Essential Information in Plan Submissions

Introduction

The Buildings Department (BD) reviews the plan approval process regularly with a view to improving the efficiency of plan processing and enhancing the quality of plan submissions. To achieve this objective, BD has implemented various measures, such as curtailed check system, pre-submission enquiry and conference services, streamlined procedures, fast track processing, etc. The general principles and details of such measures are given in Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP) ADM-19. This Practice Note sets out general guidance to facilitate the authorized persons (AP), registered structural engineers (RSE) and registered geotechnical engineers (RGE) in the preparation of plan submissions for various types of building works.

Essential Information in Plan Submissions

2. The administrative and technical requirements for plan submissions are generally stipulated in the Buildings Ordinance and its subsidiary regulations, relevant codes of practice and PNAPs. To ensure that the fundamental issues can be fully considered and the essential information is contained in the plan submissions, the following documents are provided for AP/RSE/RGE's reference:

(a) General Building Plans (GBP)

(i) Checklist for GBP Submissions (Appendix A1);

(ii) Checklist for Applications for Typical Modifications/ Exemptions (Appendix A2);

(iii) Sample tables for Modifications/Exemptions Granted/Being Applied For (Appendix A3); and

(iv) Sample drawings showing acceptable standards for GBP (Appendix A4).

(b) Structural Plans

(i) Checklist for Foundation Plan Submissions (Appendix B1);

(ii) Checklist for Excavation and Lateral Support Plan Submissions (Appendix B2);

(iii) …

(iii) Checklist for Superstructure Plan Submissions (Appendix B3);

(iv) Checklist for Curtain Wall Details Submissions (Appendix B4);

(v) Checklist for Glass Balustrade Plan Submissions (Appendix B5);

(vi) Checklist for Metal Cladding Plan Submissions (Appendix B6);

(vii) Checklist for Metal Ceiling/Grille/Louvre Plan Submissions (Appendix B7);

(viii) Sample drawings showing acceptable standards for glass balustrade plan (Appendix B8);

(ix) Sample drawings showing acceptable standards for metal cladding plan (Appendix B9);

(x) Sample drawings showing acceptable standards for metal ceiling/grille/louvre plan (Appendix B10); and

(xi) Sample drawings showing acceptable standards for supporting frames for suspended horizontal air duct, axial fan, cabinet fan and air handling unit inside a building (Appendix B11).

(xii) Sample drawings showing acceptable standards for structural details of embed for curtain wall (Appendix B12).

(c) Drainage Plans

(i) Checklist for Drainage Plan Submissions (Appendix C1);

(ii) Checklist for Applications for Typical Modifications/ Exemptions (Appendix C2); and

(iii) Sample drawings showing acceptable standards for drainage plan (Appendix C3).

3. The documents listed in paragraph 2 above are for general guidance and the items contained therein are not meant to be exhaustive. The checklists are not required to be submitted to BD. AP/RSE/RGE should include other items that they consider essential for individual projects. The checklists or tables should be referred to and completed for assuring that essential information is included in the submission to facilitate processing by BD.

/4. …

4. Reference may be made to relevant appendices to PNAP ADM-19 on the items to be checked for GBP, superstructure plans, drainage plans and other types of plans by BD under the curtailed check system.

(YU Po-mei, Clarice)
Building Authority

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Appendix A1
(PNAP ADV-33)

Checklist for General Building Plan Submissions
(This checklist is **not** required to be submitted to the BD)

I : Information to be shown on General Building Plans (GBP) for Stage I approval

II : Information needs not be shown on the first GBP but should be shown on subsequent GBP amendment plans for Stage II approval before application for consent for the commencement of superstructure works

III : Information needs not be shown on the first GBP but should be shown on subsequent GBP amendment plans for Stage III approval before application for occupation permit/temporary occupation permit

◯ : Information to be accompanied with GBP submission

Authorized person choosing to defer the submission of information under "II" and "III" should include in the first GBP a statement confirming that the deferred information which is prescribed under regulation 8(1) of the Building (Administration) Regulations (B(A)R) will be submitted to and approved by the Building Authority (BA) prior to the application for consent to the commencement of superstructure works, or prior to the application for occupation permit (OP), as appropriate.

Part A – Administration

Typical Items		**Requirements**	**Reference**
1.	Specified Forms	Ⓘ Form BA4 (appointment of AP/RSE/RGE) Ⓘ Form BA5 (application for approval) Ⓘ Form BA6 (stability certificate for alteration and addition works) Ⓘ Form BA8A (application for concurrent approval and consent) Ⓘ Form BA16 (application for exemption/ modification) Ⓘ Form BA17 (temporary building permit)	B(A)Rs 18A and 29(1) PNAP ADM-2
2.	Plans	Ⓘ 2 signed and coloured sets for BA Ⓘ 2 sets for D of FS (3 sets if subject to Fire Safety (Commercial Premises) Ordinance or Fire Safety (Buildings) Ordinance) Ⓘ 1 set for DLO in urban area (2 sets if lease conditions contain Design, Disposition and Height clause & 2 sets in N.T.) Ⓘ Additional plans for referral	Appendix A of PNAP ADM-2
3.	Fee for plan processing	Ⓘ Form BD24 (payment of fee) Ⓘ Crossed cheque for payment of fee	PNAP APP-55

Part B – Supporting Documents

Typical Items		Requirements	Reference
1.	Proof of ownership	Ⓘ Proof of ownership or control of the land forming the site	Circular Letters to AP/RSE/RGE on 20.10.2010, 29.7.2013 and 27.9.2021
2.	Exemptions/ Modifications	Ⓘ Table showing list of exemptions/ modifications attached to Form BA16 Ⓘ Documents in support of Form BA16	Appendix A3 of PNAP ADV-33
3.	Priority/Fast track processing	Ⓘ Application for priority status Ⓘ Application for fast track processing of A&A proposal	PNAP ADM-4 PNAP ADM-19
4.	Geotechnical Assessment	Ⓘ Two sets of geotechnical assessment report	PNAP APP-25

PART C – Information on Plans

Typical Items		Requirements	Reference
1.	**Location**		
1.1	Special Control Area	☐ Within special control area – Scheduled Area, Tung Chung Cable Car Route Protection Area, HK Airport (Control of Obstruction) Ordinance, Country Park	HK Airport (Control of Obstruction) Ordinance Appendix I of PNAP ADM-2
1.2	Permitted use under Outline Zoning Plan (OZP)	☐ Permitted use under OZP or compliance with planning approval	OZP
1.3	Building in, over, under or upon street/lane	☐ Works outside lot boundary ☐ Plans indicating areas to be built under/ over ☐ Elevation and section showing extent and depth/height of projection under/above the ground level	BO s31(1)

Typical Items		Requirements	Reference
2.	**Basic Information**		
2.1	General notes	☐ Notes applicable to the project, such as compliance with applicable codes of practice/design manual/guidelines ☐ Specific provisions, such as provision of CCTV and direct intercom for temporary refuge space ☐ Compliance statements, such as compliance with the specific requirements under PNAP APP-151, APP-156.	
2.2	Standard details	☐ Gas flue aperture ☐ Utility platform, balcony, A/C platform ☐ Curtain wall, non-structural prefabricated external wall, projecting window, cladding ☐ Sunken slab[1] ☐ Acoustic window, acoustic fin, vertical greening ☐ Protective barrier, vertical barrier at atrium ☐ Top hung window ☐ Accessible toilet, tactile warning strips for escalators/passenger conveyor, warning guiderail for area with headroom less than 2m	Appendix A4 of PNAP ADV-33 Third Schedule of B(P)R Design Manual – Barrier Free Access 2008 (DM:BFA)
2.3	Plans and details required under B(A)R 8(1)	☐ Floor and roof plans ☐ Elevations, street information & well ☐ Sections[2] (with site and street profile) ☐ Block plan ☐ Key plan ☐ Diagrams for plot ratio (PR), site coverage (SC), open space, etc.[3] ☐ Projections over street ☐ Plan indicating the locations/layout of the minor building works including fire damper in ventilation system, supporting frames for suspending air-conditioning plant or mechanical ventilation plant and large metal ventilation ducts or associated frame	B(A)R 8(1) PNAP ADM-2 PNAP ADM-8 PNAP ADM-19

[1] Only typical section demonstrating compliance with the minimum storey height under B(P)R 24 is required.

[2] Foundations shown on GBP are for indicative purpose only.

[3] Diagrams of gross floor area, site coverage, usable floor area, usable floor space, compartmentation, etc. should be shown with the underlay of corresponding floor plans. The colour coding system in Table 1 of the Guideline for Using Building Information Modelling in General Building Plans Submission 2019 should be adopted.

Typical Items		Requirements	Reference
2.4	Sanitary fitments	☐ Schedule of sanitary fitments with usable floor area (UFA) figures ☐ UFA diagrams[3] for podium and non-typical floors to support the calculation of sanitary fitment provisions ☐ UFA diagrams[3] for typical floors of towers to support the calculation of sanitary fitment provisions	B(A)R 8(1)(k)
2.5	Building facilities and elements	☐ Telecommunications and broadcasting (TBE) rooms ☐ Facilities for refuse storage and material recovery ☐ Usable floor space (UFS) figures for calculation of facilities for TBE and refuse storage and material recovery ☐ UFS diagrams[3] to support the calculation of facilities for TBE and refuse storage and material recovery ☐ Details for adequate means of access to roofs or projections from roofs for maintenance and repair ☐ Details for adequate means of access to outer surface of external walls, external claddings and curtain walls or projections from external walls, external claddings and curtain walls for maintenance and repair	B(P)R 28A PNAP APP-84 PNAP APP-35 B(C)Rs 27(2), 28(5), 31(3) and 34(3) Code of Practice on Access for External Maintenance 2021
2.6	Others	☐ Colour key and list of abbreviations and legends ☐ Designed imposed loads on corresponding floor plans ☐ Building line of upper floors on floor plans ☐ Modifications/exemptions granted	B(A)Rs 8(1) and 14(3) PNAP ADM-8 PNAP ADM-9 Appendix A3 of PNAP ADV-33
3.	**Essential Information and Associated Justifications**		
3.1	**Density**		
3.1.1	**Site Parameter**		
(i)	Site area and dimensions	☐ Dimensions and area of service lanes/ streets/surrender areas/dedicated areas/ special areas under lease/non-building areas required under OZP ☐ Site area calculations Ⓘ Lease and lease plan Ⓘ Assignment with plan Ⓘ Right-of-way (ROW) agreement with plan	B(P)R 23(2) (a) PNAP ADM-21

Typical Items		Requirements	Reference
		Ⓘ Land Survey Plan showing lot area, boundaries and setting-out coordinates to substantiate the site area and site boundaries[4]	
(ii)	Site classification	☐ Site abutting a specified street of not less than 4.5m wide ☐ Percentage of site boundary abutting specified streets not less than 4.5m wide (for Class B or C site only) ☐ Width of the narrowest part of the specified streets Ⓘ Land status of specified streets abutting the site Ⓘ For B(P)R19(3) case, land status of access including ROW agreement and plan from a specified street to the site	B(P)R 18A PNAP APP-124
3.1.2	**Plot Ratio (PR) and Site Coverage (SC)**		
(i)	Gross floor area (GFA) diagrams[3]	☐ Accountable areas, disregarded/exempted areas, areas subject to 10% GFA cap and areas subject to pre-requisites but not 10% cap demarcated ☐ Detailed breakdown and essential dimensions for calculating relevant areas	B(P)R 23 PNAP APP-151
(ii)	SC diagrams[3]	☐ Disregarded/exempted areas and accountable areas demarcated ☐ Essential dimensions for calculating accountable areas	B(P)R 23 PNAP APP-151
(iii)	PR and SC calculations	☐ Overall PR & SC calculations ☐ Calculation of mean street level (lowest specified street) ☐ Mean height of roof over the highest UFS ☐ The max 15m level for full SC shown on elevation and section ☐ A summary of GFA concessions and relevant areas ☐ Details for compliance with PNAP APP-152 ☐ For carparking spaces, electric vehicle (EV) charging facilities with location and dimension of associated facilities ☐ Details of above-ground carpark that may be regarded as underground carpark	B(P)Rs 20, 21, 23(1) and 28A PNAP ADM-2 PNAP APP-2 PNAP APP-42 PNAP APP-152 PNAP APP-19 PNAP ADV-14 PNAP APP-84 PNAP APP-35

[4] Land Survey Plan should be prepared by an authorized land surveyor in accordance with the Code of Practice under the Land Survey Ordinance (Cap. 473) and submitted in duplicate.

Typical Items		Requirements	Reference
		Ⓘ UFS figures for calculation of exempted areas of green balconies (with size exceeding $2m^2$) Ⓘ UFS diagrams[3] to support the calculation of exempted areas of green balconies Ⓘ Justification for plant rooms not accessed via common area, unusually sized or duplicated provisions of plant rooms e.g. requirements stipulated by or standard design drawings from utility companies/ authorities or other relevant information submitted with GBP as supporting documents Ⓘ Design information and certification of EV charging facilities for carparking spaces by a registered professional engineer Ⓘ Justification on the design and layout of carparks based on site specific demand to the satisfaction of Transport Department Ⓘ Justification of site constraints/special circumstances affecting the provision of underground carparks	
3.2	**Safety**		
3.2.1	**Means of Access for Firefighting and Rescue**		
(i)	Number and disposition of fireman's lifts and firefighting and rescue stairway (FRS)	Ⓘ Measurements of actual passage (or direct line for open plan layout) from fireman's lift/FRS at critical locations (i.e. more than 44m (for open plan layout) and 59m (for actual passage) from fireman's lift/FRS Ⓘ Fireman's lift and FRS indicated	B(P)Rs 41A, 41B and 41C Part D of Code of Practice for Fire Safety in Buildings 2011 (FS Code)
(ii)	Initial access to fireman's lifts and FRS	Ⓘ Measurement of distance from G/F fire service access point to the fireman's lift/FRS at critical situation more than 17m from fireman's lift/FRS Ⓘ Width and separation from remainder of G/F of the passage from the fire service access point to the fireman's lift/FRS Ⓘ Fire service access point indicated	B(P)Rs 41B and 41C Part D of FS Code
(iii)	Emergency vehicular access (EVA)	Ⓘ EVA plan Ⓘ Calculation of major façade length	B(P)R 41D Part D of FS Code PNAP APP-136

Typical Items		Requirements	Reference
3.2.2	**Means of Escape (MoE)**		
(i)	Basic Information	☒ UFA diagrams[3] for podium and non-typical floors to support the calculation of MoE provisions ☒ UFA diagrams[3] for typical floors of towers to support the calculation of MoE provisions ☐ Table for occupant capacity of all rooms, fire compartments and storeys (including G/F) with UFA figures ☐ Table for required and provided number and width of exit doors and exit routes from a room, fire compartment and storey (including G/F) (Table for MoE Provisions) ☐ Discharge value calculations	B(P)R 41D Part B of FS Code
(ii)	Single staircase building (if applicable)	☐ The level of highest floor above ground level on section ☐ Not exceeding permitted UFA ☐ Area on roof for refuge and calculation of such area against the minimum required area	B(P)R 41 Part B of FS Code
(iii)	Discharge from G/F to place of ultimate place of safety	☐ Separation of required staircases from remainder of the building ☐ Width of exit route from ground storey forming parts of the exit route from a required staircase	B(P)R 41 Part B of FS Code
(iv)	Relationship between staircases	☐ Permanent features to define exit route leading to an open area at an upper floor ☐ Access from a required staircase to another one without passing through other person's private premises ☐ Automatic deactivation of security measures preventing required access from a required staircase to another one ☐ 6m separation between staircases at critical locations for situation with staircases less than 7m apart ☐ Approach to required staircases from different direction except permitted deadends ☐ 48m horizontal distance between staircases at critical location for situations >47m	B(P)R 41 Part B of FS Code

Typical Items		Requirements	Reference
(v)	Travel distance	☐ Measurement of travel distance at critical locations more than 47m horizontal distance ☐ Vision panel in the door or wall of an inner room ☐ 30° requirements for two or more exit doors for a room/storey at representative critical locations forming an angle less than 33°	B(P)R 41 Part B of FS Code
(vi)	Basement/ kindergarten/ child care centre (if applicable)	☐ Independent staircases	B(P)R 41 Part B of FS Code PNAP APP-43
(vii)	Refuge floors	☐ No. of storeys between refuge floors, refuge roof and lowest ground storey disregarding floors solely for mechanical plants ☐ Net area for refuge with dimensions, diagrams and calculations against the minimum required area ☐ Signage system	B(P)R 41 Part B of FS Code
(viii)	Places of public entertainment (PPE) premises (if applicable)	☐ Thoroughfares abutting the site ☐ At least one half of the perimeter of the building having PPE premises for exit routes from each tier direct to two or more thoroughfares ☐ Table for MoE provisions taking into account PPE premises located at a storey 12m or above G/F level or shared protected exits with adjoining non-domestic accommodation ☐ Two of the exit routes from each tier leading to different thoroughfares or ways ☐ Gradient of tier not steeper than 35° ☐ Headroom of tier (including ceiling) not less than 3m ☐ Typical details of required staircases for dimensions of treads and risers ☐ Gangways and seatways layout	B(P)R 41 Part B of FS Code
(ix)	Temporary refuge space (TRS)	☐ Number, disposition and dimension of TRS	B(P)R 41 Part B of FS Code

Typical Items		Requirements	Reference
3.2.3	**Fire Resisting Constructions (FRC)**		
(i)	Basic Information	☐ Fire compartment diagram with essential dimensions[3] ☐ Fire compartment area/volume calculations ☐ Table for fire resistance rating (FRR) of elements of construction within each fire compartment and construction and materials for walls, floors, columns, beams and stairs ☐ FRR of fire barriers separating the areas of special hazard from the rest of the building ☐ A list of legend for fire resisting doors, windows, shutters, lift doors, fire dampers, etc. of different FRR ☐ FRR of fire resisting doors, windows, shutters, lift doors, fire dampers, etc. on floor plan ☐ Thickness of fire resisting wall including type of material on floor plan ☐ Fire resisting construction for the defined exit route	B(C)R 35 Part C of FS Code
(ii)	Protection of adjoining building	☐ Distance of unprotected openings between buildings ☐ Angle between façades of two adjoining buildings if the angle is more than 135^{o}	B(C)R 35 Part C of FS Code
(iii)	External wall of required staircase/lobby	☐ 6m separation distance required for unprotected external wall and opening of a required staircase and its protected lobby ☐ Calculation of the percentage of area of external wall of a required staircase and its protected lobby occupied by fire resisting fixed light provided under Clause C9.7 of FS Code for critical situations i.e. for situations with more than 24% ☐ Extension of fire resisting wall separating a required staircase or protected lobby from the rest of the building under Clause C9.8 of FS Code	B(C)R 35 Part C of FS Code
(iv)	Smoke outlets	☐ Distance between individual smoke outlets at critical locations more than 29m ☐ Calculation of the total area of the smoke outlets and required area ☐ Smoke outlets for every compartment with dimensions shown on basement and ground floor plans and building elevations	B(C)R 35 Part C of FS Code

Typical Items		Requirements	Reference
(v)	Bridge and tunnel	☐ By-pass lobbies ☐ Height of the protective barriers and construction materials of unenclosed bridge	B(C)R 35 Part C of FS Code
3.3	**Health and Environment**		
3.3.1	Lighting and Ventilation – prescribed windows	☐☐ Area calculations for prescribed windows for critical situations i.e. surplus window area is less than 10% of the required provision ☐ Critical rectangular horizontal plane for each tower ☐ Tilted rectangular horizontal plane provided under PNAP APP-130 ☐ Critical unobstructed vision area provided for each tower under PNAP APP-130 ☐☐ Openable windows either shown on floor plans or elevations	B(P)Rs 30 and 31 PNAP APP-130 Appendix A4 of PNAP ADV-33
3.3.2	Open space	☐ Open space area, disposition, diagram and calculations	B(P)R 25 Second Schedule of B(P)R
3.4	**Major Issues Under Allied Legislation**		
3.4.1	**Access and Facilities for Persons with a Disability (PwD)**		
(i)	Access route	☐ Access route to an accessible entrance ☐ Ramps and landing with handrails ☐☐ Dropped kerb ☐☐ Steps and staircase with handrails ☐ Manoeuvring space in corridor, lobby, path and similar areas including deadend situation ☐☐ Door on accessible route including frameless glass door and automatic main entrance door ☐☐☐ Sign providing direction, information and instructions for PwD	Third Schedule of B(P)R DM:BFA
(ii)	Facilities for PwD	☐☐ Wheelchair space in auditorium ☐☐ Guestroom in hotel, hostel and guesthouse ☐☐ Car parking space ☐☐ Watercloset cubicle and urinal ☐☐ Bathroom and shower compartment ☐ Lift	Third Schedule of B(P)R DM:BFA

Typical Items		Requirements	Reference
(iii)	Assistive provisions	☐ Braille & tactile floor plan (graphic indication only to show extent of such provisions) ☐ Tactile guide path ☐ Visual display board ☐ Public information/service counter ☐ Assistive listening system	Third Schedule of B(P)R DM:BFA
3.4.2	**Others**		
(i)	OZP - Compliance of approval conditions	☐ Information required under Town Planning Board Guidelines on compliance of approval conditions	Town Planning Board Guidelines TPB PG-No. 20
(ii)	Vehicular Run-in/out	☐ Vehicular access point - XYZ and associated ROW	PNAP ADM-2

(Rev. 3/2023)

Appendix A2
(PNAP ADV-33)

Checklist for Applications for Typical Modifications/Exemptions
(This list is **not** required to be submitted to the BD)

□ : information to be shown on plan
○ : information to be accompanied with the Form BA16

	Modifications/Exemptions Applied For	Reference
1.	**Buildings Ordinance (BO) section 31(1) – projections over each street**[1] ☐ Critical dimensions for clearance over pavement/street, projection, and width of the pavement and carriageway shown on plans ☐ Built-in system for disposal of condensate for AC box/platform ☐ Details of surface water drainage provision and means of preventing accumulation of water for cantilevered reinforced concrete structure ☐ Details for adequate means of access to the outer surface of external walls, external claddings and curtain walls or projections from the external walls, external claddings and curtain walls for their maintenance and repair [2] ◯ Quantitative assessment for sunshade	BO s31(1) Code of Practice on Access for External Maintenance 2021
2.	**Building (Administration) Regulation (B(A)R) 13 – deviation from the requirements on ratio of plans** ☐ Prescribed information and essential dimensions clearly shown on such plans	B(A)R 13
3.	**B(A)R 29(1A) – exemption from payment of plan processing fees for proposed building works directly associated with the charitable purpose** ◯ Supporting documents if necessary	B(A)R 29(1A)
4.	**B(A)R 33(1) – exemption from obtaining prior approval and consent for amendments to building/drainage works for which the first consent has been given, on the condition that such amendments comply with criteria set out in PNAP ADM-19** ◯ The application is for amendments complying with the criteria set out in PNAP ADM-19	B(A)R 33(1) PNAP ADM-19
5.	**Building (Planning) Regulation (B(P)R) 20 – excessive site coverage (SC) for upgrading fire service installations (FSI) in existing buildings** ☐ Dimensions of enclosures for accommodating the upgraded FSI ◯ Confirmation of the proposed enclosures only for upgraded FSI with supporting documents	B(P)R 20

[1] No application required for projection (canopy, eave, cornice, moulding, etc.) complying with Part II of Building (Planning) Regulations, and signboards complying with PNAP APP-126. Projections normally will not be allowed over a street unless justified in public interest such as sunshades with special circumstances so justify.

[2] This information may be omitted in the first GBP provided that the authorized person includes a statement on the plans that "details of the provisions for access for external maintenance and repair will be submitted to and approved by the Building Authority prior to the application for consent to the commencement of superstructure works".

Modifications/Exemptions Applied For		Reference
6.	**B(P)Rs 20 and 21 – exclusion of projections from plot ratio (PR) and SC calculations** ☐ Typical details with critical dimensions for projections ☐ Built-in system for condensate disposal for A/C box/platform ☐ Details for adequate means of access to the outer surface of external walls, external claddings and curtain walls or projections from the external walls, external claddings and curtain walls for their maintenance and repair[2] ◯ Quantitative assessment for sunshades ◯ Justification for A/C box/platform not complying with paragraph 3(b) of PNAP APP-19 ◯ Undertaking letter required under PNAP APP-151[5]	B(P)Rs 20 and 21 PNAP APP-19 PNAP APP-151 Code of Practice on Access for External Maintenance 2021
7.	**B(P)Rs 20 and 21 – exclusion of existing party structures [3] /common staircases serving an adjoining building that would be demolished in due course from PR and SC calculations[4]** ☐ Dimensions, gross floor area (GFA) calculations and construction of the party structures/common staircases ☐ Details indicating the party structures to be physically separated from the proposed new building without intervening space for potential infilling	B(P)Rs 20 and 21
8.	**B(P)Rs 20 and 23(3)(a) – exclusion of balconies/utility platforms for residential buildings from GFA and SC calculations[4]** ☐ Details showing criteria of JPN 1/JPN 2 complied with ◯ Undertaking letter required under PNAP APP-151[5] including designation of the balconies/utility platforms and covered areas underneath the balconies/ utility platforms to be designated as "non-enclosed areas" in the Deed of Mutual Covenant	B(P)Rs 20 and 23(3)(a) JPN 1/JPN 2 PNAP APP-151
9.	**B(P)Rs 20 and 23(3)(a) – exclusion of wider common corridors and lift lobbies for residential buildings from GFA and SC calculations[4]** ☐ Details showing criteria of JPN 1 complied with ◯ Undertaking letters required under PNAP APP-151[5]	B(P)Rs 20 and 23(3)(a) JPN 1 PNAP APP-151
10.	**B(P)Rs 20 and 23(3)(a) – exclusion of acoustic fins, noise barriers, wing walls, wind catchers, and wind funnels from GFA and SC calculations[4]** ☐ Details showing criteria of JPN 1/JPN 2 complied with ◯ Quantitative assessment to justify the scale and extent of such provision ◯ Undertaking letters required under PNAP APP-151[5]	B(P)Rs 20 and 23(3)(a) JPN 1/JPN 2 PNAP APP-151

[3] Including a party wall only serving as the enclosure wall of the adjoining building but excluding redundant party wall/structure.

[4] GFA and SC calculations for areas to be exempted should be shown on the submitted plans.

[5] Undertaking letter from the developer or owner to design the facilities as common parts in the Deed of Mutual Covenant (DMC) with details of the use and location clearly indicated. Such DMC should contain binding and enforceable terms and conditions included for the control, management and maintenance of the facilities where applicable, of such features. Where no DMC is to be in force for a development, such designation shall be incorporated into the Sales and Purchase Agreement, Assignment, Tenancy Agreement or conveyancing document such that the future owners or tenants are aware of their rights and liabilities (if applicable).

Modifications/Exemptions Applied For		Reference
11.	**B(P)Rs 20 and 23(3)(a) – exclusion of non-structural prefabricated external walls from GFA and SC calculations[4 & 6]** ☐ Details showing criteria of JPN 2 complied with ☐ Blown-up section for various profiles of non-structural prefabricated external walls ◯ Undertaking letters required under PNAP APP-151[5]	B(P)Rs 20 and 23(3)(a) JPN 2 PNAP APP-151
12.	**B(P)R 22 – application for bonus PR/SC for dedication/surrender of land for public passage/street widening** ☐ Areas to be dedicated/surrendered delineated ☐ Bonus GFA and SC calculations ☐ Location of passages stating the dedicated areas for public passage and details of such plagues ◯ Undertaking letter that the areas to be dedicated/surrendered will be embodied in a Deed of Dedication/Agreement to Surrender/the lease of the lot and that the Deed/Agreement/lease will be executed and registered at the Land Registry prior to application for consent to commence of works (sample undertaking for surrender in PNAP ADM-2)	B(P)R 22 PNAP APP-108 PNAP ADM-2
13.	**B(P)R 23(3)(a) – exclusion of voids/high headroom in non-domestic developments (including entrance voids) from GFA calculations[4]** ☐ Plans and sections marking clearly the location of the void and the proposed use of the space ◯ Justification for purpose-built industrial building and warehouse supported with catalogue of plant/equipment and plant/equipment layout	B(P)R 23(3)(a)
14.	**B(P)R 23(3)(a) – exclusion of voids in duplex domestic flats/houses from GFA calculations[4]** ☐ Section showing invert beam at the upper floor of the void ☐ Elevation of the large glazing panels fronting the void ◯ A table demonstrating compliance with exemption criteria in Appendix A to PNAP APP-2 ◯ Undertaking letter required under PNAP APP-2 and PNAP APP-151[5]	B(P)R 23(3)(a) PNAP APP-2 PNAP APP-151
15.	**B(P)R 23(3)(a) – exclusion of chimney shafts/filtration plant rooms for communal swimming pool from GFA calculations[4]** ☐ A general note – "the spacing between plants for filtration system or from wall not more than 1.5m", if applicable ☐ Location of the plant rooms served by the chimney ◯ Details of plants and equipment for the filtration system with justification if the spacing between plants/equipment or from wall more than 1.5m ◯ Undertaking letters required under PNAP APP-151[5]	B(P)R 23(3)(a) PNAP APP-151

[6] The covered area under the portion of non-structural prefabricated external wall over a door opening should be included in GFA and SC calculations.

Modifications/Exemptions Applied For		Reference
16.	**B(P)R 23(3)(a) – exclusion of residents' recreational facilities (RRF)/ covered landscaped and play areas in domestic developments from GFA calculations[4]** ☐ Notional exit routes and access to entrance lobbies not qualified for exemption ☐ Voids, associated non-essential/non-mandatory plant rooms, staircases or corridors included in the RRF exemption area calculations ☐ Areas for registration in the Land Registry with their GFA calculations suitably highlighted ☐ Facilities of acceptable type and size under Appendix A of PNAP APP-104 to be provided in RRF ☐ GFA of RRF within the limit in Table 1 of PNAP APP-104 ☐ A note in the corresponding floor plans – "these areas shall be for the exclusive use of the owners, tenants and their visitors only and such areas shall not be used for any other purpose or by any other person without the prior consent of the Building Authority" ◯ Financial statement to indicate the viability for maintenance of the RRF ◯ Undertaking letters required under PNAP APP-104 (for RRF), PNAP APP-151[5]	B(P)R 23(3)(a) PNAP APP-42 PNAP APP-104 PNAP APP-151
17.	**B(P)R 23(3)(a) – exclusion of horizontal screens/covered walkway in domestic or composite developments and trellis from GFA calculations[4]** ☐ Clear headroom of covered walkway and structural false ceiling ☐ Floor plans and sections of horizontal screens and trellis ☐ Details of the greenery provision to justify its exclusion from the overall cap on GFA concessions ☐ Details showing criteria of set out in PNAP APP-42 complied with ◯ Justification for cases where the width of the horizontal screen/covered walkway exceeding 2m ◯ Undertaking letters required under PNAP APP-42 and PNAP APP-151[5]	B(P)R 23(3)(a) PNAP APP-42 PNAP APP-151
18.	**B(P)R 23(3)(a) – exclusion of counters, offices, stores, guard rooms and lavatories for watchman and management staff, owner's corporation offices and caretaker's quarters from GFA calculations[4]** ☐ Exemption areas not exceeding areas allowed under PNAP APP-42 or required under lease ◯ Justification for size of owners' corporation office ◯ Justification for size of caretaker's quarters ◯ Undertaking letters required under PNAP APP-42 and PNAP APP-151[5]	B(P)R 23(3)(a) PNAP APP-42 PNAP APP-151
19.	**B(P)R 23(3)(a) – exclusion of lift shaft areas in domestic/composite/office buildings from GFA calculations[4]** ◯ Assessment from a lift engineer or consultant confirming that, according to international codes, the lift service to be provided is above the acceptance level of service in terms of handling capacity and waiting time and that there is adequate manoeuvring space for the carrying out of maintenance works ◯ Undertaking letter required under PNAP APP-151[5]	B(P)R 23(3)(a) PNAP APP-89 PNAP APP-151

Modifications/Exemptions Applied For		Reference
20.	**B(P)R 23(3)(a) – exclusion of voids of cocklofts over G/F shops in single-staircase buildings from GFA calculations[4]** ☐ One such cockloft for any one shop ☐ Cocklofts for storage only, without sanitary provision, accessible through the G/F shop only, and forming an integral part and within the curtilage of the ground storey ☐ Cocklofts not at the same level as any adjacent staircase landing ☐ A minimum clearance of 1.5m across the front ☐ Openings in cockloft only defended by protective barriers ◯ Undertaking letter required under PNAP APP-151[5]	B(P)R 23(3)(a) PNAP APP-2 PNAP APP-151
21.	**B(P)R 23(3)(a) – exclusion of refuge floors required under Clause B18.1 of Code of Practice for Fire Safety in Buildings 2011 (FS Code) from GFA calculations[4]** ☐ Details showing compliance with the provisions of FS Code for refuge floors	B(P)R 23(3)(a)
22.	**B(P)R 23(3)(a) – exclusion of pipe ducts and air ducts from GFA calculations[4&7]** ☐ Accessible to pipe ducts/pipe wells from common parts of the building as required under PNAP APP-93 ☐ Details with critical dimensions and location of drainage pipe ducts/pipe wells ◯ Justification for location and dimension of pipe ducts and pipe wells ◯ Undertaking letter required under PNAP APP-151[5] for pipe ducts and air ducts for non-mandatory/non-essential plant room and environmentally friendly systems and features	B(P)R 23(3)(a) PNAP APP-93 PNAP APP-151
23.	**B(P)R 23(3)(a) – exclusion of boiler rooms, SMATV rooms and plant rooms for environmentally friendly system and feature from GFA calculations[4]** ◯ Quantitative justifications on energy saving/benefit to the environment for plant rooms to accommodate energy efficient or environmental friendly systems/features ◯ Undertaking letters required under PNAP APP-151[5]	B(P)R 23(3)(a) PNAP APP-2 PNAP APP-151
24.	**B(P)R 23(3)(a) – exclusion of communal sky gardens for residential buildings from GFA calculations[4]** ☐ Details showing criteria of JPN 1 complied with ☐ A note in the corresponding floor plans – "these areas shall be for the exclusive use of the owners, tenants and their visitors only and such areas shall not be used for any other purpose or by any other person without the prior consent of the Building Authority" ◯ Undertaking letters required under PNAP APP-151[5]	B(P)R 23(3)(a) JPN 1 PNAP APP-151

[7] This modification is not applicable for pipe ducts serving small workshop units of industrial buildings.

Modifications/Exemptions Applied For		Reference
25.	**B(P)R 23(3)(a) – exclusion of communal podium gardens for non-residential buildings from GFA calculations[4]** ☐ Details showing criteria of JPN 1 complied with ☐ A note in the corresponding floor plans – "these areas shall be for the exclusive use of the owners, tenants and their visitors only and such areas shall not be used for any other purpose or by any other person without the prior consent of the Building Authority" ◯ Undertaking letter required under PNAP APP-151[5]	B(P)R 23(3)(a) JPN 1 PNAP APP-151
26.	**B(P)R 23(3)(a) – exclusion of communal sky gardens for non-residential buildings from GFA calculations[4]** ☐ Details showing criteria of JPN 2 complied with ☐ A note in the corresponding floor plans – "these areas shall be for the exclusive use of the owners, tenants and their visitors only and such areas shall not be used for any other purpose or by any other person without the prior consent of the Building Authority" ◯ Undertaking letters required under PNAP APP-151[5]	B(P)R 23(3)(a) JPN 2 PNAP APP-151
27.	**B(P)R 23(3)(a) – exemption of GFA for buildings adopting modular integrated construction (MiC)** ☐ A general note – " (i) Modular Integrated Construction (MiC) is adopted in this development project. The types of MiC modules to be fabricated off-site and the corresponding MiC floor area are shown on Drawing No. XXX. (ii) Alteration and addition (A&A) works after issuance of occupation permit shall require prior approval and consent from the Building Authority unless the A&A works only involve minor works items which may be carried out under the simplified requirements of the Minor Works Control System." ☐ Diagram showing the types of MiC modules to be fabricated off-site and the corresponding calculations of the MiC floor area	B(P)R 23(3)(a) PNAP APP-161
28.	**B(P)R 25 – exemption of open space requirements for hotel developments** ◯ Confirmation of compliance with the requirements of PNAP APP-40	B(P)R 25 PNAP APP-40
29.	**B(P)R 30 or 36 – omission or reduction in standard of natural lighting and ventilation for ancillary offices (which not exceeding 30% of the GFA of the premises within which it is located), toilets and kitchens in licensed premises, toilets in basements, internal toilets in non-domestic buildings, internal bathrooms in hotel premises and changing rooms containing sanitary fitments, etc.[8]** ☐ Plans and sections showing the locations of the proposed fresh air intake except for a central AC system for B(P)R 36 ☐ A note on plan confirming that mechanical means of ventilation to be provided in the premises/building has been assessed and is capable of supplying fresh air at the rate stipulated in Annex 2 of Appendix E of PNAP ADM-2.	B(P)R 30/36 PNAP ADM-2

[8] This modification is not applicable for toilets in small workshop units of industrial buildings.

Modifications/Exemptions Applied For		Reference
	☐ A note on plan confirming compliance with the requirements set out in Annex 3 of Appendix E of PNAP ADM-2 for fresh air intake.	
30.	**B(P)R 30(2)(a)(ii) – reduction of openable windows for non-domestic commercial buildings fitted with curtain wall** ☐ Plans and sections showing the locations of the proposed fresh air intake to indicate the compliance of the requirements set out in Annex 3 of Appendix E of PNAP ADM-2 ☐ Calculation of the UFA and areas of openable windows not less than 1% of UFA ☐ Elevations and plans highlighting locations of the openable windows indicating openable sashes equally distributed about the façade, openable windows readily opened, and all units being capable of receiving natural ventilation in the event of failure of the mechanical system ☐ A note on plan confirming that mechanical means of ventilation to be provided in the premises/building has been assessed and is capable of supplying fresh air at the rate stipulated in Annex 2 of Appendix E of PNAP ADM-2 ☐ A note on plan confirming compliance with the requirements set out in Annex 3 of Appendix E of PNAP ADM-2 for fresh air intake	B(P)R 30(2)(a)(ii) PNAP ADM-2
31.	**B(P)R 35A – omission of gas apertures in shower rooms for recreational facilities** ☐ A note – "electric water heaters installed prior to completion of the building"	B(P)R 35A PNAP APP-27
32.	**B(P)R 35A – omission of gas apertures in bathrooms in domestic premises (sharing of gas water heater installed in another room)** ☐ Typical details showing compliance with criteria in PNAP APP-27	B(P)R 35A PNAP APP-27
33.	**B(P)R 35A – omission of gas apertures in bathrooms in domestic premises (without sharing of gas water heater installed in another room)** ☐ A note – "electric water heaters and electric/induction cookers will be installed in all domestic units prior to completion of the building" ◯ Justifications for omission e.g. design constraint prohibiting the provision of flue aperture ◯ Undertaking letter required under PNAP APP-27	B(P)R 35A PNAP APP-27
34.	**B(P)R 36 – omission or reduction in standard of natural lighting and ventilation to bathrooms/lavatories in domestic premises** ☐ Locations of the ventilation duct, fire dampers, aperture in wall or door (with area calculation) and lourves for apertures (with area calculations)[9] ☐ Standard details of the permanent ventilation (ventilation ducts in dotted line and access panels as a square with a cross and fire dampers)	B(P)R 36 PNAP APP-98 Appendix A4 of PNAP ADV-33

[9] Where a ventilation duct is to be provided, its location (in dotted line) may be omitted in the first GBP provided that the locations of the proposed fresh air intake and exhaust outlet are indicated and the authorized person includes a statement on the plans that "the location of the ventilation ducts will be submitted to and approved by the Building Authority prior to the application for an occupation permit".

Modifications/Exemptions Applied For		Reference
35.	**B(P)R 40 – omission of natural lighting to staircases within podium above the ground floor or within the central core of office towers according to PNAP APP-65** ☐ Provision of permanent artificial lighting system with 30 lux min. lighting level backed up by an emergency lighting system providing a horizontal illuminance at floor level of not less than 2 lux complying with the Code of Practice for Minimum Fire Service Installations and Equipment/ requirements of the Director of Fire Services and BS5266 Part 1:1988, which to be permanently maintained in effective working order	B(P)R 40 PNAP APP-65
36.	**B(P)R 41D – non-provision of emergency vehicular access (EVA)/ non-compliance with the requirements for EVA[10]** ◯ Fire safety measures to ensure that the safety of the building would not be prejudiced by the exemption/modification	B(P)R 41D
37.	**Building (Private Streets and Access Roads) Regulations[11] – permit the modification of any regulation** ☐ Relevant applicable conditions imposed by the traffic authorities	Building (Private Streets and Access Roads) Regulations
38.	**Building (Refuse Storage and Material Recovery Chambers and Refuse Chutes) Regulation (B(RS&MRC&RC)R) 7 – no external wall for refuse storage and material recovery chamber[12]** ☐ Location of the chamber unlikely cause noise or sanitary nuisance	B(RS&MRC&RC)R 7
39.	**B(RS&MRC&RC)R 10(2)(a) – permit doors to refuse storage and material recovery chambers to be situated other than in an external wall[12]** ☐ Sufficient ventilation	B(RS&MRC&RC)R 10(2)(a)
40.	**B(RS&MRC&RC)R 19(2)(b) – permit vent pipes to be carried up to a lesser height in cases where the Hong Kong Airport (Control of Obstructions) Ordinance would otherwise be contravened** ☐ Location of the pipes unlikely create a nuisance to nearby occupancy	B(RS&MRC&RC)R 19(2)(b)
41.	**B(RS&MRC&RC)R 23(1) – permit hoppers installed in industrial premises and markets to have a mouth opening exceeding the regulation maximum** ☐ Provision of suitable locking or other arrangement to safeguard against unauthorized access	B(RS&MRC&RC)R 23(1)
42.	**B(SSFPDWL)Rs – permission of certain sanitary fitments to be installed after issuing of the occupation permit** ◯ Undertaking letter from the developer and AP required under PNAP APP-114	B(SSFPDWL)Rs PNAP APP-114

(Rev. 3/2023)

[10] Subject to comments from the Fire Services Department.

[11] Subject to comments from the traffic authorities, viz. Highways Department, Civil Engineering and Development Department and/or Transport Department.

[12] Subject to comments from the Food and Environmental Hygiene Department.

Sample Tables for Modifications/Exemptions Granted/ Being Applied for

Sample Table 1

To be attached to a Form BA16 for giving details on modification/exemption items being applied for

	Description	Justification	Location
1	…….	……..	……..
2	……..	… …...	……..

Sample Table 2

To be incorporated on amendment GBP as a record on the history of modifications/exemptions granted and revisions of locations, if any, throughout the GBP approval process. Sample content in the table is for indication only.

MODIFICATIONS / EXEMPTIONS GRANTED and **AMENDMENT TO LOCATION (if any) IN THE CURRENT SUBMISSION**				**Permit No.**	NT 599/2013(MOD)	NT 119/2014 (MOD)	
				Date of Modifications Granted	24/12/2013	28/3/2014	
Description	**Condition**	**Location with Modification/Exemption Granted**	**Date of Submission**	**Month**	10	02	01
				Year	13	14	16
				Rev.	A	C	F
1 Building (Planning) Regulations 20 & 21 Exclusion of projections from site coverage & plot ratio calculations (PNAP APP-19, 67 & 156)	-	All architectural features at level 3,4,5,6,7,8 & 9			X	#	△
2 Building (Planning) Regulation 36 Omission or reduction in standard of natural lighting and ventilation to rooms containing a soil or waste fitment (PNAP ADM-2)	1. Mechanical means of Ventilation to be provided in the building is capable of supplying fresh air at the rates stipulated in Annex 1 of PNAP ADM-2. 2.Compliance with the requirements set out in Annex 2 for the fresh air intake	(i) Lavatories and pantry on level 1 to 9			#	√	△
		(ii) Cafeteria, sick room and cleaner's room on level 1 to 3			#	√	△
		(iii) Commercial Kitchen on level 3			#	x	x
		(iv) Commercial Kitchen on level 4			#	√	x

Legend : # First Granted √ Still Applicable X Not Applicable △ Amendment to the location of the exemption/modification previously granted.

Depending on the extent of the amendment, new Form BA16 and BD 106 may be required.

Sample Table 3

To be incorporated in the final amendment of GBP, in parallel with Table 2, for showing a summary of the items covered by valid Form BD106. Sample content in the table is for indication only.

[This can also serve as the checklist of valid Form BD 106 under para. 14(b) and Appendix F of PNAP ADM-2]

Valid Form BD106					**Permit No.**	NT 500/2013(MOD)	NT 600/2014 (MOD)	NT 700/2014 (MOD)	NT 800/2015 (MOD)
					Date of Modifications Granted	28/12/2013	28/3/2014	28/7/2014	28/8/2015.
Description		**Condition**	**Location with Modification/Exemption Granted**	**Date of Submission**	**Month**	10	02	06	07
					Year	13	14	14	15
					Rev.	A	C	D	F
1	…….	……..	……..			X	X	X	√
2	…….	……..	……..			X	√	X	X
3	…….	……..	……			√	√	√	√

Legend : √ Valid X Not Applicable

(Rev. 2/2021)

GENERAL NOTES :

1. Code of Practice for Fire Safety in Building 2011 to be complied with.
2. Design Manual Barrier Free Access 2008 to be complied with.

FIRE SERVICES NOTES :

Fire Hydrant/Hose Reel System

1. Fire hydrant/hose reel system shall be provided for the entire building in accordance with FSI Code and Circular Letter no. 2/2013.
2. One 36m3 FS tank with FS pump set shall be provided on B1/F.
3. There shall be sufficient hydrants and hose reels on each floor to ensure that every part of the building can be reached by a length of not more than 30m of Fire Services hose and hose reel tubing.
4. All FS inlets shall be inter-connected.

Sprinkler System

1. Sprinkler system shall be provided in accordance with the LPC Rules incorporating BS EN 12845: 2003, Circular Letters no. 3/2006 and 3/2012 to protect the G/F-2/F except E & M plant rooms.
2. The hazard group of the sprinkler system :-
   - OH 3 for basement floors to 2/F;
   - OH 1 for 3/F to 22/F.,
3. One 107m3 sprinkler water tank and sprinkler pump set shall be provided on B2/F.
4. Sprinkler system signal shall be transmitted to the Fire Services Communications Centre via a direct telephone link.
5. Fast response type sprinkler heads shall be provided for the basement floors.
6. Fast response type sprinkler heads shall be provided and extended to 2 floors above/below non-domestic floors (3/F-4/F) for staircase connecting the domestic and non-domestic portion of the development.

Fire Alarm System

Fire alarm system shall be provided to the entire building. One actuating point and one audio warning device shall be provided at each hose reel point. Visual fire alarm system shall be provided in accordance with current Design Manual: Barrier Free Access 2008 and Circular Letter no. 2/2012. This actuating point shall include facilities for fire pump start and audio/visual warning device initiation.

Fire Detection System

1. Fire detection system shall be provided in accordance with BS 5839 Part I: 2002 + A2: 2008, Circular Letters no. 1/2009, 3/2010 and 2/2012 as follows: -
   - smoke detectors shall be provided in area not covered by automatic fixed installation.
   - heat detectors shall be provided for all E/M plant rooms of the entire building / G/F to 2/F.
   - the entire basement area shall be covered by fire detection system except car parking area.
2. Main fire alarm panel shall be provided inside the Fire Control Centre. All fire alarm signals including manual and AFA signals shall be connected to Fire Services Communications Centre through direct telephone link.

Emergency Generator

An independently powered generator of sufficient electrical capacity shall be provided to meet the fire service installations and fireman's lifts.

Secondary power supply

The secondary electricity supply shall be arranged to be tee-off before the incoming main switch for the essential FSI service.

Exit Sign

Sufficient directional sign and exit sign shall be provided to ensure that all exit routes from any floor within the building are clearly indicated as required by the configuration of staircases serving the building / public areas to staircases are clearly indicated in accordance with FSI Code and Circular Letter no. 5/2008.

Emergency Lighting

Sufficient emergency lightings shall be provided throughout the entire building and all exit routes leading to ground level / to all staircases, passages and public areas including lift lobbies on all floors and refuge areas in accordance with FSI Code, BS 5266 Part I: 2011 and BS EN 1838: 2013.

Portable Hand-operated Approved Appliance

Portable fire extinguishers shall be provided as indicated on plan.

Ventilation/Air Conditioning Control System

A ventilation / air conditioning control system shall be provided to stop mechanically induced air movement within a designated fire compartment.

Fire Shutter

Fire shutters shall be provided as indicated on plans and operated by smoke detectors and the manual control devices on both sides of wall opening for automatic and manual operation respectively in accordance with FSI Code.

FS Requirement for Open Kitchen

1. Smoke detector(s) fitted with sounder base shall be provided inside the flat with open kitchen. The alarm signal of the smoke detector(s) shall be connected to the local fire services control panel of the building and shall not be linked to Fire Services Communications Centre.
2. Smoke detector(s) shall be provided at the common area outside the flat with open kitchen. The alarm signal of the smoke detector(s) shall be connected to the local fire services control panel and Fire Services Communications Centre.
3. Sprinkler head(s) shall be provided to cover the notional open kitchen area. The alarm signal of the system shall be connected to the local fire services control panel and the Fire Services Communications Centre.

DOOR & FIRE SHUTTER MARKS :

D1	-/60/60 F.R.R. SELF CLOSING DOOR
D2	-/60/60 F.R.R. SELF CLOSING DOOR WITH SMOKE SEAL
D3	-/60/60 F.R.R. SELF CLOSING DOOR WITH F.R.R. TRANSPARENT GLASS UPPER PANEL
D4	-/60/60 F.R.R. SELF CLOSING DOOR WITH F.R.R. TRANSPARENT GLASS UPPER PANEL AND SMOKE SEAL
D5	-/120/120 F.R.R. SELF CLOSING DOOR WITH F.R.R. TRANSPARENT GLASS UPPER PANEL
D6	-/120/120 F.R.R. SELF CLOSING DOOR WITH F.R.R. TRANSPARENT GLASS UPPER PANEL AND SMOKE SEAL
D7	-/120/120 F.R.R. SELF CLOSING DOOR
D8	-/120/120 F.R.R. SELF CLOSING DOOR WITH SMOKE SEAL
D9	-/120/120 F.R.R. SELF CLOSING LIFT SHAFT EMERGENCY ACCESS DOOR WITH SMOKE SEAL
D10	-/-/- F.R.R. SELF CLOSING DOOR WITH SMOKE SEAL
D11	-/-/- F.R.R. SELF CLOSING DOOR WITH TRANSPARENT GLASS UPPER PANEL AND SMOKE SEAL
D12	-/-/- F.R.R. GLASS PANEL DOOR
D13	-/60/60 F.R.R. GLASS PANEL DOOR
D14	-/60/60 F.R.R. SELF CLOSING DOOR WITH PANIC BOLT-ON INSIDE
D15	-/-/- F.R.R. DOOR WITH PANIC BOLT-ON INSIDE
D16	-/60/60 F.R.R. METAL DOOR
D17	-/120/120 F.R.R. METAL DOOR
D18	-/-/- F.R.R. DOOR
D19	-/-/- F.R.R. DOOR FOR MAINTENANCE ONLY
D20	-/120/- F.R.R. LIFT LANDING DOOR
D21	-/60/- F.R.R. STEEL LOUVRES DOOR
D22	-/120/120 F.R.R. ACCESS PANEL WITH SMOKE SEAL
D32	DOOR WITH FIXED LOUVRE PANEL WITH A MINIMUM SIZE OF 1/20 OF THE FLOOR AREA OF THE ROOM
R1	-/120/- HORIZONTAL FIRE SHUTTER
R2	-/120/- F.R.R. STEEL FIRE SHUTTER
R3	-/60/60 F.R.R. STEEL FIRE SHUTTER
R4	-/240/- F.R.R. STEEL FIRE SHUTTER
R5	-/240/240 F.R.R. STEEL FIRE SHUTTER

COLOUR INDICATION :

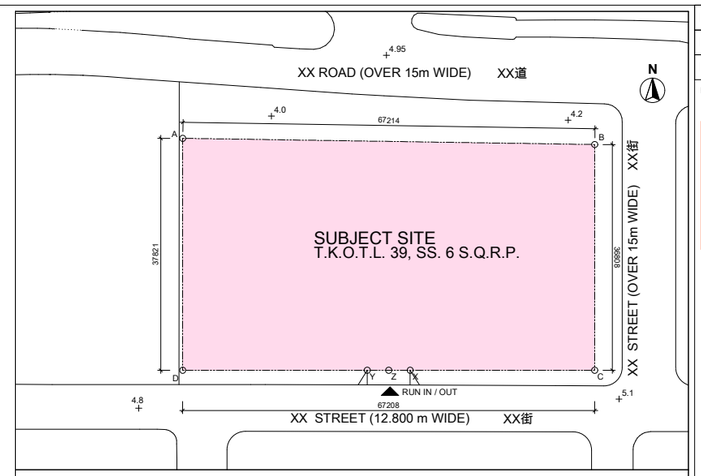
COLOUR	RGB COLOUR	MATERIAL / DESCRIPTION
	204,178,102	HARDCORE OR DRY FILL
	255,63,0	BRICK
	223,255,127	CONCRETE SLAB (LIGHTER WASH)
	0,76,38	CONCRETE (PLAIN OR REINFORCED)
	127,223,255	SOLID CONCRETE BLOCKS
	191,127,255	HOLLOW CONCRETE BLOCKS
	255,191,127	LIGHTWEIGHT PARTITION
	204,204,102	PLASTER OR CEMENT RENDERING
	255,127,223	IMPERMEABLE / NON-ABSORBENT FLOOR OR WALL
	127,255,255	GLASS
	153,133,76	TIMBER
	233,127,255	METAL WORK OR STEEL
	173,173,173	STONE FINISH
	255,255,0	SANITARY FITTINGS
	0,63,255	DEMOLITION WORKS / DELETION OF APPROVED WORKS
	204,0,51	UNDERLINE FOR REVISION
	255,164,25	ACCOUNTABLE DOMESTIC GFA
	227,100,102	ACCOUNTABLE NON-DOMESTIC GFA
	191,0,255	DISREGARDED GFA NOT SUBJECT TO THE OVERALL CAP OF 10% a) CONCESSION ITEMS SPECIFIED IN PNAP APP-151 (OTHER THAN CARPARK, LOADING AND UNLOADING AREAS)
	222,184,135	DISREGARDED GFA NOT SUBJECT TO THE OVERALL CAP OF 10% b) CARPARK, LOADING AND UNLOADING AREAS AND OTHERS
	30,144,255	DISREGARDED GFA SUBJECT TO THE OVERALL CAP OF 10% a) CONCESSION ITEMS SPECIFIED IN PNAP APP-151
	144,214,236	DISREGARDED GFA SUBJECT TO THE OVERALL CAP OF 10% b) OTHERS

LEGEND :

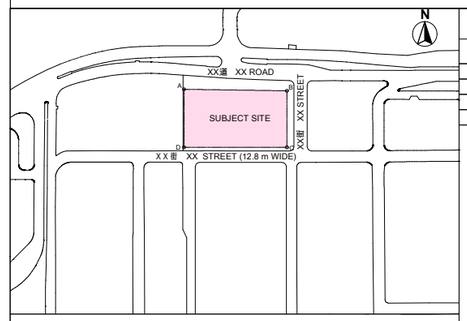
	SFL (STRUCTURAL FLOOR LEVEL)
	FFL (FINISHED FLOOR LEVEL)
D	ACCESSIBLE FACILITIES FOR PERSONS WITH A DISABILITY
AT	ACCESSIBLE UNISEX TOLIET
AU	ACCESSIBLE URINAL
	LEVEL DIFFERENCE
	DROP KERB
OW	OPENABLE WINDOW
	IRRIGATION POINT
	EV CHARGING STATION
	NON-STRUCTURAL PREFABRICATED WALL

LEGEND FOR F.S. EQUIPMENT :

EXIT	EXIT SIGN AT HIGH LEVEL
HR	HOSE REEL
A	FIREMAN'S LIFT
F	NO PARKING SIGN
E	EVA LAYOUT SIGN
FSI	FIRE SERVICE INLET
CP	CONTROL PANEL
FE	4.5 kg CO_2 FIRE EXTINGUISHER
FEH	9.0 L H_2O FIRE EXTINGUISHER
FH	FIRE HYDRANT
SB	SAND BUCKET
FB	FIRE BLANKET
SFH	STREET FIRE HYDRANT
FSAP	FIRE SERVICES ACCESS POINT
	F.S. SHUTTER



BLOCK PLAN 1 : 500



LOCATION PLAN 1 : 2000

BOUNDARY COORDINATES
Hong Kong 1980 Grid Coordination

POINT	E (m)	N (m)
A	840,500.821	816,511.001
B	840,499.808	816,578.208
C	840,463.000	816,578.208
D	840,463.000	816,511.000

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. GENERAL NOTES FOR SPECIFIC PROVISIONS AND COMPLIANCE STATEMENTS MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:48

PROJECT
BD SAMPLE -
PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
SITE PLAN AND NOTES

SCALE N.T.S.(A1)

DRAWING NO. A001 **REV. NO.** -

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

Abbreviation	Full Name
@HL	AT HIGH LEVEL
@LIL	AT LOW LEVEL
ACPF	AIR CONDITIONER PLATFORM
ACPR	AIR CONDITIONING PLANT ROOM
AF	ARCHITECTURAL FEATURE
AHU	AIR HANDLING UNIT ROOM
AP	ACCESS PANEL
BAL	BALCONY
BHR	BUILDING HEIGHT RESTRICTION
BR	BEDROOM
C/C	CENTRE TO CENTRE
CAP	CAPACITY
CB	CANTILEVERED BEAM
CL	CAT LADDER
CLA	COVERED LANDSCAPE AREA
CLD	CLADDING
CMC	CHECK METER CABINET
COA	COMMON AREA
COF	COMMON FLAT ROOF
CORR	CORRIDOR
CS	CANTILEVERED SLAB
CSB	CANTILEVERED SLAB BALCONY
CSC	COVERED SURFACE CHANNEL
CW	CURTAIN WALL
CWPR	CLEANSING WATER PUMP ROOM
DG	DANGEROUS GOODS STORE
DI	DRENCHER INLET
DOM	DOMESTIC
DR	DOOR
EGR	EMERGENCY GENERATOR ROOM
ELR	ELECTRIC ROOM
ENT	ENTRANCE
EVCR	ELECTRIC VEHICLE CHARGER ROOM
FAI	FRESH AIR INLET
FBG	FIBREGLASS
FCC	FIRE CONTROL CENTRE
FCG	FIXED CLEAR GLASS
FLA	FLUE APERTURE
FLAV	FEMALE LAVATORY
FLL	FIREMAN LIFT LOBBY
FMCR	FEMALE CHANGING ROOM
FPR	FILTRATION PLANT ROOM
FS	FIRE SERVICE
FSCR	FIRE SERVICE CONTROL ROOM
GB	GLASS BALUSTRADE
GMC	GAS METER CABINET / CHAMBER
GW	GLASS WALL

Abbreviation	Full Name
GYM	GYMNASIUM
ICOF	INACCESSIBLE COMMON FLAT ROOF (FOR MAINTENANCE ONLY)
IFR	INACCESSIBLE FLAT ROOF (FOR MAINTENANCE ONLY)
IRR	IRRIGATION
KIT	KITCHEN
L/UL	LOADING / UNLOADING
LAV	LAVATORY
LCL	LOCKABLE CAT LADDER
LFS	LIFT SHAFT
LIV / DIN	LIVING & DINING
LL	LIFT LOBBY
LMR	LIFT MACHINE ROOM
M BATH	MASTER BATHROOM
MB	METAL BALUSTRADE
MBR	MASTER BED ROOM
MCR	MALE CHANGING ROOM
MFXR	MULTI FUNCTION ROOM
ML	METAL LOUVRE
MLAV	MALE LAVATORY
MSFL	MEAN SITE FORMATION LEVEL
MSL	MEAN STREET LEVEL
MVAL	MECHANICAL VENTILATION & ARTIFICIAL LIGHTING
MW	MAINTENANCE WINDOW
NDOM	NON-DOMESTIC
O KIT	OPEN KITCHEN
OCO	OWNERS' COMMITTEE OFFICE
P	PLANTER
PAU	PRIMARY AIR HANDLING UNIT
PD	PIPE DUCT
PFWTPR	POTABLE & FLUSHING WATER TANK & PUMP ROOM
PRM	PUMP ROOM
PRPW	PARAPET WALL
RC	REINFORCED CONCRETE
RHP	RECTANGULAR HORIZONTAL PLANE
RM	ROOM
RRF	RESIDENTS' RECREATIONAL FACILITIES
RSMRC	REFUSE STORAGE & MATERIAL RECOVERY CHAMBER
RSMRR	REFUSE STORAGE & MATERIAL RECOVERY ROOM
RT	ROOF TILES WITH WATERPROOF MEMBRANE FELT ON CEMENT SAND SCREEDING LAID TO FALL

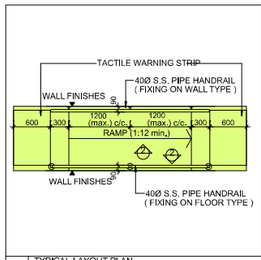
Abbreviation	Full Name
SCLD	STONE CLADDING
SC	SITE COVERAGE
SFH	STREET FIRE HYDRANT
SH	SHOWER
SI	SPRINKLER INLET
SKP	SUNKEN PLANTER
SML	SMOKE LOBBY
SPR	SPRINKLER
SS	STAINLESS STEEL
STO	STORE
SVI	SMOKE VENT INLET
SVO	SMOKE VENT OUTLET
SWMP	SWIMMING POOL
T/ TBE	TOP OF TELECOMMUNICATION AND BROADCASTING EQUIPMENT
TD	TRAVEL DISTANCE
TDR	TRAP DOOR
TL	TOP LEVEL
TLO	TELEPHONE DUCT
TOS	TOP OF SOIL
TP	TRANSFER PLATE
TPA	TRANSFER PLATE ABOVE
TPB	TRANSFER PLATE BELOW
TRS	TEMPORARY REFUGE SPACE
TX	TRANSFORMER
UFA	USABLE FLOOR AREA
UFS	USABLE FLOOR SPACE
UP	UTILITY PLATFORM
UTR	UTILITY ROOM
WC	WATER CLOSET
WL	WATER LEVEL
WMC	WATER METER CABINET
WPRML	WATERPROOF METAL LOUVRE
WPT	WATER POINT
WT	WATER TANK

DRAWING LIST

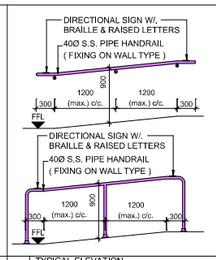
	Drawing No.	Drawing Title	Size	Rev.
1	A001	SITE PLAN AND NOTES	A1	-
2	A002	TYPICAL DETAILS	A1	-
3	A003	BASEMENT 2 FLOOR PLAN	A1	-
4	A004	BASEMENT 1 FLOOR PLAN	A1	-
5	A005	GROUND FLOOR PLAN	A1	-
6	A006	FIRST FLOOR PLAN	A1	-
7	A007	SECOND FLOOR PLAN	A1	-
8	A011	THIRD FLOOR PLAN	A1	-
9	A012	TYPICAL FLOOR PLAN (4/F TO 22/F)	A1	-
10	A013	MAIN ROOF PLAN	A1	-
11	A014	UPPER ROOF 1 FLOOR PLAN (UR1F)	A1	-
12	A015	UPPER ROOF 2 FLOOR PLAN (UR2F)	A1	-
13	A021	TOWER ELEVATION A	A1	-
14	A022	TOWER ELEVATION B	A1	-
15	A023	TOWER ELEVATION C	A1	-
16	A024	TOWER ELEVATION D	A1	-
17	A031	PODIUM SECTION 1-1	A1	-
18	A032	PODIUM SECTION 2-2	A1	-
19	A033	TOWER SECTION 3-3 & 4-4	A1	-
20	C041	CALCULATIONS	A1	-
21	C042	SCHEDULE	A1	-
22	C051	CALCULATIONS (1)	A1	-
23	C052	CALCULATIONS (2)	A1	-
24	C053	CALCULATIONS (3)	A1	-
25	C054	CALCULATIONS (4)	A1	-
26	C055	CALCULATIONS (5)	A1	-
27	C056	CALCULATIONS (6)	A1	-
28	C057	CALCULATIONS (7)	A1	-
29	C061	FIRE COMPARTMENT DIAGRAMS & CALCULATIONS (1)	A1	-
30	C062	FIRE COMPARTMENT DIAGRAMS & CALCULATIONS (2)	A1	-
31	C063	FIRE COMPARTMENT DIAGRAMS & CALCULATIONS (3)	A1	-
32	C071	SUSTAINABLE BUILDING DESIGN DEMONSTRATION DIAGRAMS & CALCULATIONS	A1	-
33	C072	GREENERY DIAGRAMS & CALCULATIONS	A1	-
34	C073	E.V.A. PLAN DIAGRAMS & CALCULATIONS	A1	-

Appendix A4 (PNAP ADV-33)

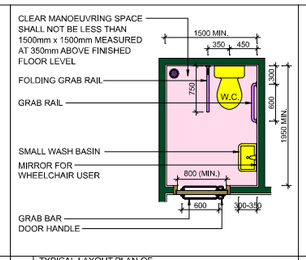
STAGE II



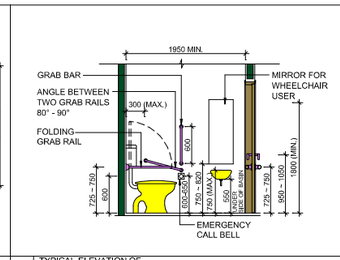
1 TYPICAL LAYOUT PLAN OF ACCESSIBLE RAMP 1:50



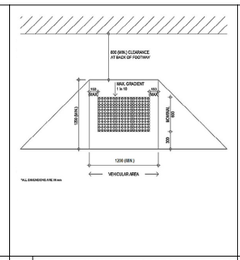
2 TYPICAL ELEVATION OF ACCESSIBLE RAMP 1:50



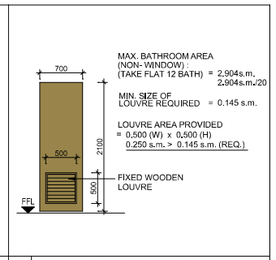
3 TYPICAL LAYOUT PLAN OF ACCESSIBLE UNISEX TOILET 1:50



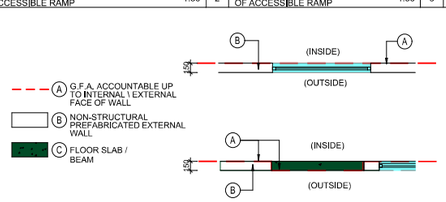
4 TYPICAL ELEVATION OF ACCESSIBLE UNISEX TOILET 1:50



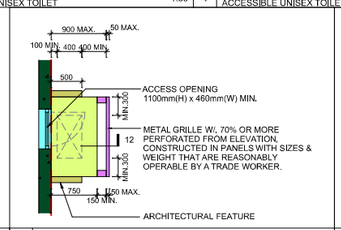
5 TYPICAL LAYOUT PLAN OF DROP KERB 1:50



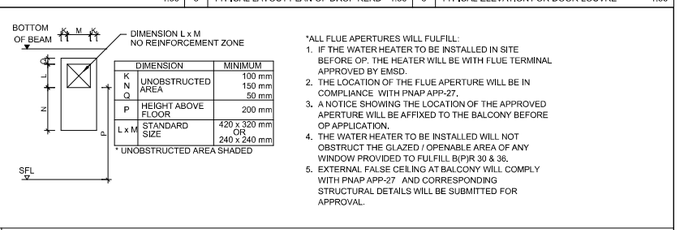
6 TYPICAL ELEVATION FOR DOOR LOUVRE 1:50



7 TYPICAL PLAN FOR GFA ACCOUNTABILITY ON NON-STRUCTURAL PREFABRICATED EXTERNAL WALL 1:50

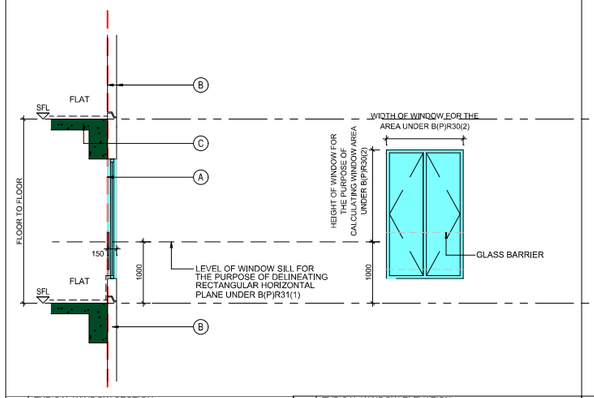


8 TYPICAL PLAN OF AIR CONDITIONING PLATFORM 1:50



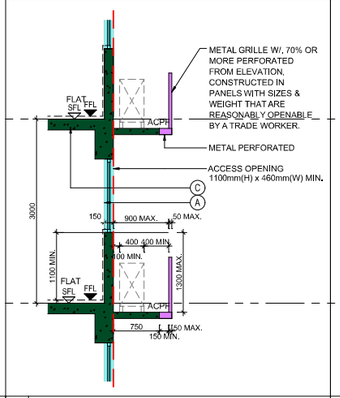
*ALL FLUE APERTURES WILL FULFILL:
1. IF THE WATER HEATER TO BE INSTALLED IN SITE BEFORE OP. THE HEATER WILL BE WITH FLUE TERMINAL APPROVED BY EMSD.
2. THE LOCATION OF THE FLUE APERTURE WILL BE IN COMPLIANCE WITH PNAP APP-27,
3. A NOTICE SHOWING THE LOCATION OF THE APPROVED APERTURE WILL BE AFFIXED TO THE BALCONY BEFORE OP APPLICATION.
4. THE WATER HEATER TO BE INSTALLED WILL NOT OBSTRUCT THE GLAZED / OPENABLE AREA OF ANY WINDOW PROVIDED TO FULFILL B(P)R 30 & 36.
5. EXTERNAL FALSE CEILING AT BALCONY WILL COMPLY WITH PNAP APP-27 AND CORRESPONDING STRUCTURAL DETAILS WILL BE SUBMITTED FOR APPROVAL.

9 TYPICAL DETAIL FOR FLUE APERTURE 1:50

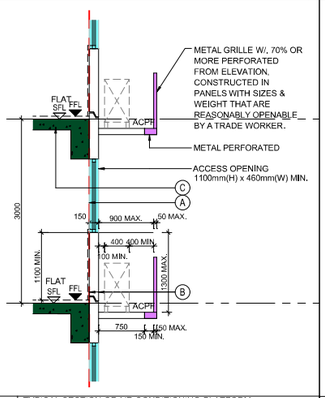


10 TYPICAL WINDOW SECTION FOR WIN. AREA & RHP 1:50

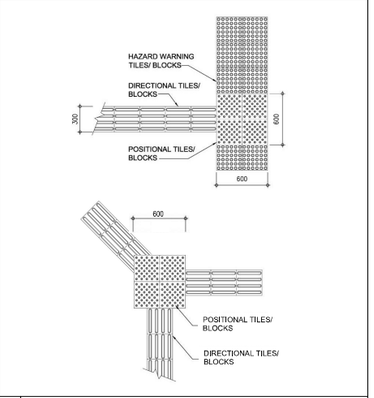
11 TYPICAL WINDOW ELEVATION FOR WIN. AREA & RHP 1:50



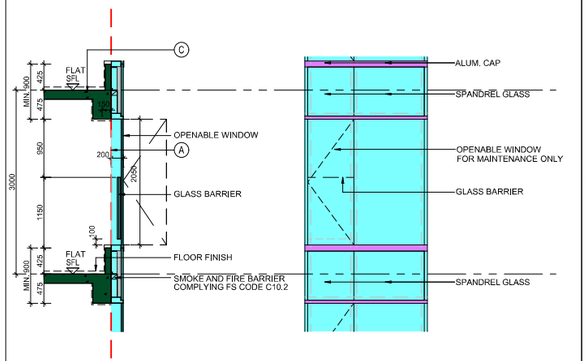
12 TYPICAL SECTION OF AIR CONDITIONING PLATFORM 1:50



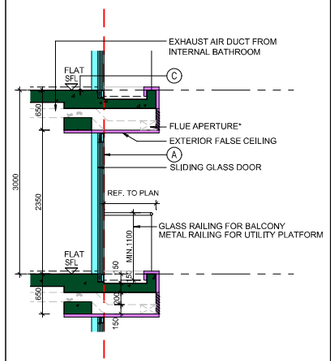
13 TYPICAL SECTION OF AIR CONDITIONING PLATFORM NON-STRUCTURAL PREFABRICATED EXTERNAL WALL 1:50



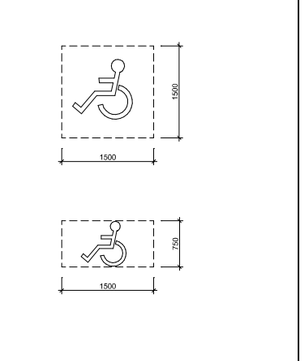
14 TYPICAL TACTILE GUIDE PATH JUNCTION



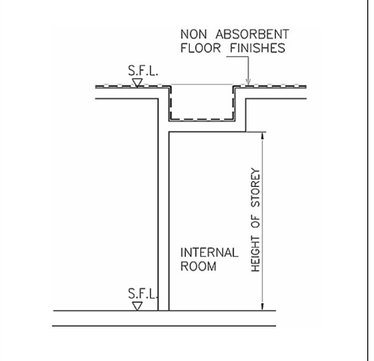
15 TYPICAL SECTION OF CURTAIN WALL 1:50



16 TYPICAL SECTION OF BALCONY & UTILITY PLATFORM 1:50



17 TEMPORARY REFUGE SPACE



18 TYPICAL DETAIL OF SUNKEN SLAB

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. STANDARD DETAILS MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:05

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
TYPICAL DETAILS

SCALE 1:50 (A1)

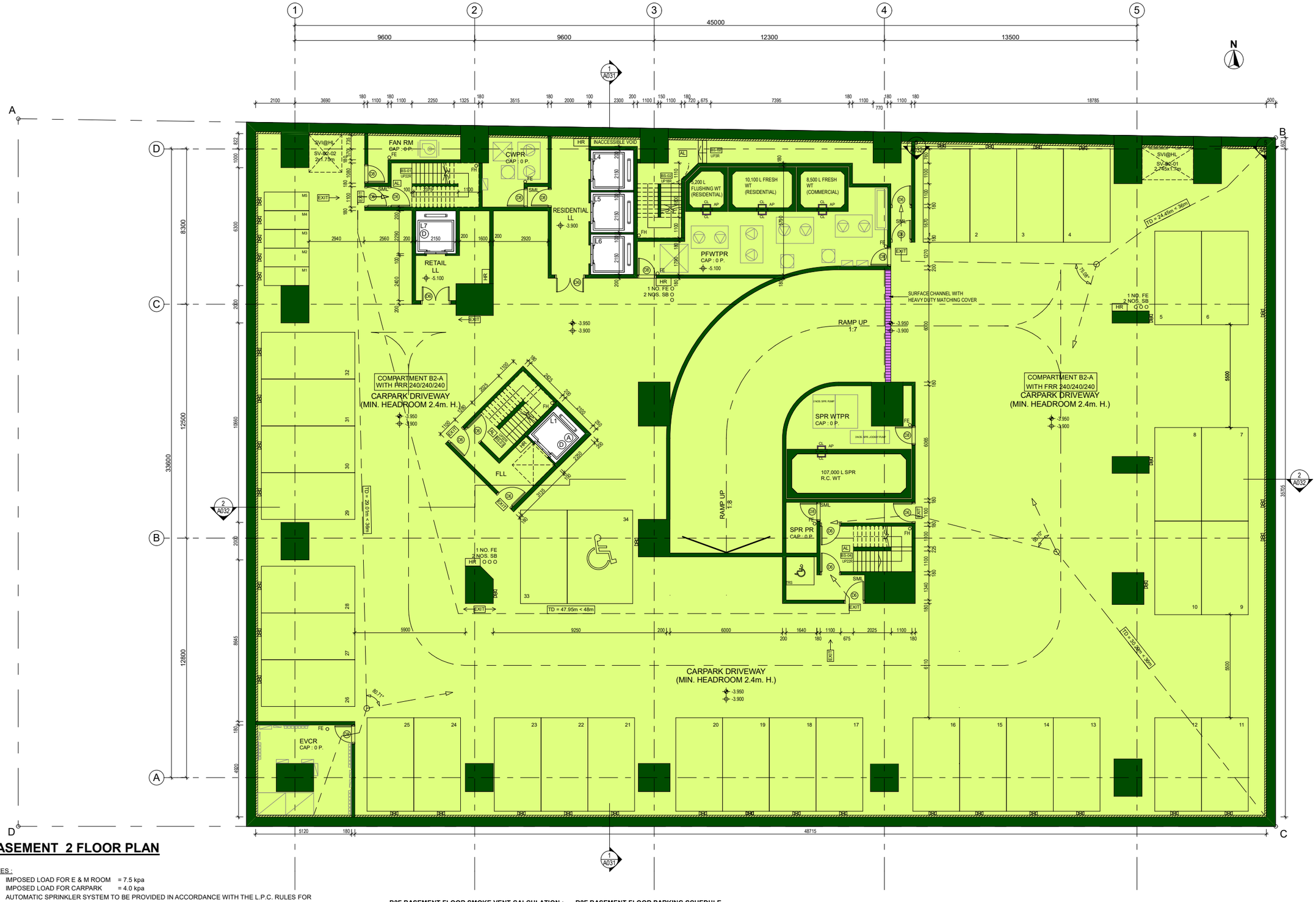
DRAWING NO. A002 **REV. NO.** -

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



BASEMENT 2 FLOOR PLAN

NOTES :

1. IMPOSED LOAD FOR E & M ROOM = 7.5 kpa
2. IMPOSED LOAD FOR CARPARK = 4.0 kpa
3. AUTOMATIC SPRINKLER SYSTEM TO BE PROVIDED IN ACCORDANCE WITH THE L.P.C. RULES FOR AUTOMATIC SPRINKLER INSTALLATIONS AND RELEVANT CIRCULAR LETTERS ISSUED BY THE HKFSD.
4. ARTIFICIAL LIGHTING TO BE PROVIDED FOR ALL STAIRCASES.
5. MECHANICAL VENTILATION TO BE PROVIDED FOR CARPARK.
6. SIZE OF PRIVATE CAR PARKING SPACE TO BE 5m x 2.5m x 2.4m(H)
7. SIZE OF MOTOR-CYCLE PARKING SPACE TO BE 2.4m x 1m x 2.4m(H)
8. ⊠ EV CHARGER RECESSED IN WALL TO BE PROVIDED FOR ALL CARPARKING SPACE IN ACCORDANCE WITH THE REQUIREMENT UNDER THE TECHNICAL GUIDELINES ON CHARGING FACILITIES FOR ELECTRIC VEHICLES (EV)ISSUED BY E.M.S.D.
9. SMOKE VENT SIZE SHALL REFER TO CALCULATIONS & COMPARTMENT AREA DIAGRAM.
10. 150H. CONCRETE CURB TO E&M ROOMS TO BE PROVIDED AS INDICATED ON THE PLAN.
11. ALL LOCKING DEVICE WHICH IS ELECTRICALLY OPERATED SHOULD BE CAPABLE OF AUTOMATIC RELEASE UPON ACTUATION OF AN AUTOMATIC HEAT OR SMOKE DETECTION SYSTEM OR THE OPERATION OF AN ALARM SYSTEM OR A CENTRAL MANUAL OVERRIDE. UPON POWER FAILURE @H/L, THE ELECTRIC LOCKING DEVICE SHOULD BE RELEASED AUTOMATICALLY.

B2F BASEMENT FLOOR SMOKE VENT CALCULATION :

B2-A AREA FOR SMOKE VENT
REQUIRED AREA :
= 1558.596 s.m. x 0.5 %
= 7.793 s.m.

PROVIDED AREA :

	SV-B2-01		SV-B2-02	
=	(2.745 x 1.7) s.m.	+	(2 x 1.75)	s.m.
=	4.667 s.m.	+	3.500	s.m.
=	8.167 s.m.	>	7.793	s.m.

B2F BASEMENT FLOOR PARKING SCHEDULE

TOTAL NOS. OF CARPARK FOR RESIDENTIAL (2500 W. x 5000 L. x 2400 H.)	=	13 NOS.	(1 ~ 13)
TOTAL NOS. OF CARPARK FOR VISITOR'S (2500 W. x 5000 L. x 2400 H.)	=	5 NOS.	(14 ~ 18)
TOTAL NOS. OF CARPARK FOR ACCESSIBLE PARKING SPACE (3500 W. x 5000 L. x 2400 H.)	=	1 NO.	(34)
TOTAL NOS. OF CARPARK FOR RETAIL (2500 W. x 5000 L. x 2400 H.)	=	15 NOS.	(19 ~ 33)
TOTAL NOS. OF MOTORCYCLE FOR RESIDENTIAL (1000 W. x 2400 L. x 2400 H.)	=	3 NOS.	(M1 ~ M3)
TOTAL NOS. OF MOTORCYCLE FOR RETAIL (1000 W. x 2400 L. x 2400 H.)	=	2 NOS.	(M4 ~ M5)

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. TRAVEL DISTANCE FOR CRITICAL SITUATION IS DEMONSTRATED.
2. AREA OF PLANT ROOM IS JUSTIFIED IN SUPPORTING DOCUMENT.
3. DESIGN IMPOSED LOADS ON FLOOR AND DETAILS OF CAR PARKING SPACE FOR PERSONS WITH A DISABILITY MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:05

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
BASEMENT 2 FLOOR PLAN

SCALE 1:100 (A1)

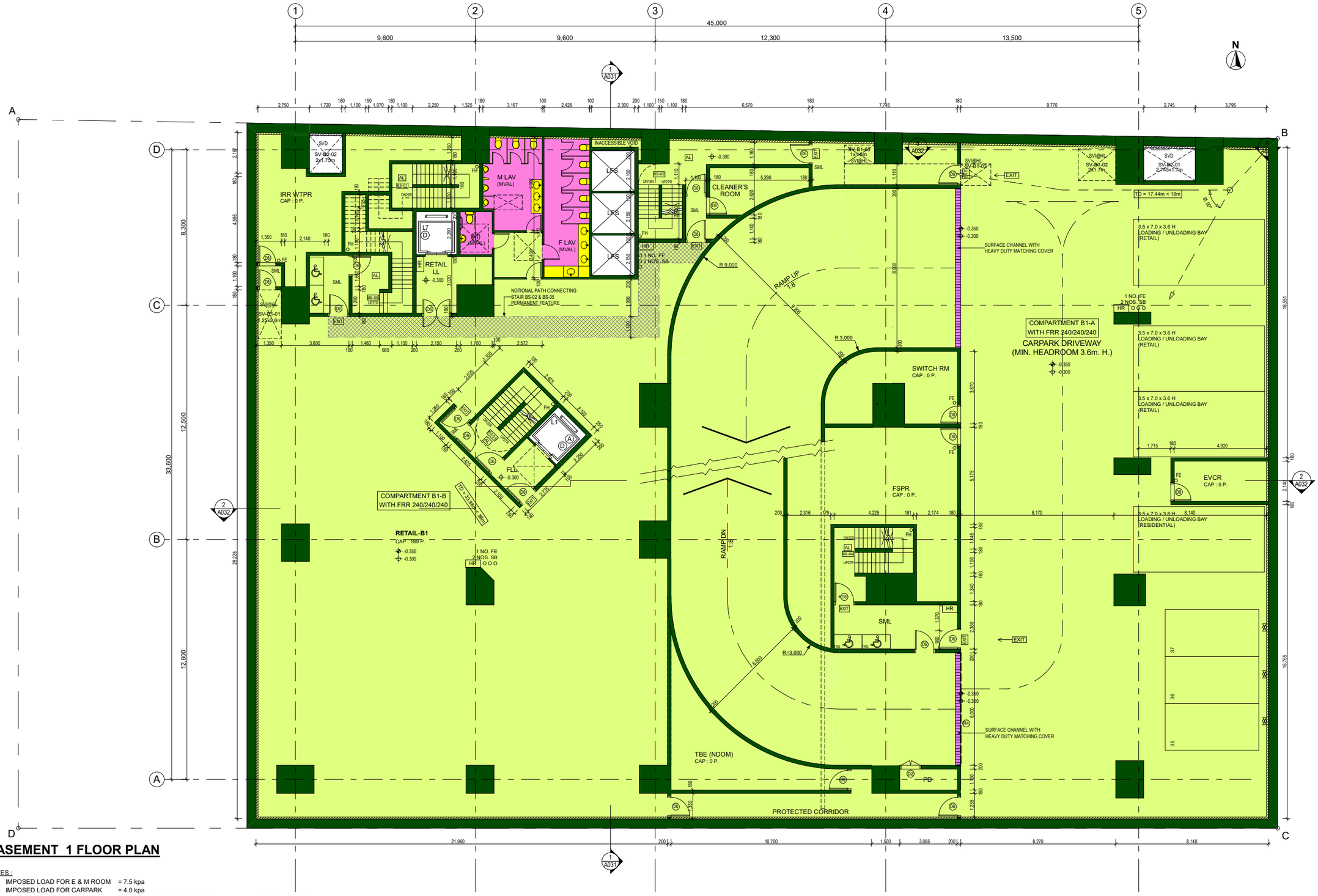
DRAWING NO.	REV. NO.
A003	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



BASEMENT 1 FLOOR PLAN

NOTES :

1. IMPOSED LOAD FOR E & M ROOM = 7.5 kpa
2. IMPOSED LOAD FOR CARPARK = 4.0 kpa
3. AUTOMATIC SPRINKLER SYSTEM TO BE PROVIDED IN ACCORDANCE WITH THE L.P.C. RULES FOR AUTOMATIC SPRINKLER INSTALLATIONS AND RELEVANT CIRCULAR LETTERS ISSUED BY THE HKFSD.
4. ARTIFICIAL LIGHTING TO BE PROVIDED FOR ALL STAIRCASES.
5. MECHANICAL VENTILATION TO BE PROVIDED FOR CARPARK.
6. SIZE OF PRIVATE CAR PARKING SPACE TO BE 5m x 2.5m x 2.4m(H)
7. SIZE OF MOTOR-CYCLE PARKING SPACE TO BE 2.4m x 1m x 2.4m(H)
8. EV CHARGER RECESSED IN WALL TO BE PROVIDED FOR ALL CARPARKING SPACE IN ACCORDANCE WITH THE REQUIREMENT UNDER THE TECHNICAL GUIDELINES ON CHARGING FACILITIES FOR ELECTRIC VEHICLES (EV)ISSUED BY E.M.S.D.
9. SMOKE VENT SIZE SHALL REFER TO CALCULATIONS & COMPARTMENT AREA DIAGRAM.
10. 150H. CONCRETE CURB TO E&M ROOMS TO BE PROVIDED AS INDICATED ON THE PLAN.
11. ALL LOCKING DEVICES WHICH ARE ELECTRICALLY OPERATED SHOULD BE CAPABLE OF AUTOMATIC RELEASE UPON ACTUATION OF AN AUTOMATIC HEAT OR SMOKE DETECTION SYSTEM OR THE OPERATION OF AN ALARM SYSTEM OR A CENTRAL MANUAL OVERRIDE. UPON POWER FAILURE @H/L, THE ELECTRIC LOCKING DEVICE SHOULD BE RELEASED AUTOMATICALLY.

B1F BASEMENT FLOOR PARKING SCHEDULE

TOTAL NOS. OF CARPARK FOR RETAIL (2500 W. x 5000 L. x 2400 H.)	=	3 NOS. (35 ~ 37)
TOTAL NOS. OF LOADING / UNLOADING FOR RESIDENTIAL (3500 W. x 7000 L. x 3600 H.)	=	1 NOS.
TOTAL NOS. OF LOADING / UNLOADING FOR RETAIL (3500 W. x 7000 L. x 3600 H.)	=	3 NOS.

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. TRAVEL DISTANCE FOR CRITICAL SITUATION IS DEMONSTRATED.
2. AREA OF PLANT ROOM IS JUSTIFIED IN SUPPORTING DOCUMENT.
3. DESIGN IMPOSED LOADS ON FLOOR AND DETAILS OF WATERCLOSET CUBICLE AND URINAL FOR PERSONS WITH A DISABILITY MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:05

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
BASEMENT 1 FLOOR PLAN

SCALE 1:100 (A1)

DRAWING NO.	REV. NO.
A004	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

GROUND FLOOR PLAN

NOTES :

1. IMPOSED LOAD FOR LIFT LOBBIES = 3.0 kpa
2. IMPOSED LOAD FOR E & M = 7.5 kpa
3. AUTOMATIC SPRINKLER SYSTEM TO BE PROVIDED IN ACCORDANCE WITH THE L.P.C. RULES FOR AUTOMATIC SPRINKLER INSTALLATIONS AND RELEVANT CIRCULAR LETTERS ISSUED BY THE HKFSD.
4. ARTIFICIAL LIGHTING TO BE PROVIDED FOR ALL STAIRCASES.
5. 150H. CONCRETE CURB TO E&M ROOMS TO BE PROVIDED AS INDICATED ON THE PLAN.

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. TRAVEL DISTANCE FOR CRITICAL SITUATION IS DEMONSTRATED.
2. AREA OF PLANT ROOM IS JUSTIFIED IN SUPPORTING DOCUMENT.
3. DESIGN IMPOSED LOADS ON FLOOR AND DETAILS OF DROPPED KERB, STEPS AND STAIRCASES WITH HANDRAILS, DOOR ON ACCESSIBLE ROUTE INCLUDING FRAMELESS GLASS DOOR AND AUTOMATIC MAIN ENTRANCE DOOR FOR PERSONS WITH A DISABILITY MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:05

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
GROUND FLOOR PLAN

SCALE 1:100 (A1)

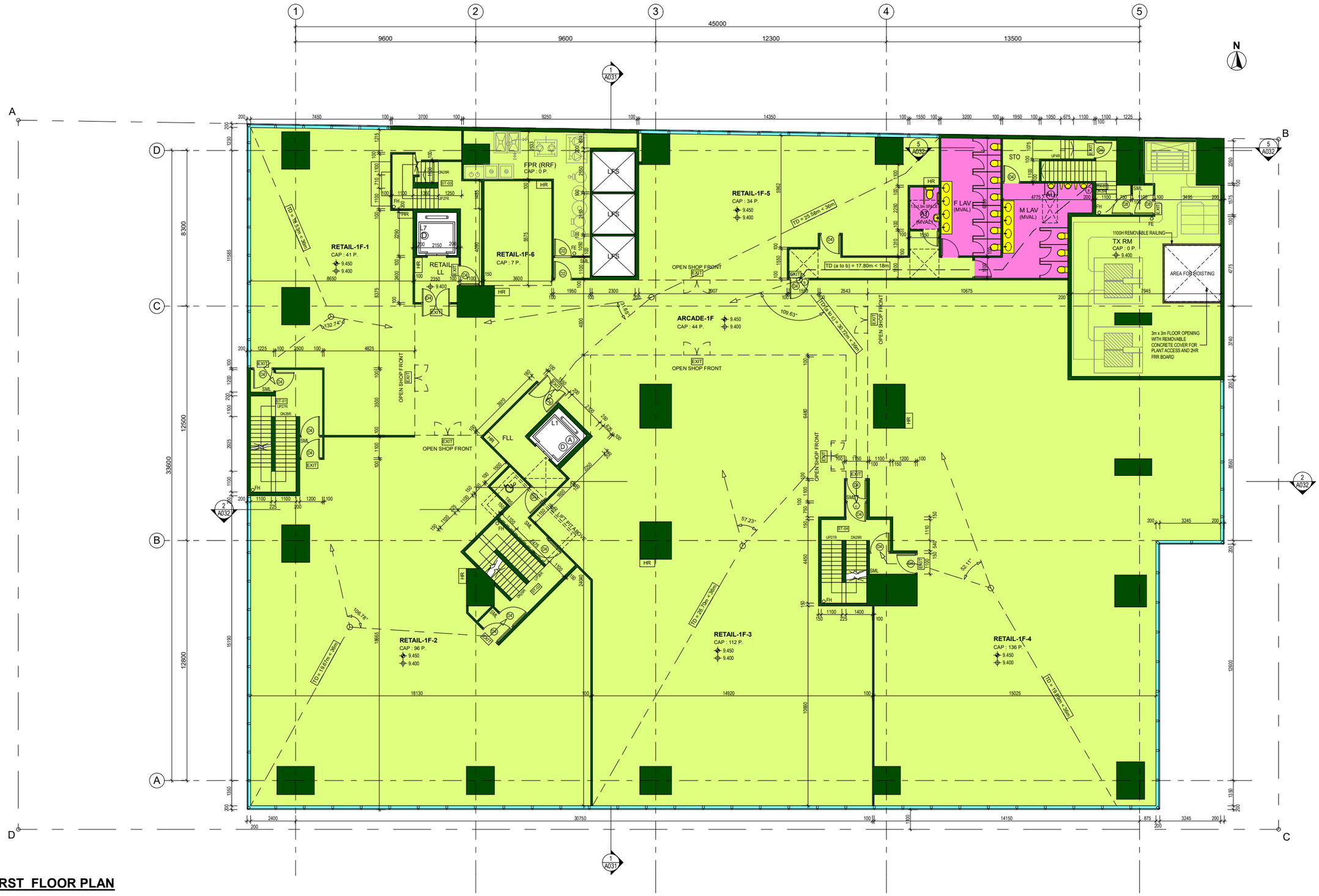
DRAWING NO.	REV. NO.
A005	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



FIRST FLOOR PLAN

NOTES :

1. IMPOSED LOAD FOR LIFT LOBBIES = 3.0 kpa
2. IMPOSED LOAD FOR E & M = 7.5 kpa
3. AUTOMATIC SPRINKLER SYSTEM TO BE PROVIDED IN ACCORDANCE WITH THE L.P.C. RULES FOR AUTOMATIC SPRINKLER INSTALLATIONS AND RELEVANT CIRCULAR LETTERS ISSUED BY THE HKFSD.
4. ARTIFICIAL LIGHTING TO BE PROVIDED FOR ALL STAIRCASES.
5. MECHANICAL VENTILATION AND ARTIFICIAL LIGHTING TO BE PROVIDED TO ACCESSIBLE UNISEX TOLIET (AT) , MALE LAVATORY & FEMALE LAVATORY.
6. 150H. CONCRETE CURB TO E&M ROOMS TO BE PROVIDED AS INDICATED ON THE PLAN

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. TRAVEL DISTANCE FOR CRITICAL SITUATION IS DEMONSTRATED.
2. AREA OF PLANT ROOM IS JUSTIFIED IN SUPPORTING DOCUMENT.
3. DESIGN IMPOSED LOADS ON FLOOR AND DETAILS OF WATERCLOSET CUBICLE AND URINAL FOR PERSONS WITH A DISABILITY MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:05

PROJECT

BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE

FIRST FLOOR PLAN

SCALE 1:100 (A1)

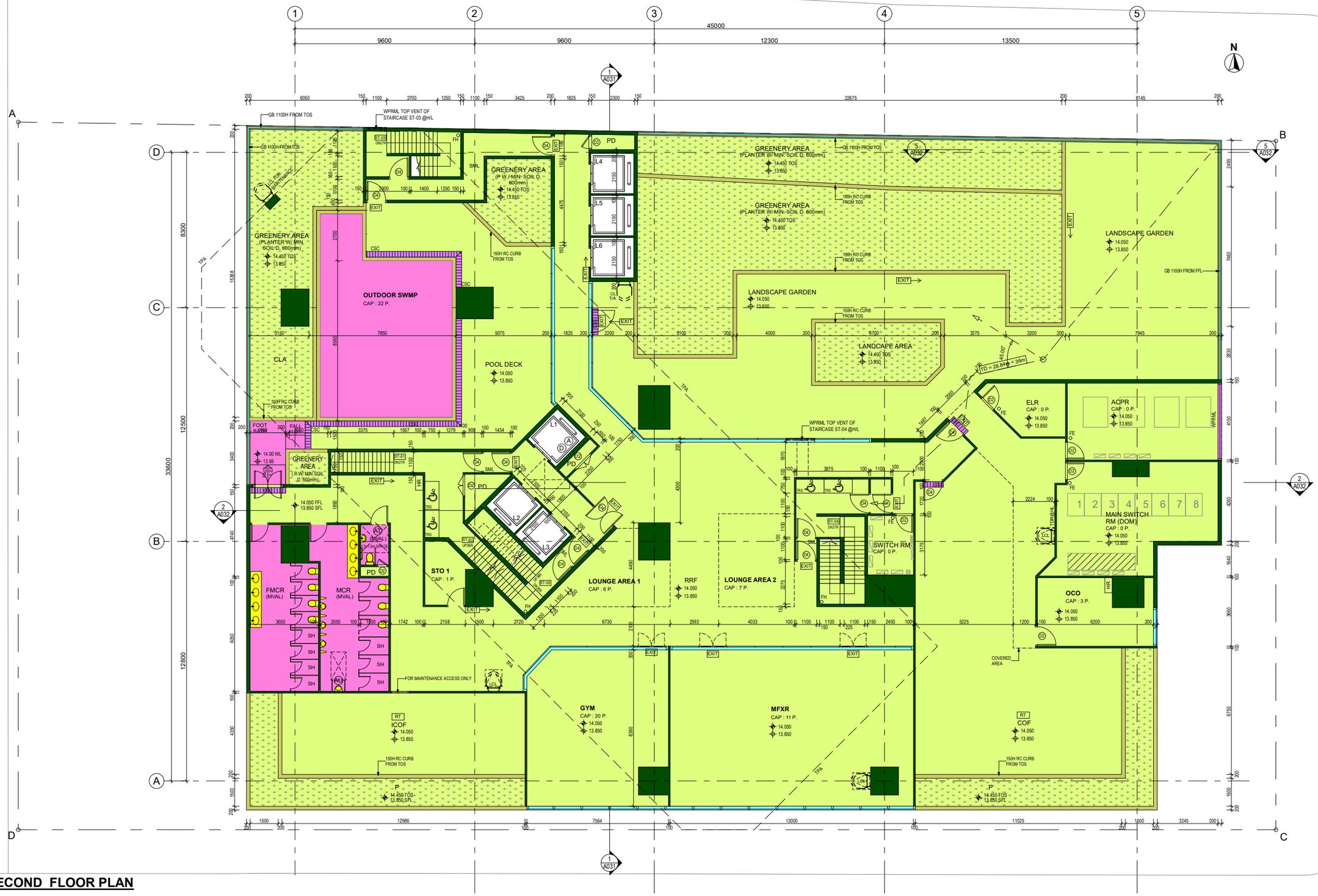
DRAWING NO.	REV. NO.
A006	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



SECOND FLOOR PLAN

NOTES :

1. IMPOSED LOAD FOR LIFT LOBBIES = 3.0 kpa
2. IMPOSED LOAD FOR E & M = 7.5 kpa
3. AUTOMATIC SPRINKLER SYSTEM TO BE PROVIDED IN ACCORDANCE WITH THE L.P.C. RULES FOR AUTOMATIC SPRINKLER INSTALLATIONS AND RELEVANT CIRCULAR LETTERS ISSSUED BY THE HKFSD.
4. ARTIFICIAL LIGHTING TO BE PROVIDED FOR ALL STAIRCASES.
5. MECHANICAL VENTILATION AND ARTIFICIAL LIGHTING TO BE PROVIDED TO ACCESSIBLE UNISEX TOLIET (AT) , MALE LAVATORY & FEMALE LAVATORY.
6. 150H. CONCRETE CURB TO E&M ROOMS TO BE PROVIDED AS INDICATED ON THE PLAN.

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. TRAVEL DISTANCE FOR CRITICAL SITUATION IS DEMONSTRATED.
2. AREA OF PLANT ROOM IS JUSTIFIED IN SUPPORTING DOCUMENT.
3. DESIGN IMPOSED LOADS ON FLOOR AND DETAILS OF WATERCLOSET CUBICLE AND URINAL FOR PERSONS WITH A DISABILITY MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:05

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
SECOND FLOOR PLAN

SCALE 1:100 (A1)

DRAWING NO.	REV. NO.
A007	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

FLAT 7 – BR. 1 (3/F TO 22/F)

UNOBSTRUCTED VISION AREA (UVA) PROVIDED :

(UVA) OF WINDOW

HEIGHT OF FACADE FOR DOMESTIC - HABITABLE ROOM
= 80.00 (R/F) - 20.00 (3/F) + 1.50 - 2.40
= 59.10 m

UNOBSTRUCTED VISION AREA (UVA) REQUIREMENT FOR DOMESTIC HABITABLE ROOM (8 % VDF)

HEIGHT OF FACADE (m)	10% UFA	15% UFA	20% UFA
= 59.10 m	873	682	491

PERFORMANCE-BASED APPROACH CALCULATIONS

= C1 x 4

= 261.507 s.m. x 4

= 1046.028 s.m. > 873 s.m. (10% of UFA)

X X 道 X X ROAD

WINDOW FACING TO STREET

C1 = 261.507 m²

59.100

WINDOW FACING TO STREET

X X 街 X X STREET (12.8 WIDE)

CENTRE LINE OF STREET

7.500

THIRD FLOOR PLAN

STOREY HEIGHT = 3000 mm

NOTES :

1. IMPOSED LOAD = 2.5 kpa
2. IMPOSED LOAD FOR FLAT ROOF = 2.0 kpa
3. LIFT DOOR OPENING ARRANGEMENT :
   LIFT NO. L1, L2 & L3 SERVED ALL FLOORS
   (LIFT NO. L1 FOR FIREMAN'S LIFT & ACCESSIBLE LIFT)
4. NOTES FOR INTERNAL BATHROOMS :
   A SYSTEM OF ARTIFICIAL LIGHTING AND MECHANICAL VENTILATION PRODUCING 5 AIR CHANGES PER HOUR) IS IN OPERATION AT TIME WHEN THE BATHROOM IS IN USE.
5. 150H. CONCRETE CURB TO E&M ROOMS TO BE PROVIDED AS INDICATED ON THE PLAN.
6. AUTOMATIC SPRINKLER SYSTEM TO BE PROVIDED IN ACCORDANCE WITH THE L.P.C. RULES FOR AUTOMATIC SPRINKLER INSTALLATIONS AND RELEVANT CIRCULAR LETTERS ISSUED BY THE HKFSD.
7. ALL BATHROOM / MVAL WITH * MARK HAVE TRANSFER AIR DUCT AT H/L.
8. ALL KITCHEN WITH * MARK ARE EQUIPPED WITH ELECTRIC FUEL.

LEGEND :

B -/30/30 F.R.R. FULL HEIGHT FIRE RESISTING BARRIER

O KIT OPEN KITCHEN

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. PRESCRIBED WINDOWS ADOPTING CRITICAL UNOBSTRUCTED VISION AREA FOR EACH TOWER UNDER PNAP APP-130 IS DEMONSTRATED.
2. LAYOUT OF SUNKEN SLAB MIGHT BE PROVIDED IN DRAINAGE PLAN.
3. DESIGN IMPOSED LOADS ON FLOOR AND DETAILS OF OPENABLE WINDOWS MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II)

14/2/2023 4:05

PROJECT

BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE

THIRD FLOOR PLAN

SCALE 1:100 (A1)

DRAWING NO.	REV. NO.
A011	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

40% OF THE PERIMETER OF THE BALCONY & UTILITY PLATFORM

LOCATION : FLAT 1 ~ BALCONY
TOTAL PERIMETER : (1.450 + 1.379) x 2
: 5.658 m
40% OF LENGTH : 2.263 m
PROVIDED LENGTH : 2.829 m > 2.263 m

LOCATION : FLAT 1 ~ UTILITY PLATFORM
TOTAL PERIMETER : (1.000 + 1.500) x 2
: 5.000 m
40% OF LENGTH : 2.000 m
PROVIDED LENGTH : 2.500 m > 2.000 m

TOWER WINDOW AREA & OPENABLE AREA CALCULATION

FLAT	USE (EACH FLOOR)	U.F.A. (s.m.)	PRO. LIGHTING AREA (W) x (H) x 80%		(s.m.)	REQ. LIGHTING U.F.A. (1/10)	PRO. OPENABLE AREA (W) x (H) x 80%		(s.m.)	REQ. OPENABLE AREA U.F.A. (1/15)
1 & 6	LIV / DIN	18.853	1,371 x 1,375 x 80%	=	1.508	1.565	1,371 x 0.950 x 80%	=	1.042	1.241
	*BATH 1	2.940	1,229 x 1,350 x 80%	=	1.327	0.294	0.750 x 1,350 x 80%	=	0.810	0.294 (1/10)
			Total	=	2.835	> 2.279	Total	=	1.852	> 1.535

STAGE II

N

TYPICAL FLOOR PLAN

(4F~22F TOTAL 19 STOREYS)

STOREY HEIGHT = 3000 mm

NOTES :

1. IMPOSED LOAD = 2.5 kpa
2. LIFT DOOR OPENING ARRANGEMENT :
   LIFT NO. L1, L2 & L3 SERVED ALL FLOORS
   (LIFT NO. L1 FOR FIREMAN'S LIFT & ACCESSIBLE LIFT)
3. NOTES FOR INTERNAL BATHROOMS :
   A SYSTEM OF ARTIFICIAL LIGHTING AND MECHANICAL VENTILATION PRODUCING 5 AIR CHANGES PER HOUR) IS IN OPERATION AT TIME WHEN THE BATHROOM IS IN USE.
4. 150H. CONCRETE CURB TO E&M ROOMS TO BE PROVIDED AS INDICATED ON THE PLAN.
5. AUTOMATIC SPRINKLER SYSTEM TO BE PROVIDED IN ACCORDANCE WITH THE L.P.C. RULES FOR AUTOMATIC SPRINKLER INSTALLATIONS AND RELEVANT CIRCULAR LETTERS ISSUED BY THE HKFSD.
6. ALL BATHROOM / MVAL WITH * MARK HAVE TRANSFER AIR DUCT AT H/L.
7. ALL KITCHEN WITH * MARK ARE EQUIPPED WITH ELECTRIC FUEL.

LEGEND :

B -/30/30 F.R.R. FULL HEIGHT FIRE BARRIER

O KIT OPEN KITCHEN

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. AREA CALCULATION FOR PRESCRIBED WINDOWS FOR CRITICAL SITUATIONS IS DEMONSTRATED.
2. LAYOUT OF SUNKEN SLAB MIGHT BE PROVIDED IN DRAINAGE PLAN.
3. DESIGN IMPOSED LOADS ON FLOOR AND DETAILS OF OPENABLE WINDOWS MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).
4. AREA CALCULATIONS FOR PRESCRIBED WINDOWS FOR CRITICAL SITUATIONS MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:05

PROJECT

BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE

TYPICAL FLOOR PLAN (4/F TO 22/F)

SCALE 1:100 (A1)

DRAWING NO.	REV. NO.
A012	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev. Date Amendment Purpose

COMMENTARY

1. DESIGN IMPOSED LOADS ON FLOOR MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:05

PROJECT
**BD SAMPLE -
PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO**

DRAWING TITLE
MAIN ROOF PLAN

SCALE 1:100 (A1)

DRAWING NO. A013
REV. NO. -

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

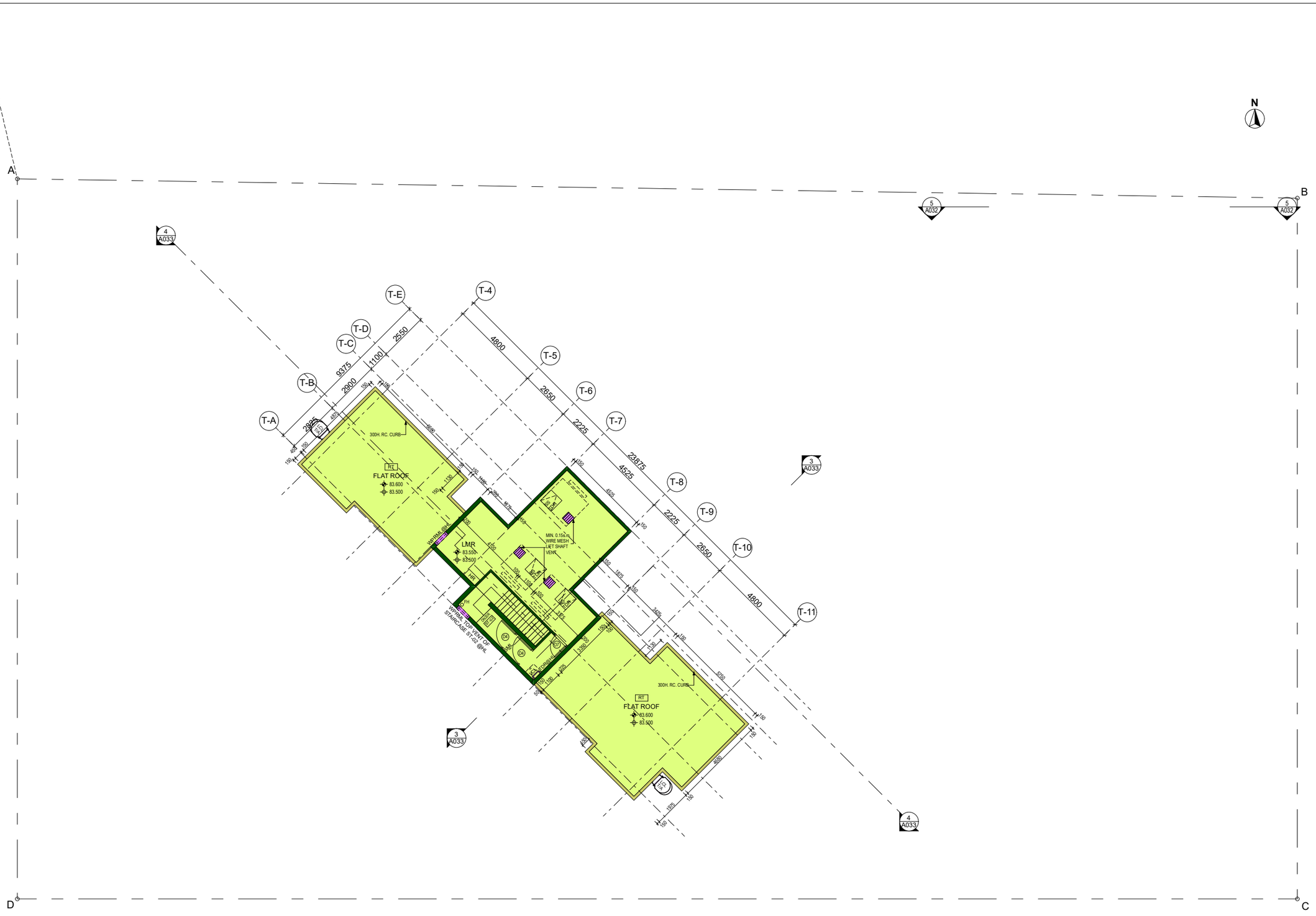
90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

MAIN ROOF PLAN

NOTES :

1. IMPOSED LOAD = 2.0 kpa
2. IMPOSED LOAD FOR ELR, WATER TANK & PUMP ROOM = 10.0 kpa
3. 150H. CONCRETE CURB TO E&M ROOMS TO BE PROVIDED AS INDICATED ON THE PLAN



UPPER ROOF 1 FLOOR PLAN (UR1F)

NOTES :

1. IMPOSED LOAD = 2.0 kpa
2. IMPOSED LOAD FOR E&M ROOM = 7.5 kps
3. 150H. CONCRETE CURB TO E&M ROOMS TO BE PROVIDED AS INDICATED ON THE PLAN

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. DESIGN IMPOSED LOADS ON FLOOR MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:05

PROJECT

BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE

UPPER ROOF 1 FLOOR PLAN (UR1F)

SCALE 1:100 (A1)

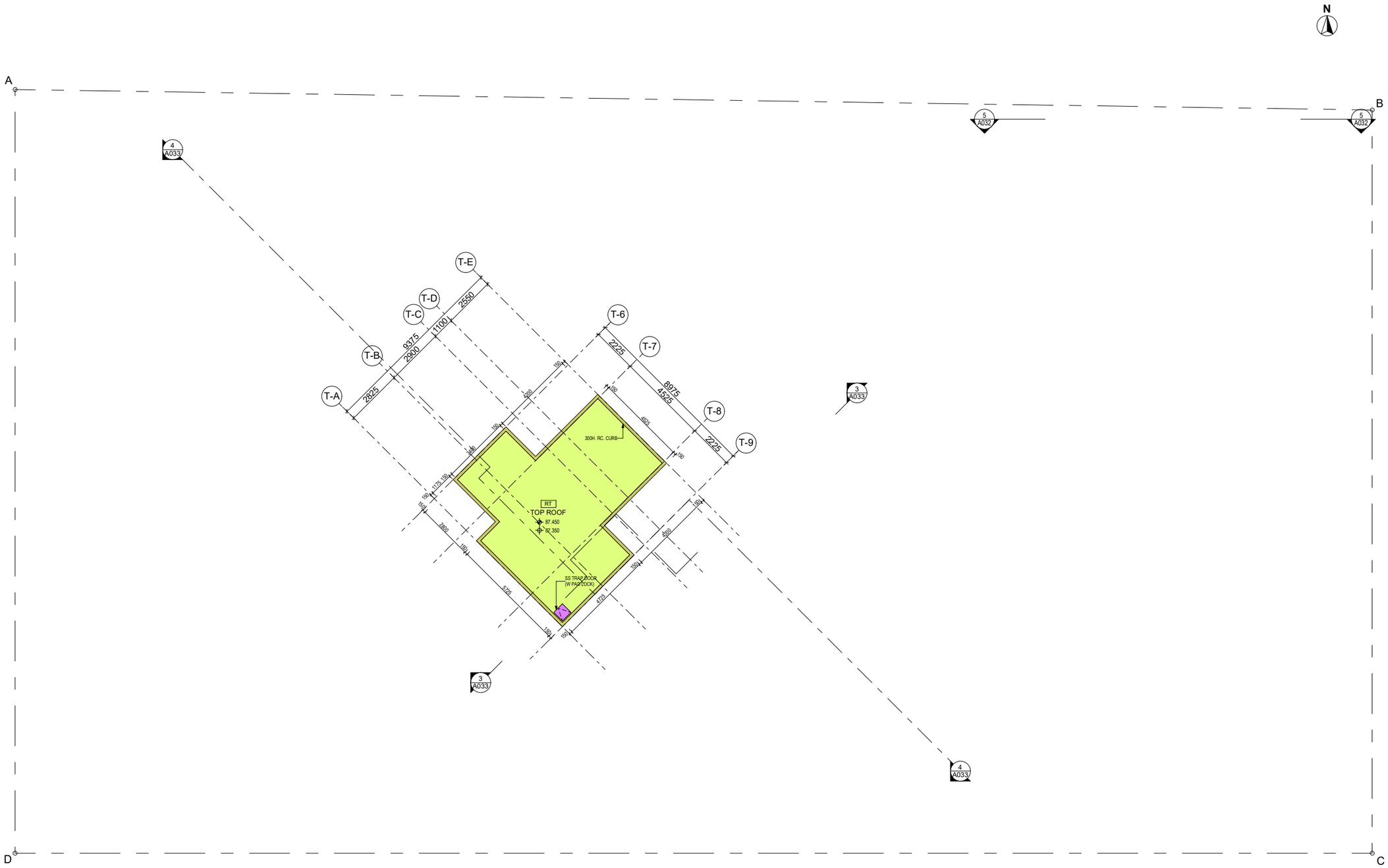
DRAWING NO.	REV. NO.
A014	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



UPPER ROOF 2 FLOOR PLAN (UR2F)

NOTES :

1. IMPOSED LOAD = 2.0 kpa

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. DESIGN IMPOSED LOADS ON FLOOR MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:05

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
UPPER ROOF 2 FLOOR PLAN (UR2F)

SCALE 1:100 (A1)

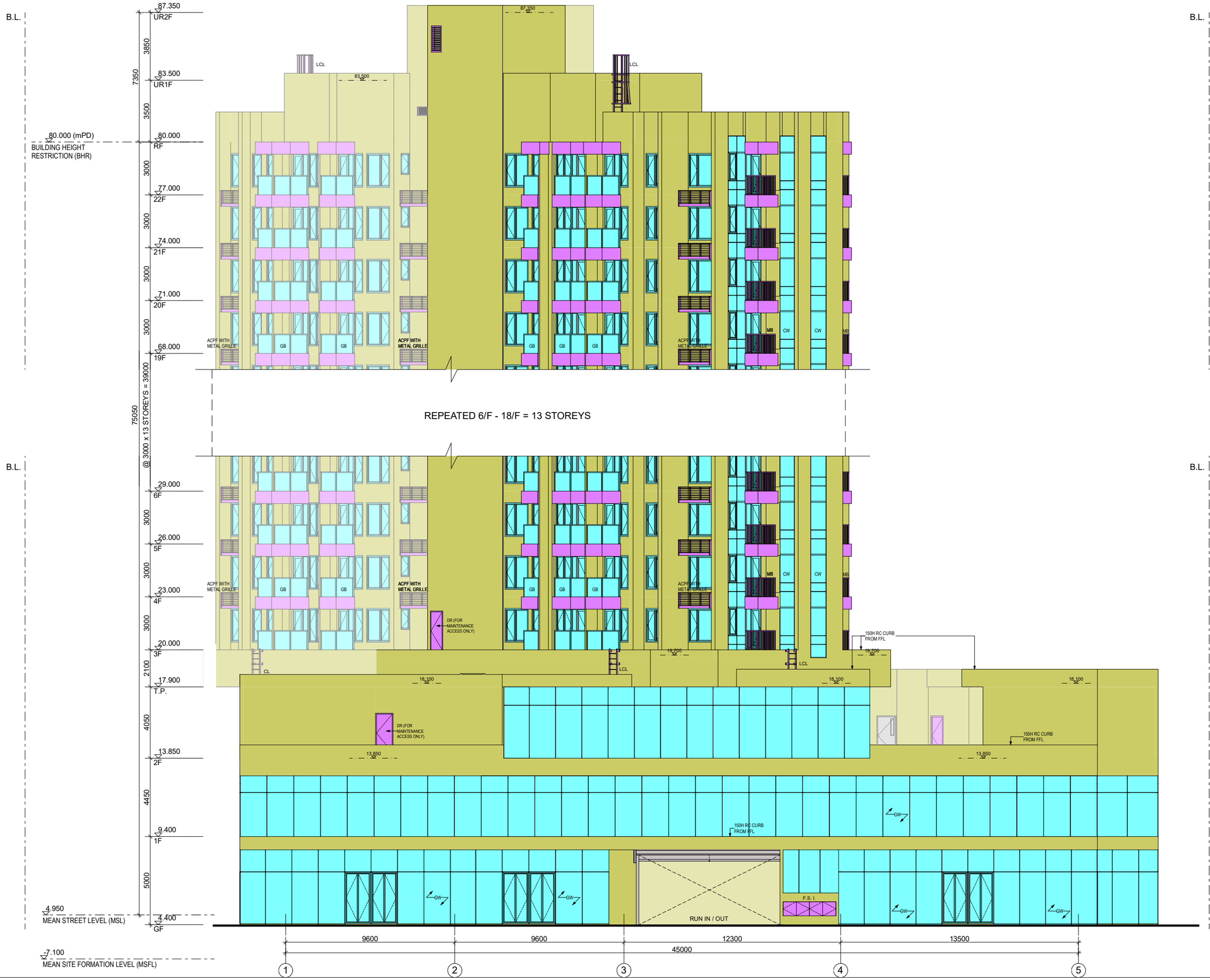
DRAWING NO.	REV. NO.
A015	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



ELEVATION A

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. DETAILS OF OPENABLE WINDOWS MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:05

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
TOWER ELEVATION A

SCALE 1:100 (A1)

DRAWING NO.	REV. NO.
A021	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

ELEVATION B

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. DETAILS OF OPENABLE WINDOWS MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:05

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
TOWER ELEVATION B

SCALE 1:100 (A1)

DRAWING NO.	REV. NO.
A022	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

ELEVATION C

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. DETAILS OF OPENABLE WINDOWS MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:05

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
TOWER ELEVATION C

SCALE 1:100 (A1)

DRAWING NO.	REV. NO.
A023	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

ELEVATION D

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. DETAILS OF OPENABLE WINDOWS MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:05

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
TOWER ELEVATION D

SCALE 1:100 (A1)

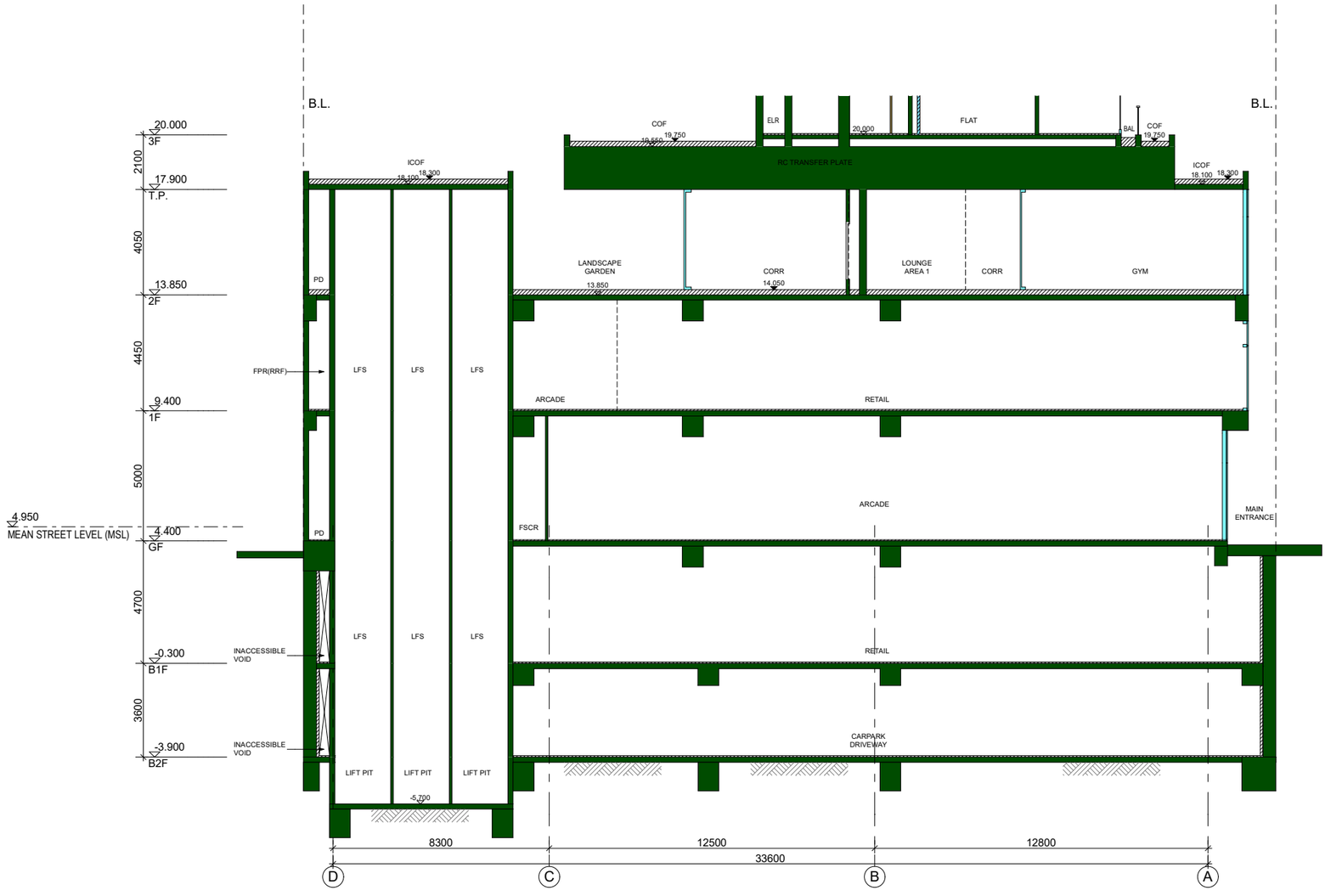
DRAWING NO.	REV. NO.
A024	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



SECTION 1-1

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

14/2/2023 4:05

PROJECT

BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE

PODIUM SECTION 1-1

SCALE 1:100 (A1)

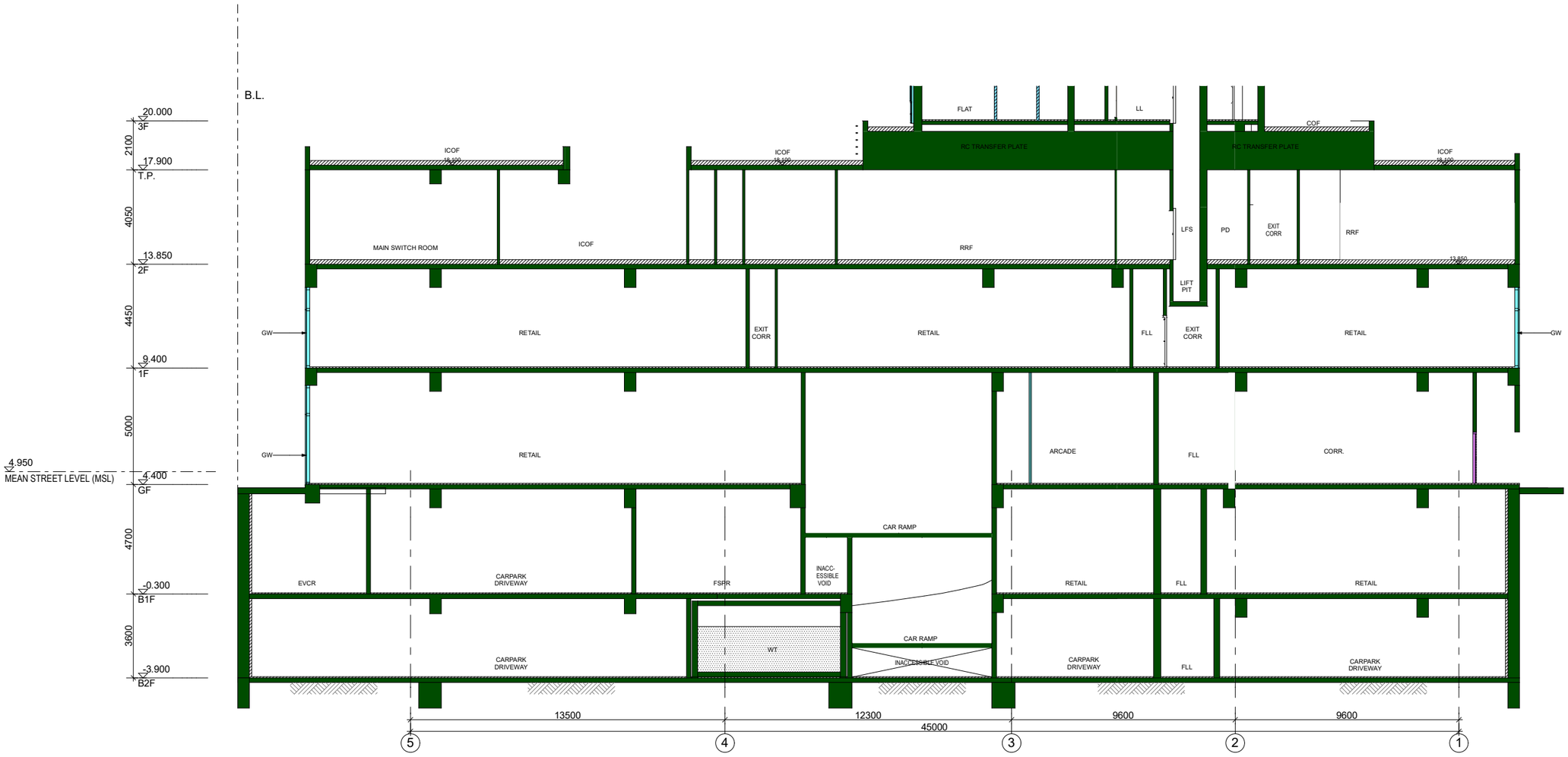
DRAWING NO.	REV. NO.
A031	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



SECTION 2-2

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

14/2/2023 4:05

PROJECT

BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE

PODIUM SECTION 2-2

SCALE 1:100 (A1)

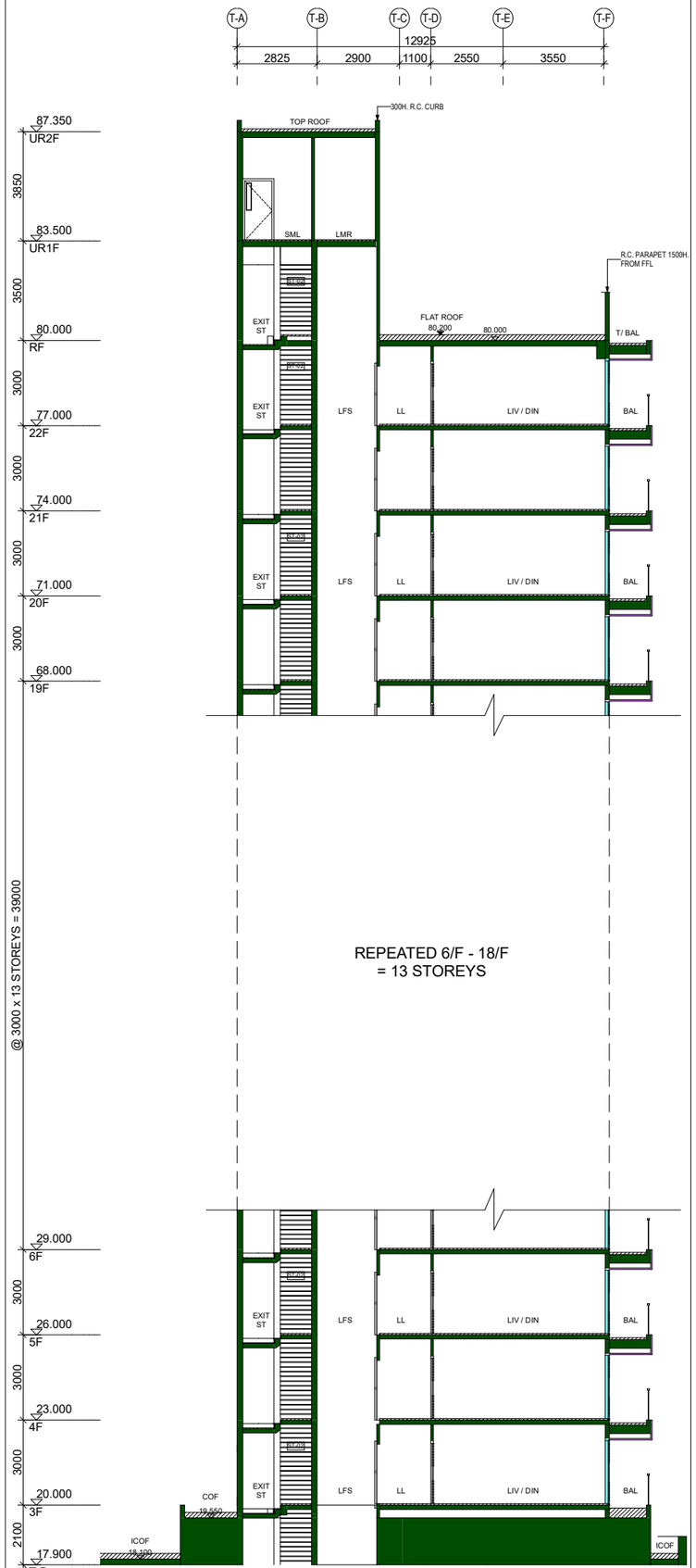
DRAWING NO.	REV. NO.
A032	-

SOURCE

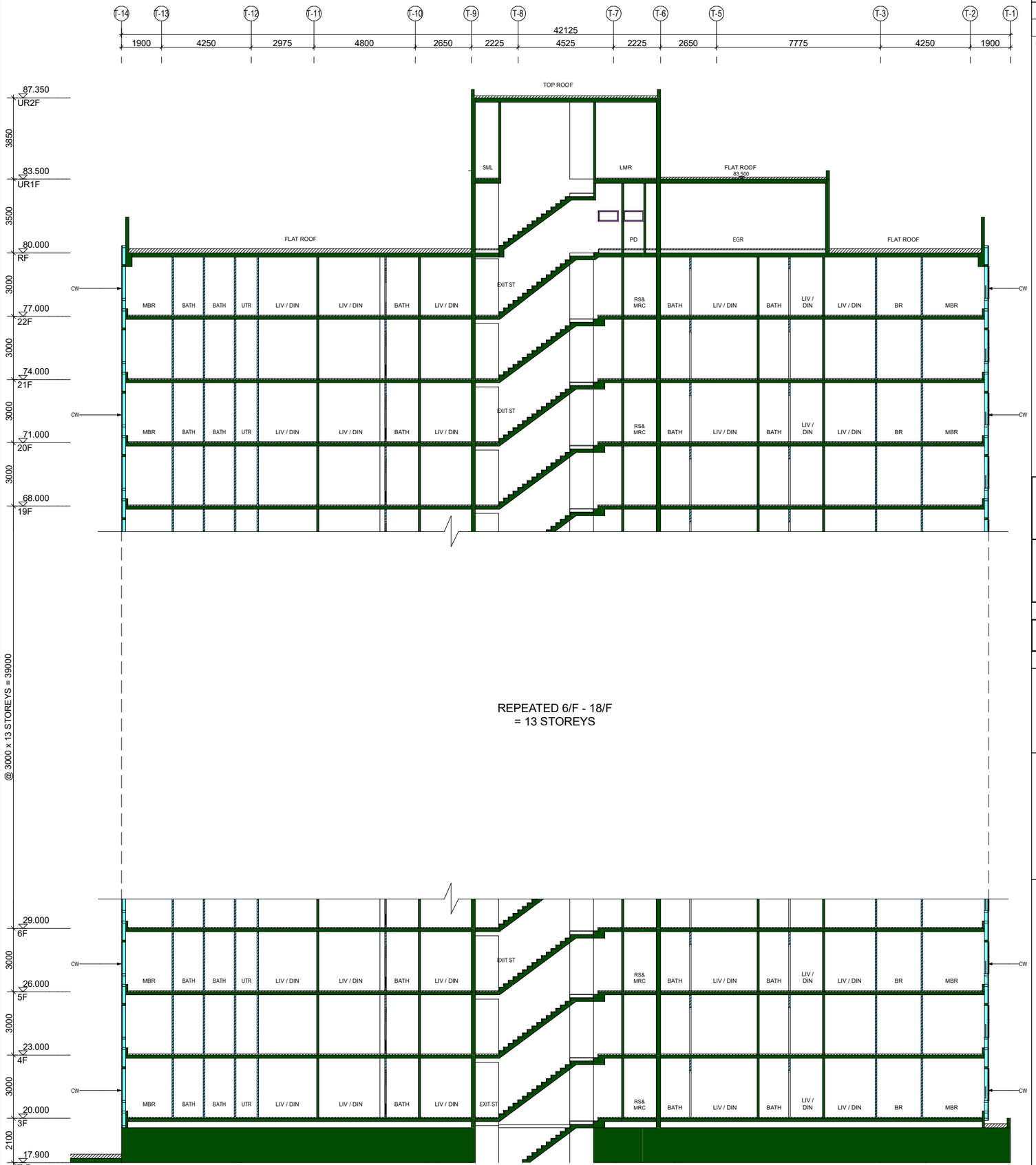
90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



SECTION 3-3



SECTION 4-4

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

14/2/2023 4:05

PROJECT

BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE

TOWER SECTION 3-3 & 4-4

SCALE 1:100 (A1)

DRAWING NO.	REV. NO.
A033	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

TOTAL DOMESTIC G.F.A. CALCULATIONS

(BEFORE EXEMPTION OF LIFT SHAFT AREA UNDER PNAP APP-89)
(CALCULATION REFER DWG. NO. C051~C052)

			(LOBBY & EXIT STAIRCASE)				
GF			1 STOREY	=	70.943	s.m.	
1F			1 STOREY	=	23.055	s.m.	
2F			1 STOREY	=	230.874	s.m.	
3F ~ 22F	498.749 s.m. (EACH FLOOR) x		20 STOREYS	=	9974.980	s.m.	
			23 SUB-TOTAL :	=	10299.852	s.m.	

G.F.A. CONCESSION UNDER PNAP APP-89 (FOR PROVISION OF BETTER LIFT SERVICE)

(10% CAP ON G.F.A. CONCESSIONS TABLE ITEM 18)
(CALCULATION REFER DWG. NO. C053)

LIFT NO. L1, L2 & L3	13.545 s.m.	(2F ~ 22F) x 21	STOREYS	=	284.445	s.m.
LIFT NO. L1	4.725 s.m.	(GF~ 1F) x 2	STOREYS	=	9.450	s.m.
					293.895	
TOTAL DOMESTIC LIFT SHAFT AREAS SHOWN ON PLANS AND INCLUDED AS DOMESTIC G.F.A. :						
(293.895 s.m. / 10028.952 s.m. x 100%)				=	2.85	% OF TOTAL DOMESTIC G.F.A.
6% OF TOTAL DOMESTIC G.F.A.		10299.852	s.m. x 6%	=	617.991	s.m.
2.5% OF TOTAL DOMESTIC G.F.A.		10299.852	s.m. x 2.5%	=	257.496	s.m.
PERMITTED EXEMPTION DOMESTIC G.F.A. FROM LIFT SHAFTS						
293.895 s.m. - (10299.852 s.m. x 2.5 %)				=	36.399	s.m. **(CONCESSIONS ITEM 18)**
3.5% OF TOTAL DOMESTIC G.F.A.		10299.852	s.m.	=	360.495	s.m. (NOT EXCEEDING 3.5% OF THE TOTAL DOMESTIC G.F.A.)
ACTUAL DOMESTIC G.F.A.		10299.852	s.m.	-	36.399	s.m.
			TOTAL :	=	10263.453	s.m. (PERMITTED EXEMPTION DOMESTIC G.F.A. FROM LIFT SHAFTS)

TOTAL NON-DOMESTIC G.F.A. CALCULATIONS

(PODIUM CAL. REFER DWG. NO. C051 TO C052)

B1F	RETAIL	=	875.406	s.m.
G/F	RETAIL & ARCADE	=	1415.101	s.m.
1/F	RETAIL & ARCADE	=	1693.067	s.m.
1/F & 2/F	RRF	=	166.035	s.m.
	TOTAL :	=	4149.609	s.m.

RESIDENT'S RECREATIONAL FACILITIES (R.R.F.) CALCULATION

(10% CAP ON G.F.A. CONCESSIONS TABLE ITEM 15)
(CALCULATION REFER DWG. NO. C052 & C053)

1/F	(NOTE DWG NO. C052)	=	31.431	s.m.
2/F	(NOTE DWG NO. C053)	=	647.777	s.m.
	TOTAL	=	679.208	s.m.
ACCOUNTABLE NON-DOMESTIC GFA FOR RRF				
5% OF ACTUAL DOMESTIC GFA = 10263.453 X 5 %		=	513.173	s.m. **(CONCESSIONS ITEM 15)**
= 679.208 - 513.173		=	166.035	s.m.

NUMBER OF UNIT CALCULATION

3F ~ 22F	12 UNITS x 20 STOREYS	=	240	UNIT
	TOTAL :	=	240	UNIT

CALCULATION AREA OF OWNER'S CORPORATION OFFICE (O.C.O.)

(CALCULATION REFER DWG. NO. C052)

= 20.000 s.m.

ACTUAL O.C.O. AREA = 19.972 s.m. < 20 s.m.

REFUSE STORAGE & MATERIAL RECOVERY CHAMBER NET FLOOR CALCULATION

(CALCULATION REFER DWG. NO. C055 ~ C057)

TOTAL U.F.S. OF NON-DOMESTIC

B1/F	RETAIL	=	565.752	s.m.
G/F	RETAIL & ARCADE	=	1055.322	s.m.
1/F	RETAIL & ARCADE	=	1399.407	s.m.
2/F	RESIDENT'S RECREATIONAL FACILITIES	=	231.097	s.m.
	SUB-TOTAL :	=	3251.578	s.m.

TOTAL U.F.S. OF DOMESTIC

3F ~ 22F	300.138 s.m. (EACH FLOOR) x 20 STOREYS	=	6002.760	s.m.
	SUB-TOTAL :	=	6002.760	s.m.

REQUIRED MIN. RS&MRC AREA FOR DOMESTIC	=	6002.760	s.m. / 347	=	17.299	s.m.
REQUIRED MIN. RS&MRC AREA FOR NON-DOMESTIC	=	3251.578	s.m. / 925	=	3.515	s.m.
			TOTAL :	=	20.814	s.m.

ACTUAL REFUSE STORAGE & MATERIAL RECOVERY CHAMBER = 35.835 s.m. > 20.814 s.m.

CALCULATION AREA OF T.B.E. ROOM

UNDER PNAP APP-84
(CALCULATION REFER DWG. NO. C041 & C055 - C057)

TOTAL NO. OF UNIT :	=	240	UNIT
ACTUAL T.B.E. ROOM PROVIDED (FOR DOMESTIC)	=	27.971	s.m. [24 s.m. (min.) ~ 31 s.m. (max.)]
TOTAL U.F.S. OF NON-DOMESTIC	=	3251.578	s.m.
ACTUAL T.B.E. ROOM PROVIDED (FOR NON-DOMESTIC)	=	27.144	s.m. [22 s.m. (min.) ~ 28 s.m. (max.)]

SITE COVERAGE & PLOT RATIO CALCULATION (UNDER BO)

SITE AREA		=	2507.730	s.m.	
CLASS OF SITE		=	C		
HEIGHT OF BUILDING		=	75.05 m		
	[80 m (MAIN ROOF LEVEL) - 4.95 m (MEAN STREET LEVEL)]				
PERMITTED DOMESTIC SITE COVERAGE (OVER 61 m)		=	40%		
PROPOSED DOMESTIC SITE COVERAGE (OVER 61 m)	(REFER C053)	=	685.553	s.m.	
		=	685.553	/ 2507.73 s.m. x 100 %	
		=	27.338 %	< 40 %	
PERMITTED NON-DOMESTIC SITE COVERAGE (NOT EXCEEDING 15m)		=	100 %		
PROPOSED NON-DOMESTIC SITE COVERAGE (EXCEEDING 15m)	(REFER C056)	=	1837.404	s.m.	
		=	1837.404	/ 2507.73 s.m. x 100 %	
		=	73.27 %	< 100 %	
PERMITTED NON-DOMESTIC PLOT RATIO		=	15		
PERMITTED DOMESTIC PLOT RATIO		=	10		
PROPOSED DOMESTIC G.F.A.		=	10263.453	s.m.	
PROPOSED NON-DOMESTIC G.F.A.		=	4149.609	s.m.	
PROPOSED NO. OF UNITS		=	240	UNIT	
ACTUAL NON DOMESTIC PLOT RATIO					
= 4,149.609 / 2,507.73		=	1.654	< 15	
PERMITTED DOMESTIC PLOT RATIO (RESIDUE METHOD)					
= (15 - 1.654) / 15 x 10		=	8.897		
ACTUAL DOMESTIC PLOT RATIO					
= 10,263.453 / 2507.73		=	4.093	< 8.897	

OPEN SPACE REQUIRED :

(CALCULATION REFER DWG. NO. C056)

1 / 4 OF DOMESTIC ROOF OVER AREA	=	685.553	s.m.	x	0.250
	=	171.388	s.m.		
ACTUAL OPEN SPACE PROVIDED	=	715.319	s.m.	>	171.388 s.m.

SITE COVERAGE & PLOT RATIO CALCULATION (UNDER TPO)

SITE AREA	=	2507.730	s.m.
MAXIMUM PLOT RATIO (OZP)	=	9	
PERMITTED TOTAL GFA (OZP)	=	22569.570	s.m.
PERMITTED DOMESTIC PLOT RATIO (OZP)	=	7.5	PERMITTED DOMESTIC PLOT RATIO (OZP) : UNRESTRICTED
PERMITTED DOMESTIC GFA (OZP)	=	18807.975	s.m. PERMITTED DOMESTIC GFA (OZP) : -
PROPOSED DOMESTIC G.F.A. (OZP)	=	10263.453	s.m. < 18807.975 s.m
PROPOSED NON-DOMESTIC G.F.A. (OZP)	=	4149.609	s.m
PROPOSED TOTAL G.F.A. (OZP)	=	14413.602	s.m. < 22569.57 s.m
PROPOSED DOMESTIC PR (OZP)	=	4.093	(domestic)
PROPOSED NON-DOMESTIC PR (OZP)	=	1.654	(non-domestic)
PROPOSED TOTAL PR (OZP)	=	5.747	< 9

GREENERY AREA OF THE LOT

REQUIRED TOTAL GREENERY AREA OF THE LOT	=	20	%	(Min.)	
ACTUAL TOTAL GREENERY AREA OF THE LOT	=	558.725	s.m. /	2507.730	s.m. x 100 %
(CALCULATION REFER DWG. NO. C072)	=	22.280	%	>	20 %
REQUIRED GREENERY AREA ON PRIMARY ZONE	=	10	%	(Min.)	
GREENERY AREA ON PRIMARY ZONE	=	558.725	s.m. /	2507.730	s.m. x 100 %
	=	22.280	%	>	10 %

REQUIRED PLANTING AREA PROVIDED SHALL BE VISIBLE TO PEDESTRIANS OR ACCESSIBLE BY ANY PERSON OR PERSONS ENTERING THE LOT

$$= \frac{\text{GREENERY AREA ON PRIMARY ZONE}}{\text{SITE AREA}} \times 100\%$$

$$= \frac{558.725}{2507.730} \times 100\%$$

= 22.280% ≥ 10%

Development Schedule

A. LOCATION & LOT NO: T.K.O.T.L. 39.SS.6 S.Q.R.P.

B. SITE AREA : 2507.730 m^2 (approx)

C. HEIGHT OF BUILDING

Block	No. of Storeys	Proposed Height of Building	Height Restrictiions under Lease	Special Condition Referred	AP's Confirmation (Dwg No.)
1	25	75m	Not specified	SC	C041

D. LEASE REQUIREMENTS

Items		Proposed	Required / Permitted under Lease	Relevant Departments	Special Condition Referred	AP's Confirmation (Dwg No.)
1	User	Composite Development	not specified	N/A	SC	C041,C042
2	Type of Building	Composite Building	not specified	N/A	SC	C041,C042
3	Gross Floor Area	Domestic : 10263.453 s.m. Non-Domestic : 4149.609 s.m.	not specified	N/A	SC	C041
4	Site Coverage	Domestic : 27.338 % Non-Domestic : 73.27 %	not specified	N/A	SC	C041
5	Building Separation	Lp:52.120m < 60m i.e. no. requirement on building separation	not specified	N/A	SC	C071
6	Building Setback	Building setback at xx Street (7.5m from centre line)	not specified	N/A	SC	C071
7	Greenery Requirement	22.28%	not specified	N/A	SC	C072
8	Design and Disposition / Design Disposition and Height	N/A	(Please refer to the aspects that will be generally considered under DDH/DD clause stated in the LAO Practice Note 3/2014)	N/A	SC	N/A
9	Carpark	13 nos. for resident: 5 nos. for visitors; 19 nos. for retail	not specified	N/A	SC	A003, A004, C041
10	Loading and Unloading Requirements	1 no. for residents 3 nos. for retail	not specified	N/A	SC	A004, C041
11	Vehicular Access	Vehicular access through Run-in/out at xx Street	not specified	N/A	SC	A005
12	Caretaker's - Office Accommodation	N/A	not specified	N/A	SC	N/A
	- Quarters	N/A	not specified	N/A	SC	N/A
13	Owners' Corporation and Owners' Committee office	19.972 s.m.	not specified	N/A	SC	A007, C041
14	Recreational Facilities	679.208 s.m.	not specified	N/A	SC	A007, A007, C041
15	Non-building Area (e.g.Drainage Reserve Area and Waterworks Reserve Area,etc	N/A	not specified	N/A	SC	N/A
16	Formation Areas (e.g. Green, Yellow etc.)	N/A	not specified	N/A	SC	N/A
17	Tree Preservation	N/A	not specified	N/A	SC	N/A
18	Landscaping	N/A	not specified	N/A	SC	N/A
19	Other Special Requirements under Lease (e.g. footbridge, open space provision)	N/A	not specified	N/A	SC	N/A

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

17/3/2023 7:50

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
CALCULATIONS

SCALE N.T.S.(A1)

DRAWING NO.	REV. NO.
C041	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

FIRE RESISTANCE REQUIREMENT FOR ELEMENTS OF CONSTRUCTION

LOCATION	TYPE OF ACCOMMODATION	USE CLASSIFICATION	COMPARTMENT OF BUILDING		FIRE RESISTANCE RATING (minutes) FOR ELEMENTS OF CONSTRUCTION	MINIMUM DIMENSION OF ELEMENTS OF CONSTRUCTION							
						R.C. SLAB		R.C. BEAM		R.C. COLUMN		R.C. WALL	
			FLOOR AREA (m²)	VOLUME (m³)		THICKNESS	CONCRETE COVER TO REINFORCEMENT	THICKNESS	CONCRETE COVER TO REINFORCEMENT	THICKNESS	CONCRETE COVER TO REINFORCEMENT	THICKNESS	CONCRETE COVER TO REINFORCEMENT
B2F & B1F	CARPARK	7	NOT EXCEEDING 10500	NOT EXCEEDING 7000 FOR F.S.D.	240 / 240 / 240	170	55* (simply supported) 45* (continuous)	280	80* (simply supported) 60* (continuous)	450	35	180	25
B1F	RETAIL	4b	NOT EXCEEDING 2500	NOT EXCEEDING 7000 FOR F.S.D.	240 / 240 / 240	170	55* (simply supported) 45* (continuous)	280	80* (simply supported) 60* (continuous)	450	35	180	25
G/F - 1/F	RETAIL & ARCADE	4b	NOT EXCEEDING 2500	NOT EXCEEDING 7000 FOR F.S.D.	60	100	20 (simply supported) 20 (continuous)	200	30 (simply supported) 30 (continuous)	200	25	75	15
2/F	RRF	5d	NOT EXCEEDING 2500	NOT EXCEEDING 7000 FOR F.S.D.	60	100	20 (simply supported) 20 (continuous)	200	30 (simply supported) 30 (continuous)	200	25	75	15
TOWER (3/F - 22/F)	EACH FLOOR DOMESTIC FLATS	1	NOT LIMITED	NOT LIMITED	60	100	20 (simply supported) 20 (continuous)	200	30 (simply supported) 30 (continuous)	200	25	75	15
BASEMENT, PODIUM & TOWER	ALL E&M ROOMS	8	-	-	120	125	35 (simply supported) 25 (continuous)	200	50* (simply supported) 40 (continuous)	300	35	100	25

REMARKS :
1. * Reinforcement consisting of expanded metal lath or a wire fabric not lighter than 0.5kg/m² with 2mm diameter wire at not more than 100mm centers or a continuous arrangement of links not more than 200mm centers shall be incorporated in the concrete cover at a distances not exceeding 20mm from the face.
2. * All floors transformer rooms, switch rooms. pump rooms, tbe rooms, lift machine rooms, emergency generator rooms and all electrical and special hazards rooms, tower roof lift machine room, pump rooms, wall & floor adjoining to the required staircases wall thickness 180mm cover to steel 25mm, floor thickness 170mm cover to steel 55mm*.
3. The special hazard room's or floors which adjoining to the exit staircase to be of -/240/240 minutes F.R.R.
4. Slab between B/F carpark and G/F should have an F.R.R. of less than - / 240 / 240.

PROVISIONS OF EXIT DOORS & EXIT ROUTES FROM ROOM, FIRE COMPARTMENT OR STOREY

LOCATION	USE CLASSIFICATION	TYPE OF ACCOMMODATION	TOTAL USABLE FLOOR AREA (m²)	FACTOR REPERSENTING s.m. OF UFA PER PERSON	TOTAL CAPACITY PER FLOOR (PERSON)	MIN. NO OF EXIT DOOR / ROUTE (FROM STOREY)		MIN. TOTAL WIDTH (mm)				MIN. WIDTH OF EACH (mm)			
								EXIT DOOR		EXIT ROUTE		EXIT DOOR		EXIT ROUTH	
						REQ.	PRO.	REQ.	PRO.	REQ.	PRO.	REQ.	PRO.	REQ.	PRO.
B2F	7	CARPARK	1554.014	30	52	2	4	1750	3600	2100	4200	850	900	1050	1050
B1F	7	CARPARK	861.170	30	29	2	2	1750	3600	2100	4200	850	900	1050	1050
	4b	RETAIL-B1	565.752	3	189	2	2	1750	3600	2100	4200	850	900	1050	1050
G/F	4b	ARCADE-G1	141.475	3	48	DIRECT EXIT TO ULTIMATE PLACE OF SAFETY									
		RETAIL-G1	121.852		41										
		RETAIL-G2	206.995		69										
		RETAIL-G3	373.048		125										
		RETAIL-G4	171.957		58										
		RETAIL-G5	39.995		14										
		TOTAL OCCUPANCY FOR G/F SHOPS & ARCADE			TOTAL = 355 P.										
1/F	4b	ARCADE-1F	129.333	3	44	2	4	3000	4200	3000	4200	1050	1050	1050	1050
		RETAIL-1F-1	122.278		41										
		RETAIL-1F-2	286.417		96										
		RETAIL-1F-3	334.367		112										
		RETAIL-1F-4	407.605		136										
		RETAIL-1F-5	99.338		34										
		RETAIL-1F-6	20.069		7										
		TOTAL OCCUPANCY FOR 1/F SHOPS & ARCADE			TOTAL = 470 P.										
	RECREATIONAL FACILITIES :														
2/F	-	LOUNGE AREA 2	20.072	3	7	2	4	1750	4200	2100	4200	850	900	1050	1050
	-	LOUNGE AREA 1	17.779	3	6										
	4a	MFXR	106.398	10	11										
	5d	GYM	59.889	3	20										
		OUTDOOR SWMP	64.563	3	22										
	6c	STO 1	6.987	30	1										
	-	OCO	19.972	9	3										
		TOTAL OCCUPANCY FOR 2/F SHOPS & ARCADE			TOTAL = 70 P.										
TOWER 3/F - 22/F (TOTAL = 20 S.)	1b	FLAT 1 ~ 12 (TOTAL = 12 FLATS)	261.690	4.5	TOTAL = 59 P.	2	2	1750	1800	2100	2100	850	900	1050	1050
			TOTAL = (59 x 20) = 1180 P.												

REMARKS :
1. ALL PLANT ROOM TAKE LARGEST AREA OF EACH FLOOR, ROOM AREA AS INDICATED ON PLAN
2. FOR CLASSIFICATION 8, IF THE NET FLOOR AREA OF A ROOM DOES NOT EXCEED 100m², THE OCCUPANT CAPACITY IS CONSIDERED TO BE ZERO.

SCHEDULE OF SANITARY FITMENT

MARK ○ INCLUSIVE ACCESSIBLE UNISEX TOILET

LOCATION	TYPE OF ACCOMMODATION	TOTAL USABLE FLOOR AREA (m²)	FACTOR REPERSENTING s.m. OF UFA PER PERSON	CAPACITY (PERSONS) TOTAL		RATIO OF MALE TO FEMALE			W.C. PAN				BASIN				URINAL		BATH / SHOWER			
						RATIO	MALE	FEMALE	MALE		FEMALE		MALE		FEMALE		MALE		MALE		FEMALE	
									REQ.	PRO.	REQ.	PRO.	REQ.	PRO.	REQ.	PRO.	REQ.	PRO.	REQ.	PRO.	REQ.	PRO.
B1F	RETAIL-B1	REFER TO MEANS OF ESCAPE		189	P.	1:1.5	76	113	1	3	2	⑥	1	3	1	⑤	1	3	-	-	-	-
G/F	ARCADE-G1			48	TOTAL = 825 P.	1:1.5	330	495	3	3	8	⑥	3	4	4	⑤	2	3	-	-	-	-
	RETAIL-G1			41																		
	RETAIL-G2			69																		
	RETAIL-G3			125																		
	RETAIL-G4			58																		
	RETAIL-G5			14																		
1/F	ARCADE-1F			44																		
	RETAIL-1F-1			41																		
	RETAIL-1F-2			96																		
	RETAIL-1F-3			112																		
	RETAIL-1F-4			136																		
	RETAIL-1F-5			34																		
	RETAIL-1F-6			7																		
2/F	RECREATIONAL FACILITIES																					
	LOUNGE AREA 2			7																		
	LOUNGE AREA 1			6																		
	MFXR			11																		
	GYM			20																		
	OUTDOOR SWMP			22																		
	STO 1			1																		
	OCO			3																		
(FOR RESIDENTIAL TOWERS)									REQ.		PRO.		REQ.		PRO.		REQ.		REQ.		PRO.	
TOWER 3/F ~ 22/F (20 STOREYS)	DOMESTIC FLAT NO. 1 (TAKE LARGEST AREA FLAT)	36.793	4.5	9	P.	-	-	-	1		2		1		2		-		1		2	

PROVISIONS OF MEANS OF ESCAPE IN CASE OF FIRE

LOCATION	TYPE OF ACCOMMODATION	TOTAL USABLE FLOOR AREA (m²)	FACTOR REPERSENTING s.m. OF UFA PER PERSON	TOTAL CAPACITY PER FLOOR (PERSON)		TOTAL CAPACITY OF STOREYS SERVED BY STAIRS (PERSON)	NUMBER & STAIRS PROVIDED IN THE BUILDING	NUMBER OF STOREY ABOVE GROUND		WIDTH OF STAIRS (mm)	TOTAL DISCHARGE VALUE OF THE STAIRS (PERSON) (# NON-SPRINKLER BUILDING) (* SPRINKLER BUILDING)
B2F	CARPARK	REFER TO MEANS OF ESCAPE		52		13 BS-01	BS-01	B2F~G/F	BELOW GROUND 1 STOREY	1050	# [210 x 0.8] = 168 > 13
						13 BS-02	BS-02	B2F~G/F	BELOW GROUND 2 STOREYS	1050	# [242 x 0.8] = 193 > 68
						13 BS-03	BS-03	B2F~G/F	BELOW GROUND 2 STOREYS	1050	# [242 x 0.8] = 193 > 68
						13 BS-04	BS-04	B2F~G/F	BELOW GROUND 2 STOREYS	1050	# [242 x 0.8] = 193 > 67
B1F	CARPARK			29		55 BS-02	BS-05	B1F~G/F	BELOW GROUND 1 STOREY	1050	# [210 x 0.8] = 168 > 54
	RETAIL-B1			189	218	55 BS-03					
						54 BS-04					
						54 BS-05					
1/F	ARCADE-1F			44		118 ST-01	ST-01	G/F~22/F	ABOVE GROUND 22 STOREYS	1050	# [498 + (32x12)] = 882 > 726
	RETAIL-1F-1			41		118 ST-02	ST-02	G/F~22/F	ABOVE GROUND 22 STOREYS	1050	# [498 + (32x12)] = 882 > 726
	RETAIL-1F-2			96		117 ST-03	ST-03	G/F~2/F	ABOVE GROUND 2 STOREYS	1050	# 242 > 134
	RETAIL-1F-3			112	470	117 ST-04	ST-04	G/F~2/F	ABOVE GROUND 2 STOREYS	1050	# 242 > 134
	RETAIL-1F-4			136							
	RETAIL-1F-5			34							
	RETAIL-1F-6			7							
2/F	RECREATIONAL FACILITIES					18 ST-01					
	LOUNGE AREA 2			7		18 ST-02					
	LOUNGE AREA 1			6		17 ST-03					
	MFXR			11	70	17 ST-04					
	GYM			20							
	OUTDOOR SWMP			22							
	STO 1			1							
	OCO			3							
TOWER 3/F - 22/F (TOTAL = 20 S.)	FLAT 1 ~ 12 (TOTAL = 12 FLATS)			59	1180	590 ST-01					
						590 ST-02					

Item		GFA Exempted (s.m.) (No, Cap)	GFA Exempted (sq. m.) Subject to Overall Cap of 10% under PNAP APP-151		GFA Exempted (sq. m.) Subject to Overall Cap of 10% under PNAP APP-151	
			Refer Dwg. No.	(DOMESTIC)	Refer Dwg. No.	(NON-DOMESTIC)
Disregarded GFA under Regulations 23(3)(b) of the Building (Planning) Regulations (B(P)R)						
1	Carpark and loading / unloading area excluding public transport terminus	3040.334				
Plant rooms and similar services						
2.1	Mandatory feature or essential plant room, area of which is limited by respective PNAP or regulation, such as lift machine room, TBE room, refuse storage chamber, etc.	294.138				
2.2	Mandatory feature or essential plant room, areas of which is NOT limited by any PNAP or regulation, such as room occupied solely by FSI and equipment, meter room, transformer room, potable and flushing water tank, etc.	546.506				
2.3	Non-mandatory or non-essential plant room, such as A/C plant room, AHU room, etc.	35.454		Not Applicable	C053	35.45
Disregarded GFA under Regulations 23A(3) of the B(P)R						
3	Area for picking up and setting down persons departing from or arriving at the hotel by vehicle					
4	Supporting facilities for a hotel					
Green Features under Joint Practice Notes (JPNs)						
5	Balcony for residential buildings	240.000	C053	240.000		Not Applicable
6	Wider common corridor and lift lobby					
7	Communal sky garden					
8	Communal podium garden for non-residential buildings					
9	Acoustic fin					
10	Wing wall, wind catcher and funnel					
11	Non-structural prefabricated external wall	23.760	C053	23.760		Not Applicable
12	Utility platform	60.000	C053	60.000		Not Applicable
13	Noise barrier					
Amenity Features						
14	Counter, office, store, guard room and lavatory for watchman and management staff, Owners' Corporation Office	19.972	C053	19.972		Not Applicable
15	Residential recreational facilities including void, plant room, swimming pool filtration plant room, covered walkway etc serving solely the recreational facilities	513.173	C053	513.173		Not Applicable
16	Covered landscaped and play area	105.383				
17	Horizontal screen/covered walkway, trellis					
18	Larger lift shaft	36.399	C041	36.399		Not Applicable
19	Chimney shaft					
20	Other non-mandatory or non-essential plant room, such as boiler room, SMATV room					
21	Pipe duct, air duct for mandatory feature or essential plant room	135.122				
22	Pipe duct, air duct for non-mandatory or non-essential plant room					
23	Plant room, pipe duct, air duct for environmentally friendly system and feature					
24	High headroom and void in front of cinema, shopping arcade etc. in non-domestic development					
25	Void over main common entrance (prestige entrance) in non-domestic development					
26	Void in duplex domestic flat and house					
27	Sunshade and reflector					
28	Minor projection such as AC box, window cill, projecting window	279.129				
29	Other projection such as air-conditioning box and flatform with a projection of more than 750MM from the external wall					
Other Items						
30	Refuge floor including refuge floor cum sky garden					
31	Covered area under large projecting / overhanging feature					
32	Public transport terminus (PTT)					
33	Party structure and common staircase					
34	Horizontal area of staircase, lift shaft and vertical duct solely serving floor accepted as not being accountable for GFA	78.819				
35	Public passage					
36	Covered set back area					
Bonus GFA						
37	Bonus GFA					
Additional Green Features under JPN						
38	Building adopting Modular Intergrated Construction					
Total Exempted GFA		5408.729		893.844		35.454
Total Domestic GFA				10263.453		
Total Non-Domestic GFA						4149.609
Percentage (%)				8.709%		0.854%
Under Lease						
Total Exempted GFA		5408.729		893.844		
Total Domestic GFA				10263.453		
Percentage (%)				8.709%		

STAGE II

SUMMARY OF GFA CONCESSIONS
(CAL. REFER DWG. NO. C051~C053)

DOMESTIC / NON-DOMESTIC GFA CONCESSIONS (s.m.)

FLOOR	1	2.1	2.2	2.3	5	11	12	14	15	16	18	21	28	34
				NON-DOM				DOMESTIC					(4/F~22/F)	
B2F	1900.881	-	146.914	-	-	-	-	-		-		-	-	-
B1F	959.533	27.144	140.706	-	-	-	-	-		-		12.190	-	32.829
G/F	179.920	63.806	30.141	-	-	-	-	-		21.284		31.498	-	45.990
1/F	-	-	89.850	-	-	-	-	-	REF. DWG. C041	-	REF. DWG. C041	-	-	-
2/F	-	-	68.555	35.454	-	-	-	19.972		84.099		6.994	-	-
3F~22F	-	48.040	70.340	-	240.000	23.760	60.000	-		-		84.440	279.129	-
RF	-	108.492	-	-	-	-	-	-		-		-	-	-
UR1F	-	46.656	-	-	-	-	-	-		-		-	-	-
TOTAL	3040.334	294.138	546.506	35.454	240.000	23.760	60.000	19.972	513.173	105.383	36.399	135.122	279.129	78.819

COMPLIANCE WITH SBD GUIDELINES AS STIPULATED IN PNAP APP-152

1, BUILDING SEPARATION	MAXIMUM FACADE LENGTH Lp= 52.120m < 60m for entire building * refer to G/F plan dwg. C071
2, SITE COVERAGE OF GREENERY	GREENERY WITH AREA OF 20% of the site area is provided. out of which half of such green area is within pedestrian zone * refer to greenery area diagram C072

TARGET RATING IN THE COMPLIANCE ASSESSMENT UNDER BEAM PLUS NB AND SPECIFIC STANDARDS AS STIPULATED IN PNAP APP-151

1,	TARGET RATING IN THE COMPLIANCE ASSESSMENT UNDER BEAM PLUS NB	**ANTICIPATED SILVER**
2,	**PROVISION OF SPECIFIC STANDARD(S)**	
2,1	ENHANCED GREENERY PROVISION	☐
	☐ SKYRISE GREENING ☐ GREEN BUFFER ☐ TREE CLUSTER	
2,2	HEALTH AND WELL-BEING	☐
	FEATURES: 2,2,1_____ 2,2,2_____ 2,2,3_____ 2,2,4_____ 2,2,5_____	
2,3	ENHANCED NATURAL VENTILATION	☐
	☐ NVTC REQUIREMENTS FOR RESIDENTIAL BUILDING ☐ LIGHT WELL PROVIDED IN A RESIDENTIAL BUILDING FOR THE PURPOSE OF COMPLIANCE WITH REGULATION 38 OF THE BUILDING (PLANNING) REGULATIONS	
2,4	ADOPTION OF BUILDING INFORMATION MODELLING	☑
2,5	ADOPTION OF MULTI-TRADE INTEGRATED MECHANICAL, ELECTRICAL AND PLUMBING IN BUILDING SERVICES	☐

BD REF 2/1234/18
BIM REF 2-1234-18-A21-01
FSD REF FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. NON-ACCOUNTABLE GROSS FLOOR AREA OF MANDATORY FEATURE OR ESSENTIAL PLANT ROOM AREA MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

17/3/2023 12:12

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
SCHEDULE

SCALE N.T.S.(A1)

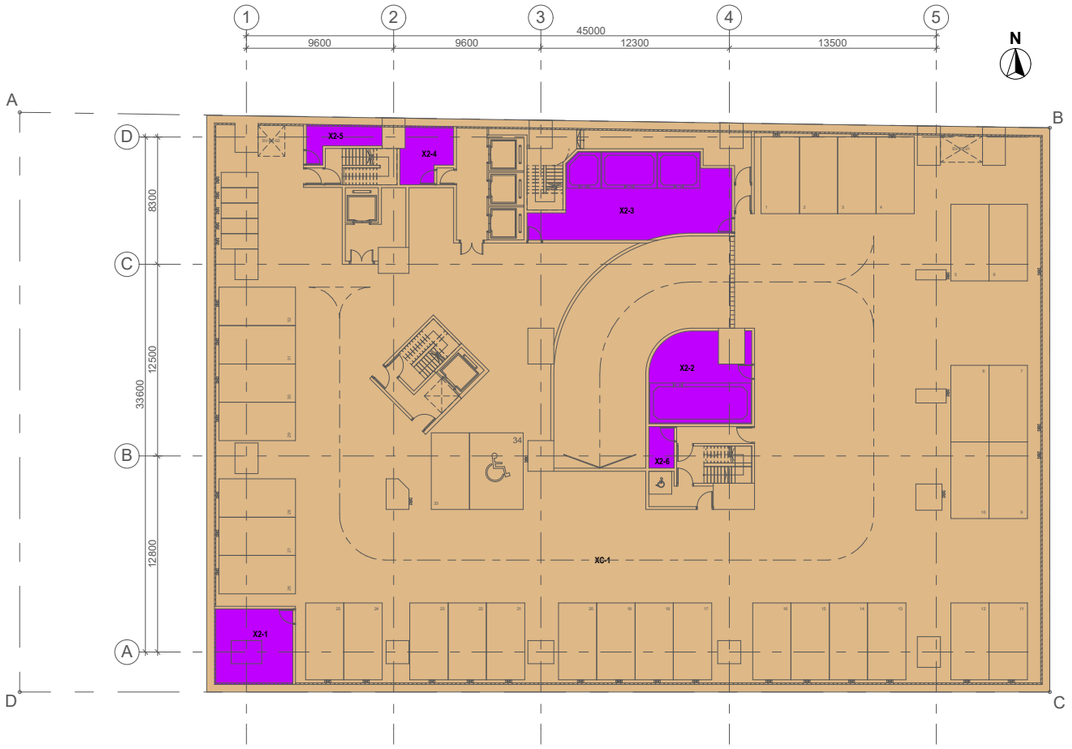
DRAWING NO. C042
REV. NO. -

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



BASEMENT 2

NON ACCOUNTABLE (NOT SUBJECT TO 10% CONCESSION CAP) :

CONCESSION ITEMS SPECIFIED IN PNAP APP-151 (OTHER THAN CAR PARK AND LOADING / UNLOADING AREA EXCLUDING PUBLIC TRANSPORT TERMINUS)

CAR PARK AND LOADING / UNLOADING AREA EXCLUDING PUBLIC TRANSPORT TERMINUS

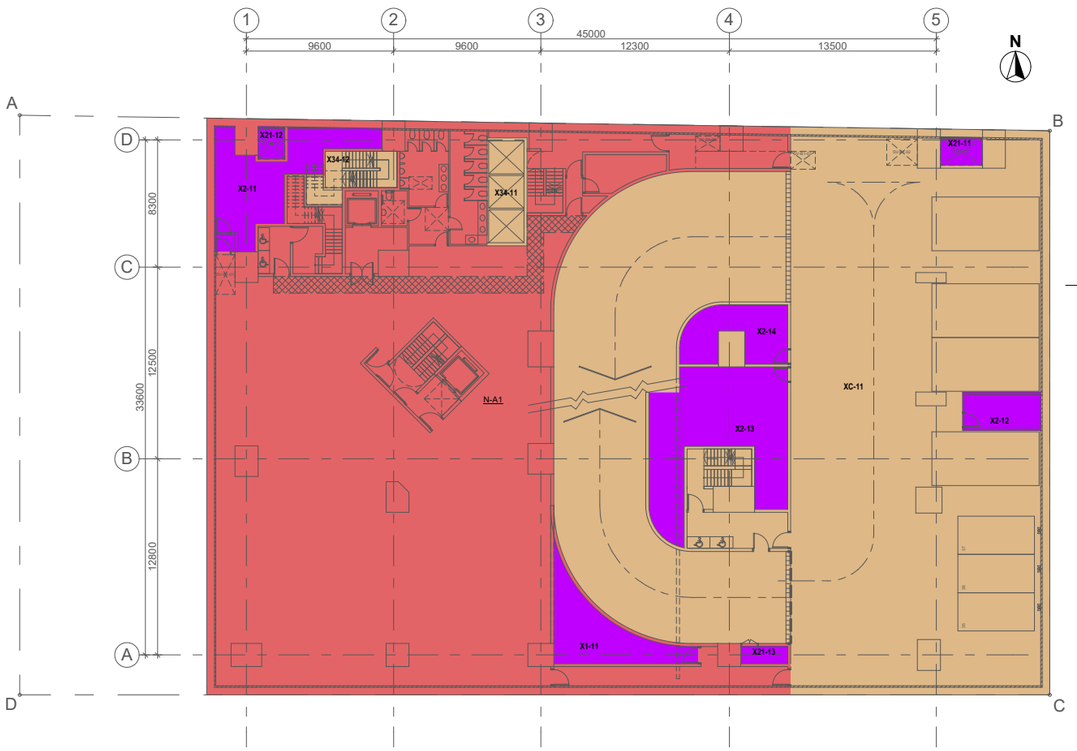
STAGE II

CONCESSION CALCULATION AT B2F

CONCESSION ITEM 1			CONCESSION ITEM 2.2		
AREA NO.	Name	(S.M.) ②	AREA NO.	Name	(S.M.) ②
XC-1	CARPARK	1900.881	X2-1	EVCR	25.190
			X2-2	SPR WTPR	35.294
			X2-3	PFWTPR	62.576
			X2-4	CWPR	11.291
			X2-5	FAN RM	8.110
			X2-6	SPR PR	4.453
		1900.881			146.914

DETAILED BREAKDOWN OF GFA CALCULATION OF B2/F

DOMESTIC & NON- DOMESTIC G.F.A. DIAGRAM OF B2/F



BASEMENT 1

ACCOUNTABLE :

NON-DOMESTIC G.F.A. = 875.406 S.M.

NON ACCOUNTABLE (NOT SUBJECT TO 10% CONCESSION CAP) :

CONCESSION ITEMS SPECIFIED IN PNAP APP-151 (OTHER THAN CAR PARK AND LOADING / UNLOADING AREA EXCLUDING PUBLIC TRANSPORT TERMINUS)

CAR PARK AND LOADING / UNLOADING AREA EXCLUDING PUBLIC TRANSPORT TERMINUS

STAGE II

NON-DOMESTIC G.F.A. CALCULATION AT B1F

NON-DOMESTIC AREA	
AREA NO.	(S.M.) ①
N-A1	875.406
	875.406

CONCESSION CALCULATION AT B1F

CONCESSION ITEM 1			CONCESSION ITEM 2.1			CONCESSION ITEM 2.2		
AREA NO.	Name	(S.M.) ②	AREA NO.	Name	(S.M.) ②	AREA NO.	Name	(S.M.) ③
XC-11	CARPARK	959.533	X1-11	TBE (NDOM)	27.144	X2-11	IRR WTPR	39.545
						X2-12	EVCR	12.754
						X2-13	FSPR	66.398
						X2-14	SWITCH RM	22.009
		959.533			27.144			140.706

CONCESSION CALCULATION AT B1F

CONCESSION ITEM 21			CONCESSION ITEM 34		
AREA NO.	Name	(S.M.) ②	AREA NO.	Name	(S.M.) ③
X21-11	SV-B2-01	5.046	X34-11	LFS	18.330
X21-12	SV-B2-02	3.700	X34-12	BS-01	14.499
X21-13	PD	3.444			
		12.190			32.829

DETAILED BREAKDOWN OF GFA CALCULATION OF B1/F

DOMESTIC & NON- DOMESTIC G.F.A. DIAGRAM OF B1/F

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. DETAILED BREAKDOWN OF GROSS FLOOR AREA (GFA) CALCULATIONS MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:06

PROJECT

BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE

CALCULATIONS (1)

SCALE 1:200 (A1)

DRAWING NO. C051

REV. NO. -

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

GROUND FLOOR

ACCOUNTABLE :

DOMESTIC GFA (INCLUDING 4.725 S.M. LIFT SHAFT AREA FOR L1) = 70.943 S.M.

NON-DOMESTIC GFA = 1,415.101 S.M.

NON ACCOUNTABLE (NOT SUBJECT TO 10% CONCESSION CAP) :

CONCESSION ITEMS SPECIFIED IN PNAP APP-151
(OTHER THAN CAR PARK AND LOADING / UNLOADING AREA
EXCLUDING PUBLIC TRANSPORT TERMINUS)

CAR PARK AND LOADING / UNLOADING AREA EXCLUDING
PUBLIC TRANSPORT TERMINUS

DOMESTIC G.F.A. CALCULATION AT G/F

DOMESTIC AREA	
AREA NO.	(S.M.) ①
D-A21	66.218
D-A22	4.725
	70.943

CONCESSION CALCULATION AT G/F

CONCESSION ITEM 1			CONCESSION ITEM 2.1			CONCESSION ITEM 16		
AREA NO.	Name	(S.M.) ②	AREA NO.	Name	(S.M.) ②	AREA NO.	Name	(S.M.) ②
XC-21	RAMP & L/UL	179.920	X1-21	RSMRR	35.835	X16-21	Covered Landscape	5.162
			X1-22	TBE (DOM)	27.971	X16-22	Covered Landscape	16.122
		179.920			63.806			21.284

NON-DOMESTIC G.F.A. CALCULATION AT G/F

NON-DOMESTIC AREA	
AREA NO.	(S.M.) ①
N-A21	1412.603
N-A22	2.498
	1415.101

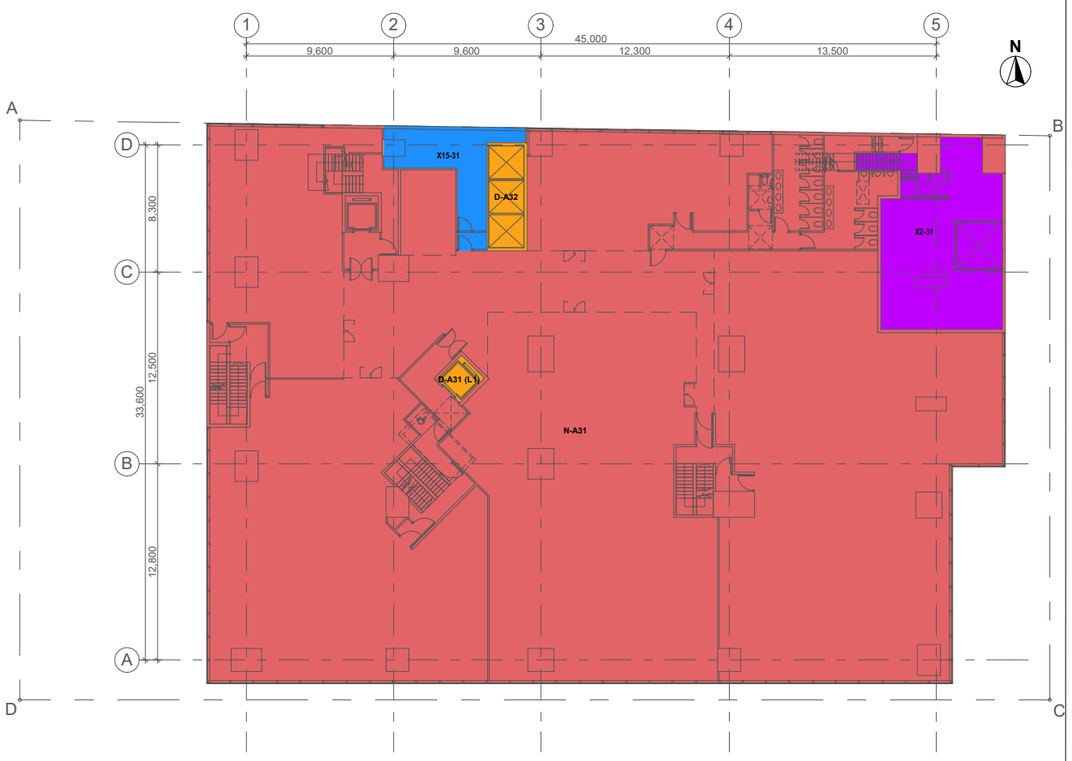
CONCESSION CALCULATION AT G/F

CONCESSION ITEM 2.2			CONCESSION ITEM 21			CONCESSION ITEM 34		
AREA NO.	Name	(S.M.) ②	AREA NO.	Name	(S.M.) ②	AREA NO.	Name	(S.M.) ②
X2-21	FSCR	2.976	X21-21	SV-B2-01	6.419	X34-21	BS-01	19.610
X2-22	FSI	3.749	X21-22	SV-B2-02	4.963	X34-22	BS-03	26.380
X2-23	CMC	3.194	X21-23	SV-B1-01	4.890			
X2-24	GMC	3.148	X21-24	SV-B1-02	4.793			
X2-25	SPR CON VALVE	2.827	X21-25	SV-B1-03	4.142			
X2-26	TX-01	11.706	X21-26	PD	0.650			
X2-27	FSI	2.541	X21-27	PD	3.578			
			X21-28	PD	2.063			
		30.141			31.498			45.990

STAGE II

DETAILED BREAKDOWN OF GFA CALCULATION OF G/F

DOMESTIC & NON- DOMESTIC G.F.A. DIAGRAM OF G/F



FIRST FLOOR

ACCOUNTABLE :

DOMESTIC G.F.A. (INCLUDING 4.725 S.M. LIFT SHAFT AREA FOR L1) = 23.055 S.M.

NON-DOMESTIC G.F.A. = 1,693.067 S.M.

NON ACCOUNTABLE (SUBJECT TO 10% CONCESSION CAP) :

RESIDENTS' RECREATIONAL FACILITIES = 31.431 S.M.

NON ACCOUNTABLE GFA (NOT SUBJECT TO 10% CONCESSION CAP) :

CONCESSION ITEMS SPECIFIED IN PNAP APP-151
(OTHER THAN CAR PARK AND LOADING / UNLOADING AREA
EXCLUDING PUBLIC TRANSPORT TERMINUS)

CAR PARK AND LOADING / UNLOADING AREA EXCLUDING
PUBLIC TRANSPORT TERMINUS

DOMESTIC G.F.A. CALCULATION AT 1/F

DOMESTIC AREA	
AREA NO.	(S.M.) ①
D-A31	4.725
D-A32	18.330
TOTAL	23.055

CONCESSION CALCULATION AT 1/F

CONCESSION ITEM 2.2			AREA CALCULATIONS AT 1/F RRF		
AREA NO.	Name	(S.M.) ②	AREA NO.	Name	(S.M.) ②
X2-31	TX RM	89.850	X15-31	FPR (RRF)	31.431
		89.850			31.431

NON-DOMESTIC G.F.A. CALCULATION AT 1/F

NON-DOMESTIC G.F.A.	
AREA NO.	(S.M.) ①
N-A31	1693.067
	1693.067

STAGE II

DETAILED BREAKDOWN OF GFA CALCULATION OF 1/F

DOMESTIC & NON- DOMESTIC G.F.A. DIAGRAM OF 1/F

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. DETAILED BREAKDOWN OF GROSS FLOOR AREA (GFA) CALCULATIONS MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:06

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
CALCULATIONS (2)

SCALE 1:200 (A1)

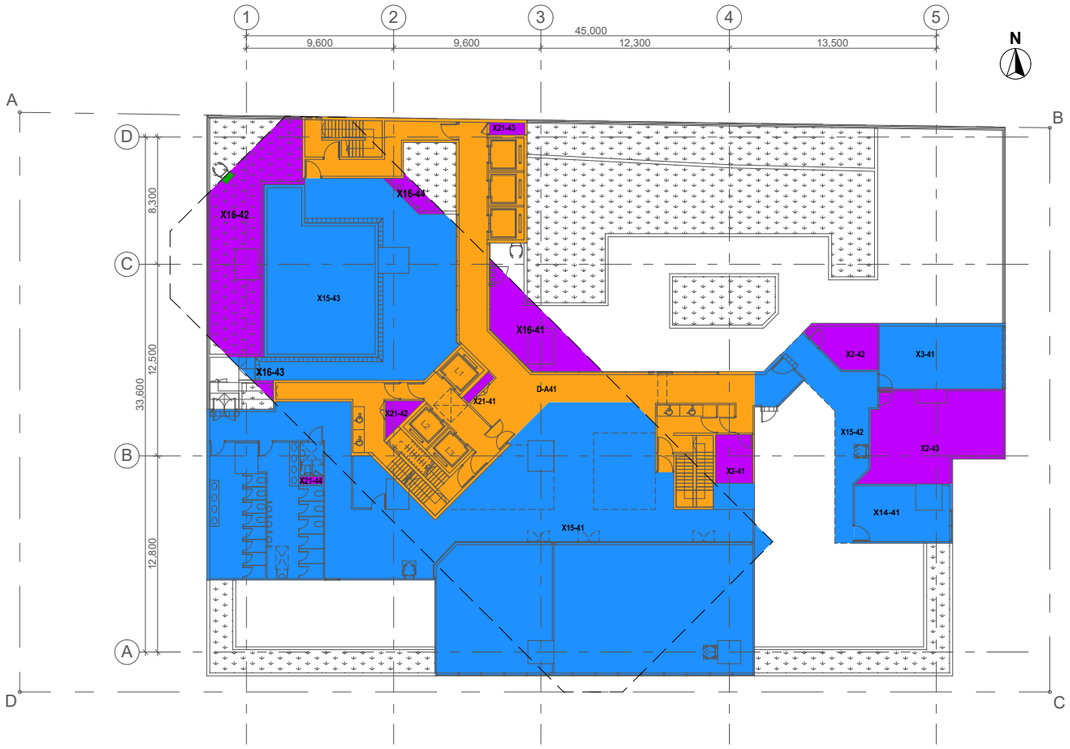
DRAWING NO.	REV. NO.
C052	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



DOMESTIC & NON- DOMESTIC G.F.A. DIAGRAM OF 2/F

SECOND FLOOR

ACCOUNTABLE:

DOMESTIC G.F.A. (INCLUDING 13.535 S.M. LIFT SHAFT AREA FOR L1, L2 & L3) = 230.874 S.M.

NON ACCOUNTABLE (SUBJECT TO 10% CONCESSION CAP):

RESIDENTS' RECREATIONAL FACILITIES = 647.777 S.M.

NON ACCOUNTABLE (NOT SUBJECT TO 10% CONCESSION CAP):

CONCESSION ITEMS SPECIFIED IN PNAP APP-151
(OTHER THAN CAR PARK AND LOADING / UNLOADING AREA
EXCLUDING PUBLIC TRANSPORT TERMINUS)

DOMESTIC G.F.A. CALCULATION AT 2/F

DOMESTIC AREA	
AREA NO.	(S.M.) ①
D-A41	230.874
	230.874

CONCESSION CALCULATION AT 2/F

CONCESSION ITEM 2.2			CONCESSION ITEM 2.3			CONCESSION ITEM 14		
AREA NO.	Name	(S.M.) ②	AREA NO.	Name	(S.M.) ②	AREA NO.	Name	(S.M.) ②
X2-41	SWITCH RM	7.779	X3-41	ACPR	35.454	X14-41	OCO	19.972
X2-42	ELR	11.846						
X2-43	MAIN SWITCH RM (DI	48.930						
		68.555			35.454			19.972

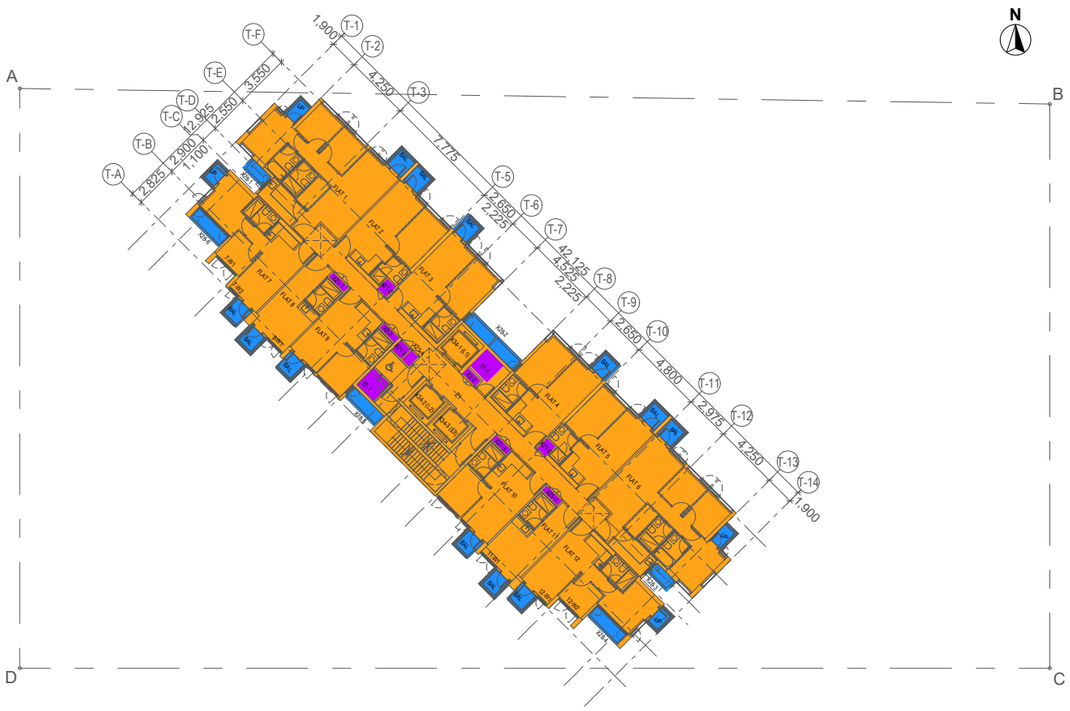
CONCESSION CALCULATION AT 2/F

CONCESSION ITEM 16			CONCESSION ITEM 21			AREA CALCULATIONS AT 2/F RRF		
AREA NO.	Name	(S.M.) ②	AREA NO.	Name	(S.M.) ②	AREA NO.	Name	(S.M.) ②
X16-41	Covered Landscape	23.138	X21-41	PD	1.293	X15-41	RRF	448.512
X16-42	Covered Landscape	55.937	X21-42	PD	3.120	X15-42	RRF	43.858
X16-43	Covered Landscape	0.972	X21-43	PD	1.831	X15-43	RRF	155.407
X16-44	Covered Landscape	4.054	X21-44	PD	0.750			
		84.099			6.994			647.777

AREA CALCULATION OF A/C PLANT ROOM AT 2/F (CONCESSION ITEM 2.3)
1% OF TOTAL NON-DOMESTIC GFA FOR A/C PLANT RM.
= 4163.493 s.m. x 1%
= 41.635 s.m. > 35.454 s.m.

STAGE II

DETAILED BREAKDOWN OF GFA CALCULATION OF 2/F



DOMESTIC G.F.A. DIAGRAM OF 3/F ~ 22/F (20 STOREYS)

3/F TO 22/F

ACCOUNTABLE:

ACCOUNTABLE DOMESTIC G.F.A
(INCLUDING 13.535 S.M. LIFT SHAFT AREA FOR L1, L2 & L3)
= 498.749 S.M. X 20 STOREYS = 9,974.980 S.M.

BAL/UP BALCONY AND UTILITY PLATFORM
= 30.000 S.M. X 50% X 20 STOREYS = 300.000 S.M.

TOTAL ACCOUNTABLE DOMESTIC G.F.A.
= 9,974.980 S.M. + 300.000 S.M. = 10,274.980 S.M.

NON ACCOUNTABLE (SUBJECT TO 10% CONCESSION CAP):

BAL/UP BALCONY AND UTILITY PLATFORM
= 30.000 S.M. X 50% X 20 STOREYS = 300.000 S.M.

PREFABRICATED EXTERNAL WALL
= 1.188 S.M. X 20 STOREYS = 23.760 S.M.

TOTAL FEATURES SUBJECT TO 10% CONCESSION CAP
= 300.000 S.M. + 23.760 S.M. = 323.760 S.M.

NON ACCOUNTABLE (NOT SUBJECT TO 10% CONCESSION CAP):

CONCESSION ITEMS SPECIFIED IN PNAP APP-151
(OTHER THAN CAR PARK AND LOADING / UNLOADING AREA
EXCLUDING PUBLIC TRANSPORT TERMINUS)

LIFT SHAFT AREA					
AREA NO.		(S.M.) ①		STOREYS ②	TOTAL ①=① x ②
X34-1	LFS	4.725	GF~22F	23	108.68
X34-2	LFS	4.410	2F~22F	21	92.61
X34-3	LFS	4.410	2F~22F	21	92.61
		13.545			293.895

TOTAL DOMESTIC G.F.A. = TOTAL FLAT AREA + COMMON AREA + TOTAL LIFT SHAFT AREA
= 402.097 S.M. + 83.107 S.M. + 13.545 S.M. = 498.749 S.M.

STAGE II

DOMESTIC G.F.A. CALCULATIONS
(3/F - 22/F)

FLAT NO.	NET FLAT AREA (S.M.) ①	BALCONY CONCESSION ITEM 5 100% AREA (S.M.)	BALCONY CONCESSION ITEM 5 50% AREA (S.M.) ②	U.P. CONCESSION ITEM 12 100% AREA (S.M.)	U.P. CONCESSION ITEM 12 50% AREA (S.M.) ③	SUB-TOTAL FLAT AREA (S.M.) =①+②+③	COMMON AREA AREA NO.	COMMON AREA (S.M.) ④
1	56.075	2.000	1.000	1.500	0.750	57.825	Z1	83.107
2	28.888	2.000	1.000	-	-	29.888		
3	28.986	2.000	1.000	-	-	29.986		
4	28.986	2.000	1.000	-	-	29.986		
5	28.888	2.000	1.000	-	-	29.888		
6	56.075	2.000	1.000	1.500	0.750	57.825		
7	34.719	2.000	1.000	1.500	0.750	36.469		
8	18.654	2.000	1.000	-	-	19.654		
9	26.744	2.000	1.000	-	-	27.744		
10	25.694	2.000	1.000	-	-	26.694		
11	18.669	2.000	1.000	-	-	19.669		
12	34.719	2.000	1.000	1.500	0.750	36.469		
	387.097		12.000		3.000	402.097		83.107

PRECAST FAÇADE CONCESSION ITEM 11				
AREA NO.	(S.M.)	AREA NO.	(S.M.)	SUB-TOTAL (S.M.)
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
7-W1	0.266	7-W2	0.119	0.385
8-W1	0.209	-	-	0.209
-	-	-	-	-
-	-	-	-	-
11~W1	0.209	-	-	0.209
12-W1	0.119	12-W2	0.266	0.385
				1.188

CONCESSION ITEM 2.1			CONCESSION ITEM 2.2			CONCESSION ITEM 21			CONCESSION ITEM 28		
AREA NO.		(S.M.)	AREA NO.		(S.M.)	AREA NO.		(S.M.)	AREA NO.		(S.M.)
X1-1	RSMRC	2.402	X2-1	ELR	2.402	X21-1	PD	0.550	X28-1	ACP	1.597
			X2-2	WMC	0.575	X21-2	PD	0.675	X28-2	ACP	4.072
			X2-3	WMC	0.540	X21-3	TLD	0.722	X28-3	ACP	1.597
						X21-4	PD	0.510	X28-4	ACP	2.475
						X21-5	PD	0.540	X28-5	ACP	2.475
						X21-6	PD	0.675	X28-6	ACP	2.475
						X21-7	PD	0.550			
		2.402			3.517			4.222			14.691

DETAILED BREAKDOWN OF GFA CALCULATION OF 3/F ~ 22/F (20 STOREY)

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. DETAILED BREAKDOWN OF GROSS FLOOR AREA (GFA) CALCULATIONS MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:06

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
CALCULATIONS (3)

SCALE 1:200 (A1)

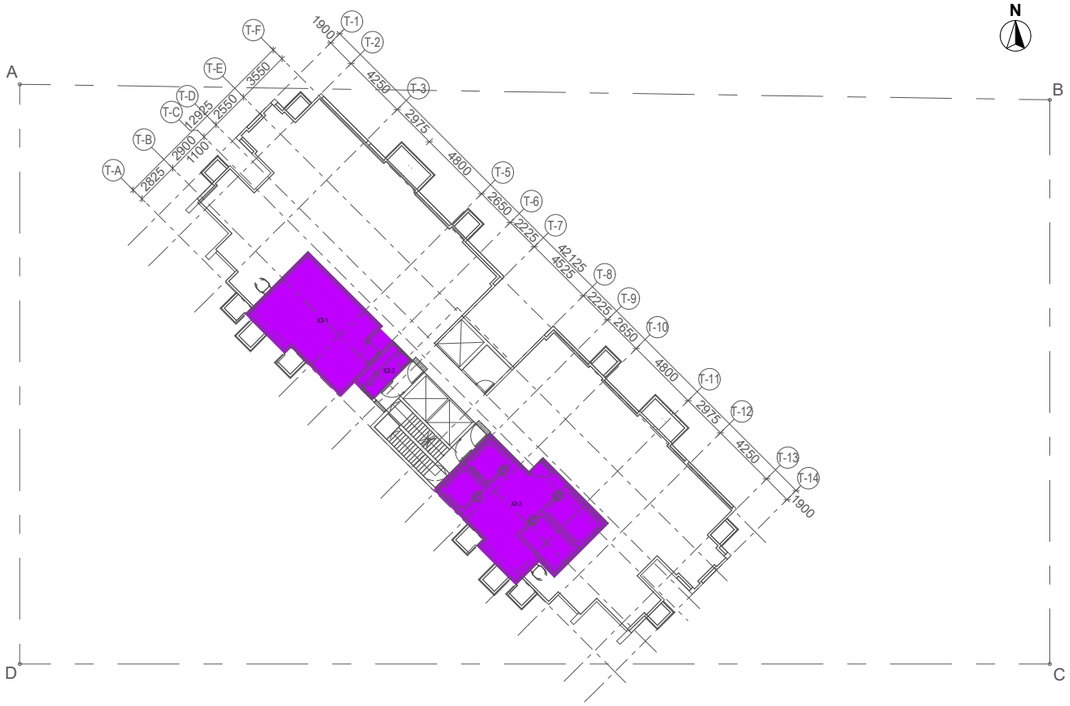
DRAWING NO. C053
REV. NO. -

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



N

ROOF FLOOR

NON ACCOUNTABLE (NOT SUBJECT TO 10% CONCESSION CAP) :

CONCESSION ITEMS SPECIFIED IN PNAP APP-151

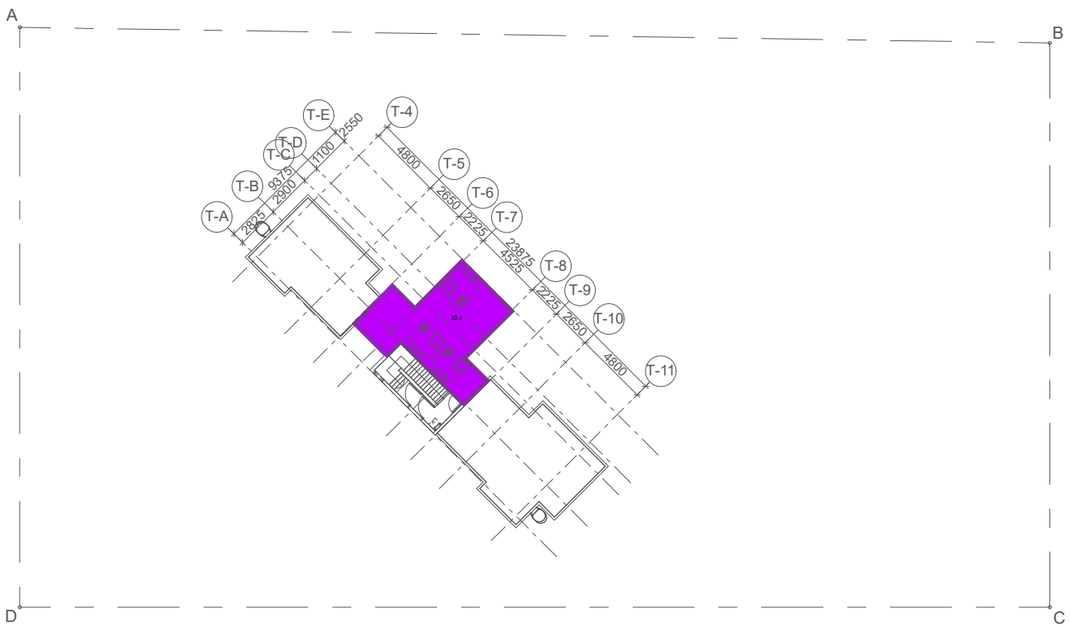
DOMESTIC G.F.A. CALCULATIONS
(ROOF FLOOR)

CONCESSION ITEM 2.1		
AREA NO.		(S.M.)
X2-1	EGR	44.350
X2-2	PD	6.105
X2-3	PF/WTPR	58.037
		108.492

STAGE II

DETAILED BREAKDOWN OF GFA CALCULATION OF ROOF FLOOR

DOMESTIC G.F.A. DIAGRAM OF ROOF FLOOR



N

UPPER ROOF 1

NON ACCOUNTABLE (NOT SUBJECT TO 10% CONCESSION CAP) :

CONCESSION ITEMS SPECIFIED IN PNAP APP-151

DOMESTIC G.F.A. CALCULATIONS
(UR1/F)

CONCESSION ITEM 2.1		
AREA NO.		(S.M.)
X2-4	LMR	46.656
		46.656

STAGE II

DETAILED BREAKDOWN OF GFA CALCULATION OF UR1/F

DOMESTIC G.F.A. DIAGRAM OF UR1/F

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. DETAILED BREAKDOWN OF GROSS FLOOR AREA (GFA) CALCULATIONS MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:06

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
CALCULATIONS (4)

SCALE 1:200 (A1)

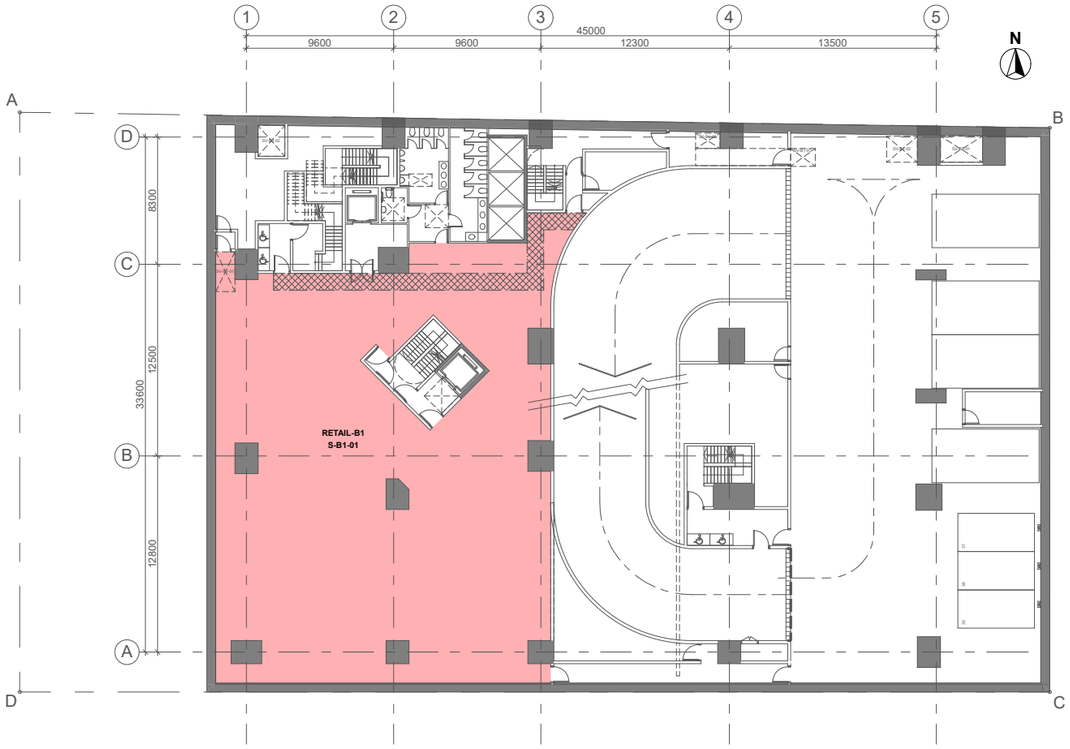
DRAWING NO.	REV. NO.
C054	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

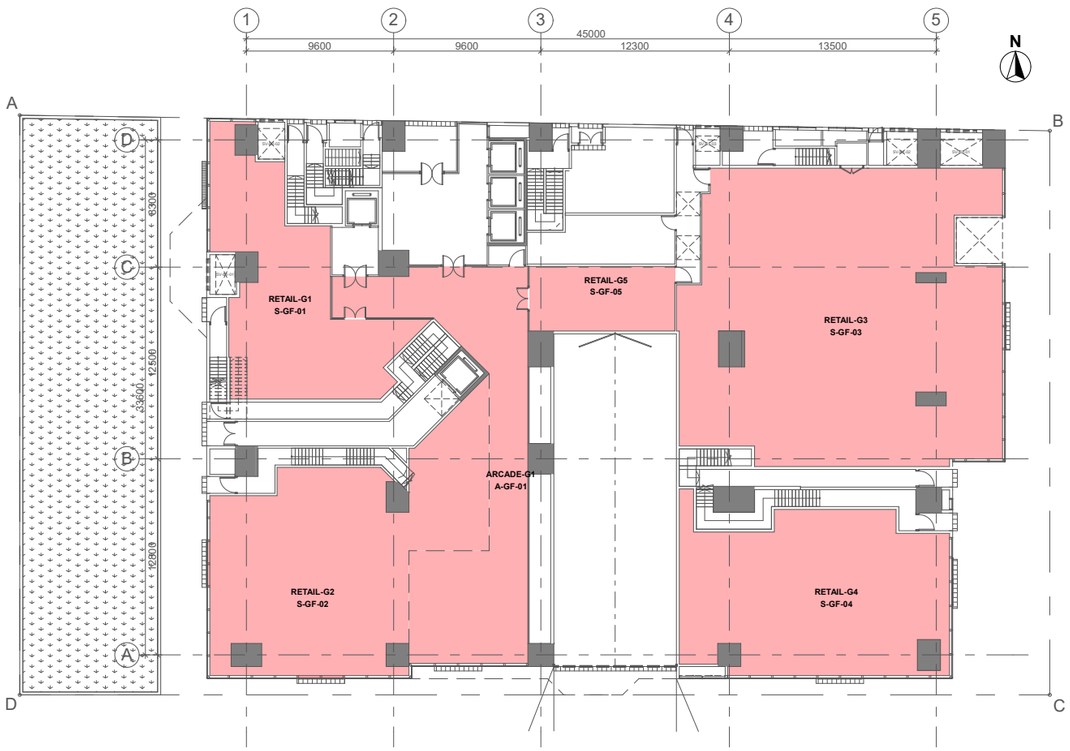


NON-DOMESTIC U.F.A. CALCULATIONS AT B1F

AREA NO.	NAME	(S.M.)
S-B1-01	RETAIL-B1	565.752
	TOTAL UFA AT B1F =	565.752

STAGE II

UFA CALCULATION DIAGRAM OF B1/F



NON-DOMESTIC U.F.A. CALCULATIONS AT G/F

AREA NO.	NAME	(S.M.)
A-GF-01	ARCADE-G1	141.475
S-GF-01	RETAIL-G1	121.852
S-GF-02	RETAIL-G2	206.995
S-GF-03	RETAIL-G3	373.048
S-GF-04	RETAIL-G4	171.957
S-GF-05	RETAIL-G5	39.995
	TOTAL UFA AT G/F =	1055.322

STAGE II

UFA CALCULATION DIAGRAM OF G/F

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. USABLE FLOOR AREA / USABLE FLOOR SPACE DIAGRAM MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:06

PROJECT

BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE

CALCULATIONS (5)

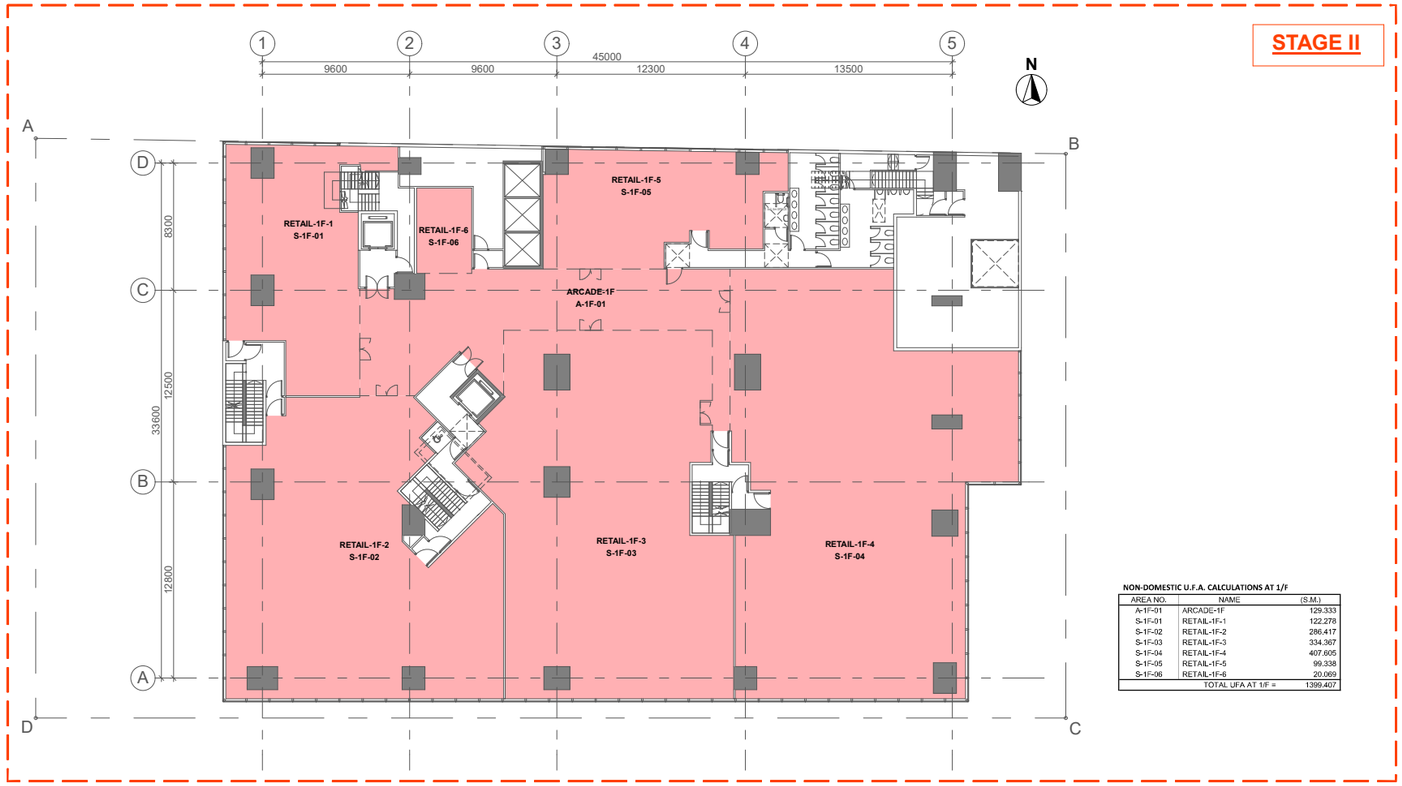
SCALE	1:200 (A1)
DRAWING NO.	C055
REV. NO.	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



NON-DOMESTIC U.F.A. CALCULATIONS AT 1/F

AREA NO.	NAME	(S.M.)
A-1F-01	ARCADE-1F	129.333
S-1F-01	RETAIL-1F-1	122.278
S-1F-02	RETAIL-1F-2	286.417
S-1F-03	RETAIL-1F-3	334.367
S-1F-04	RETAIL-1F-4	407.605
S-1F-05	RETAIL-1F-5	99.338
S-1F-06	RETAIL-1F-6	20.069
	TOTAL UFA AT 1/F =	1399.407

UFA CALCULATION DIAGRAM OF 1/F

R.R.F. U.F.A. & U.F.S. CALCULATIONS AT 2/F

AREA NO.	NAME	(S.M.)
R-U1	LOUNGE AREA 2	20.072
R-U2	LOUNGE AREA 1	17.779
R-U3	MFXR	106.398
R-U4	GYM	59.889
R-U21	OCO	19.972
	TOTAL UFA AT 2/F =	224.110
R-U11	STO 1	6.987
	TOTAL UFS AT 2/F =	231.097

UFA & UFS CALCULATION DIAGRAM OF 2/F

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. USABLE FLOOR AREA / USABLE FLOOR SPACE DIAGRAM MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:06

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
CALCULATIONS (6)

SCALE 1:200 (A1)

DRAWING NO.	REV. NO.
C056	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

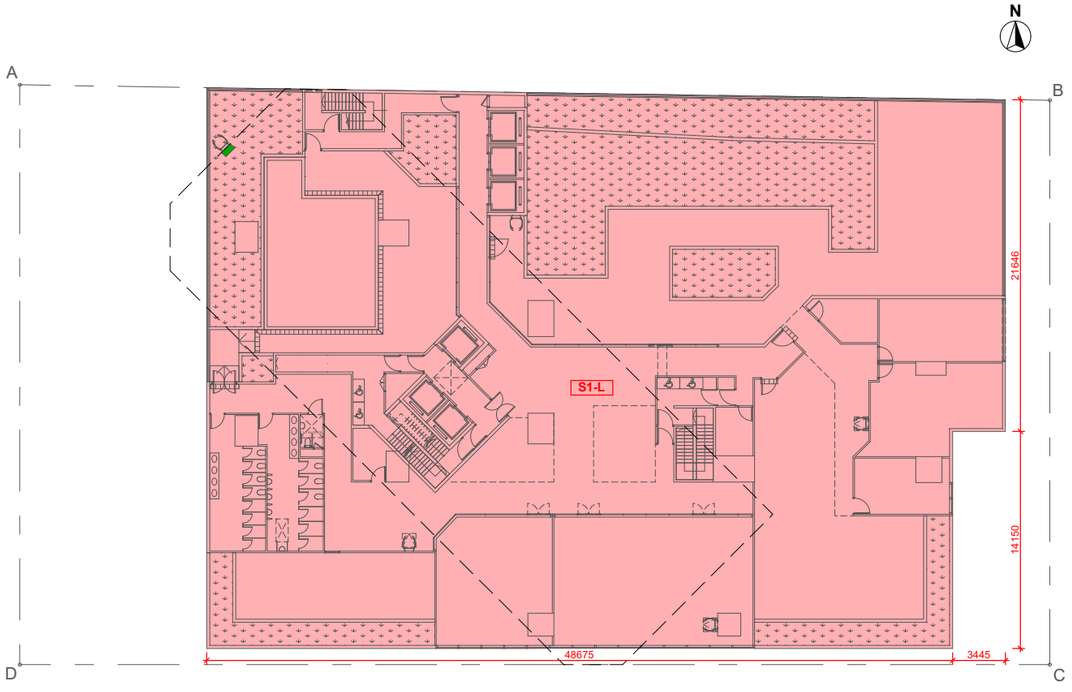
STAGE II

DOMESTIC U.F.A. CALCULATIONS

(3/F - 22/F)					(TOTAL)	MEANS OF ESCAPE		U.F.S. CALCULATIONS		(TOTAL)
FLAT	LIV / DIN (S.M.) ①	M. BR /BR. (S.M.) ②	BR.1 (S.M.) ③	BR.2 (S.M.) ④	U.F.A. (S.M.) ⑤=①+②+③+④	OCCUPANCY FACTOR ⑥	CAPACITY (PERSONS) ⑦ = ⑤ / ⑥	OPEN KIT. (S.M.) ⑧	UTILITY (S.M.) ⑨	U.F.S. (S.M.) ⑩=⑤+⑧+⑨
1	19.853	7.176	4.882	4.882	36.793	4.5	9	4.650	2.100	43.543
2	12.839	7.579	-	-	20.418		5	2.280	-	22.698
3	12.134	7.524	-	-	19.658		5	2.377	-	22.035
4	12.134	7.524	-	-	19.658		5	2.377	-	22.035
5	12.839	7.579	-	-	20.418		5	2.280	-	22.698
6	19.853	7.176	4.882	4.882	36.793		9	4.650	2.100	43.543
7	12.542	7.768	4.410	-	24.720		6	2.522	-	27.242
8	12.224	-	-	-	12.224		3	1.710	-	13.934
9	11.119	5.913	-	-	17.032		4	3.585	-	20.617
10	11.119	5.913	-	-	17.032		4	3.585	-	20.617
11	12.224	-	-	-	12.224		3	1.710	-	13.934
12	12.542	7.768	4.410	-	24.720		6	2.522	-	27.242
TOTAL U.F.A./ U.F.S. PER EACH FLOOR					261.690		64			300.138

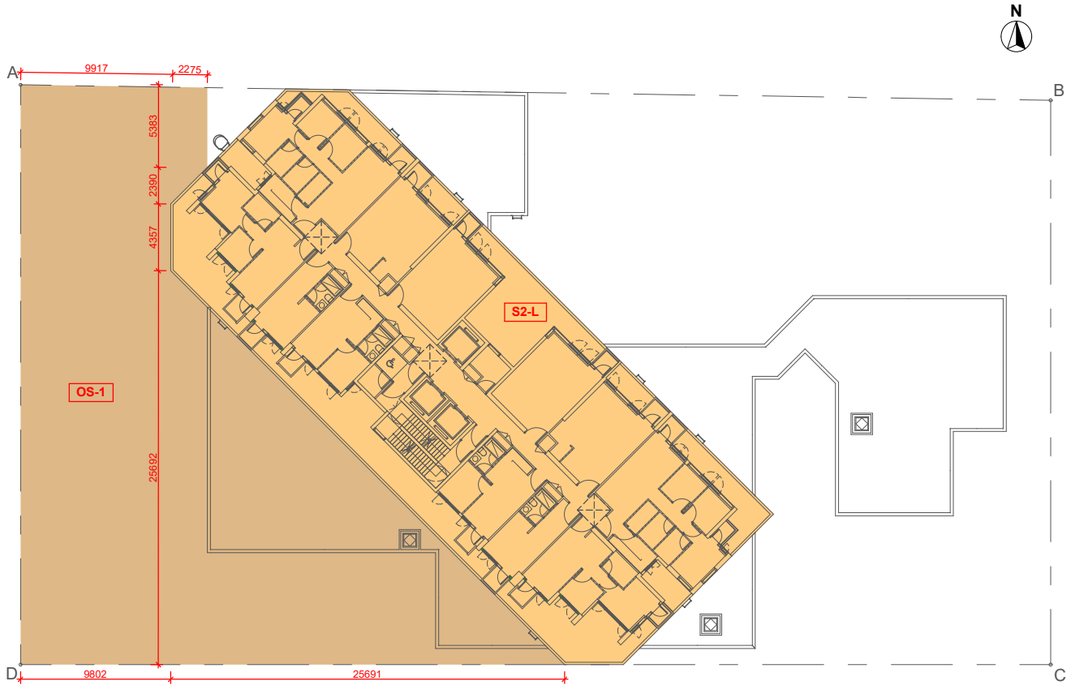
TOTAL U.F.A. (3/F~22/F) = 261.69 x 20 Storeys	=	5233.800
TOTAL U.F.S. = 300.138 x 20 Storeys	=	6002.760

UFA & UFS CALCULATION DIAGRAM OF 3/F ~ 22/F (20 STOREYS)



NON-DOMESTIC SITE COVERAGE AREA CALCULATION (15m ABOVE GROUND LEVEL)			
	NO.	AREA	NAME
2F	S1-L	1,837.404	NON-DOMESTIC SC
		1,837.404 m²	

NON-DOMESTIC SITE COVERAGE CALCULATIONS DIAGRAM AT 2F (NOT EXCEEDING 15M)



OPEN SPACE AREA CALCULATION			
	NO.	AREA	NAME
3F	OS-1	715.319	OPEN SPACE
		715.319 m²	

DOMESTIC SITE COVERAGE AREA CALCULATION			
	NO.	AREA	NAME
3F	S2-L	685.553	DOMESTIC SC
		685.553 m²	

OPEN SPACE & DOMESTIC SITE COVERAGE CALCULATIONS DIAGRAM AT 3F

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. USABLE FLOOR AREA / USABLE FLOOR SPACE DIAGRAM FOR TYPICAL FLOORS OF TOWER MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR CONSENT FOR THE COMMENCEMENT OF SUPERSTRUCTURE WORKS (STAGE II).

14/2/2023 4:06

PROJECT

BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE

CALCULATIONS (7)

SCALE 1:200 (A1)

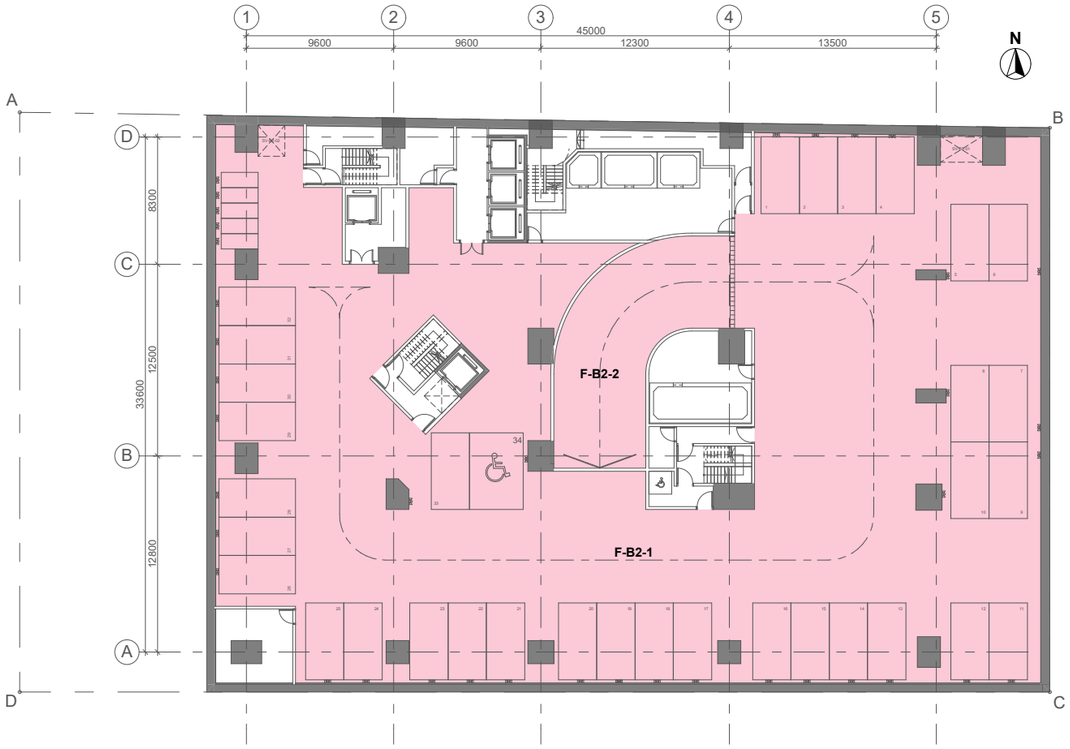
DRAWING NO.	REV. NO.
C057	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



FIRE COMPARTMENT CALCULATION AT B2-A

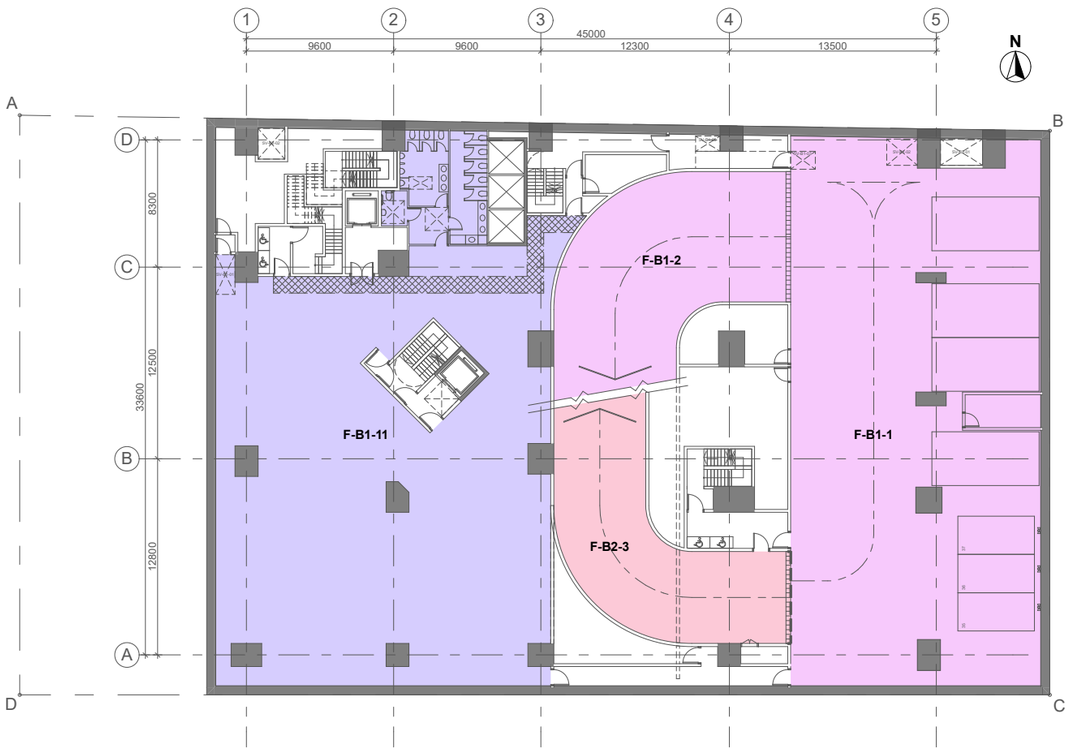
AREA NO.			(s.m.)	Height (m)	(cu.m.)
F-B2-1	B2/F (CARPARK)	=	1443.825	3.600	5197.770
F-B2-2	B2/F (RAMP)	=	110.189	3.600	396.680
F-B2-3	B1/F (RAMP)	=	136.454	5.650	770.965
	TOTAL	=	1690.468		6365.415

FIRE COMPARTMENT B2-1 = 6365.415 < 7000 cu.m.

AREA CALCULATION FOR SMOKE VENT AT B2-A

AREA NO.			(s.m.)
F-B2-1	B2/F (CARPARK)	=	1443.825
F-B2-2	B2/F (RAMP)	=	110.189
B2-1 AREA FOR SMOKE VENT		=	1554.014

FIRE COMPARTMENT DIAGRAM OF B2/F



FIRE COMPARTMENT CALCULATION FOR B1-A

AREA NO.			(s.m.)	Height (m)	(cu.m.)
F-B1-1	B1/F (CARPARK)	=	562.814	5.650	3179.896
F-B1-2	B1/F (RAMP)	=	161.902	5.650	914.746
F-B1-3	G/F (RAMP)	=	173.533	5.250	911.048
	TOTAL	=	898.249		5005.693

FIRE COMPARTMENT B1-1 = 5005.693 < 7000 cu.m.

FIRE COMPARTMENT CALCULATION AT B1-B

AREA NO.			(s.m.)	Height (m)	(cu.m.)
F-B1-11	B1/F (RETAIL)	=	605.070	5.650	3418.646
	TOTAL	=			3418.646

FIRE COMPARTMENT B1-2 = 3418.646 < 7000 cu.m.

AREA CALCULATION FOR SMOKE VENT FOR B1-A

AREA NO.			(s.m.)
F-B2-3	B1/F (RAMP)	=	136.454
F-B1-1	B1/F (CARPARK)	=	562.814
F-B1-2	B1/F (RAMP)	=	161.902
B1-1 AREA FOR SMOKE VENT		=	861.170

AREA CALCULATION FOR SMOKE VENT FOR B1-B

AREA NO.			(s.m.)
F-B1-11	B1/F (RETAIL)	=	605.070
B1-2 AREA FOR SMOKE VENT		=	605.070

B1F BASEMENT FLOOR SMOKE VENT CALCULATION :

B1-A AREA FOR SMOKE VENT
REQUIRED AREA :
= 861.17 s.m. x 0.5 %
= 4.306 s.m.

PROVIDED AREA :
= SV-B1-02 + SV-B1-03
= (2 x 1.7) s.m. + (1 x 1.6)
= 3.400 s.m. + 1.600
= 5.000 s.m. > 4.306 s.m.

B1-B AREA FOR SMOKE VENT
REQUIRED AREA :
= 605.07 s.m. x 0.5 %
= 3.025 s.m.

PROVIDED AREA :
= SV-B1-01
= (1.25 x 2.6) s.m.
= 3.250 s.m. 3.025 s.m.

FIRE COMPARTMENT DIAGRAM OF B1/F

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

14/2/2023 4:06

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
FIRE COMPARTMENT DIAGRAMS & CALCULATIONS (1)

SCALE 1:200 (A1)

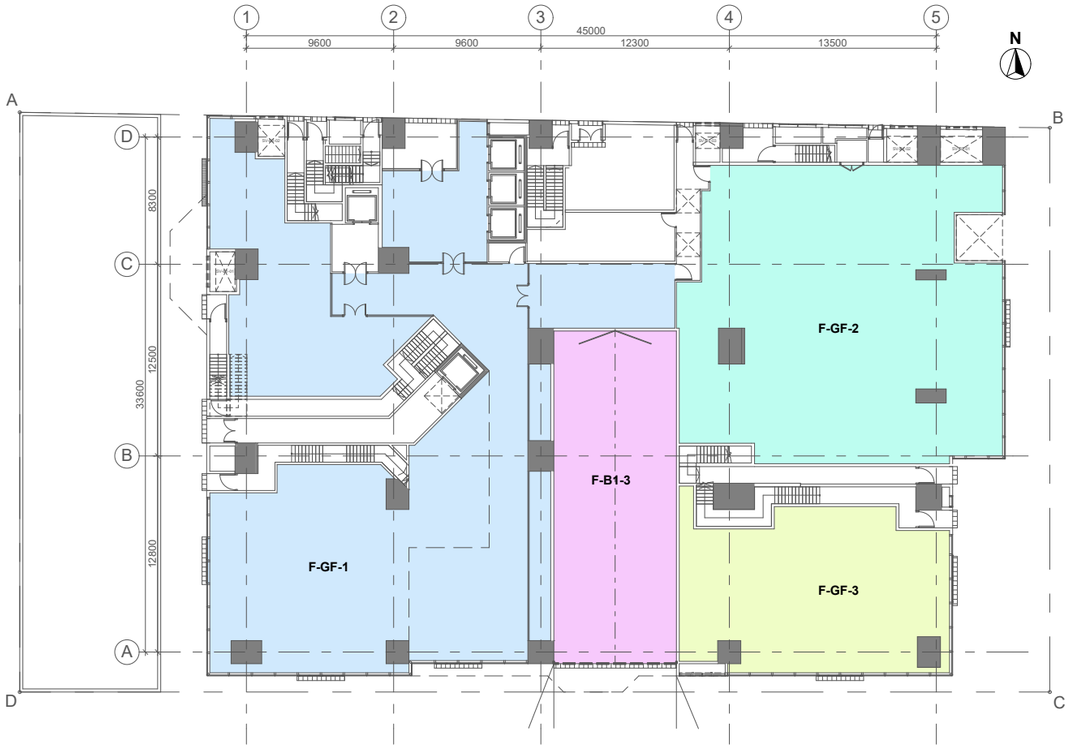
DRAWING NO.	REV. NO.
C061	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



FIRE COMPARTMENT CALCULATION AT G/F-A

AREA NO.			(s.m.)	Height (m)	(cu.m.)
F-GF-1	G/F (RETAIL)	=	580.452	5.250	3047.373
	TOTAL	=			3047.373
FIRE COMPARTMENT B1-1 = 3047.373 < 7000 cu.m.					

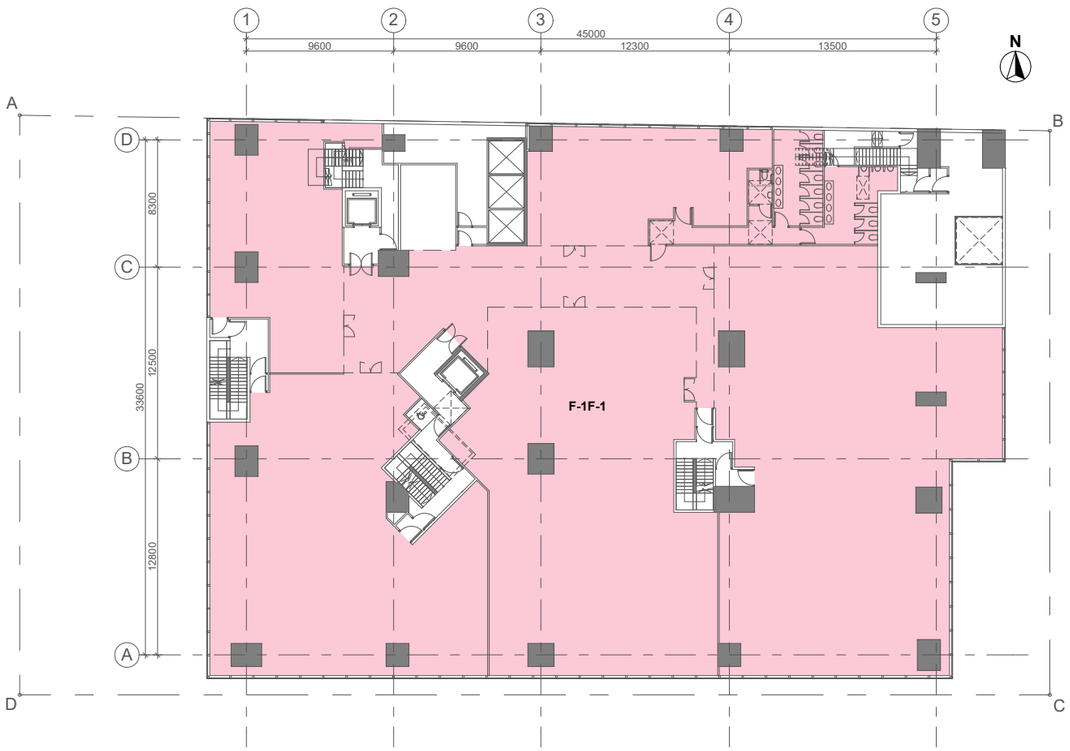
FIRE COMPARTMENT CALCULATION AT G/F-B

AREA NO.			(s.m.)	Height (m)	(cu.m.)
F-GF-2	G/F (RETAIL)	=	373.058	5.250	1958.555
	TOTAL	=			1958.555
FIRE COMPARTMENT B1-1 = 1958.555 < 7000 cu.m.					

FIRE COMPARTMENT CALCULATION AT G/F-C

AREA NO.			(s.m.)	Height (m)	(cu.m.)
F-GF-3	G/F (RETAIL)	=	171.953	5.250	902.753
	TOTAL	=			902.753
FIRE COMPARTMENT B1-1 = 902.753 < 7000 cu.m.					

FIRE COMPARTMENT DIAGRAM OF G/F



FIRE COMPARTMENT CALCULATION AT 1/F

AREA NO.			(s.m.)	Height (m)	(cu.m.)
F-1F-1	1/F (RETAIL)	=	1440.875	4.450	6438.594
	TOTAL	=			6438.594
FIRE COMPARTMENT B1-1 = 6438.594 < 7000 cu.m.					

FIRE COMPARTMENT DIAGRAM OF 1/F

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

14/2/2023 4:06

PROJECT

BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE

FIRE COMPARTMENT DIAGRAMS & CALCULATIONS (2)

SCALE 1:200 (A1)

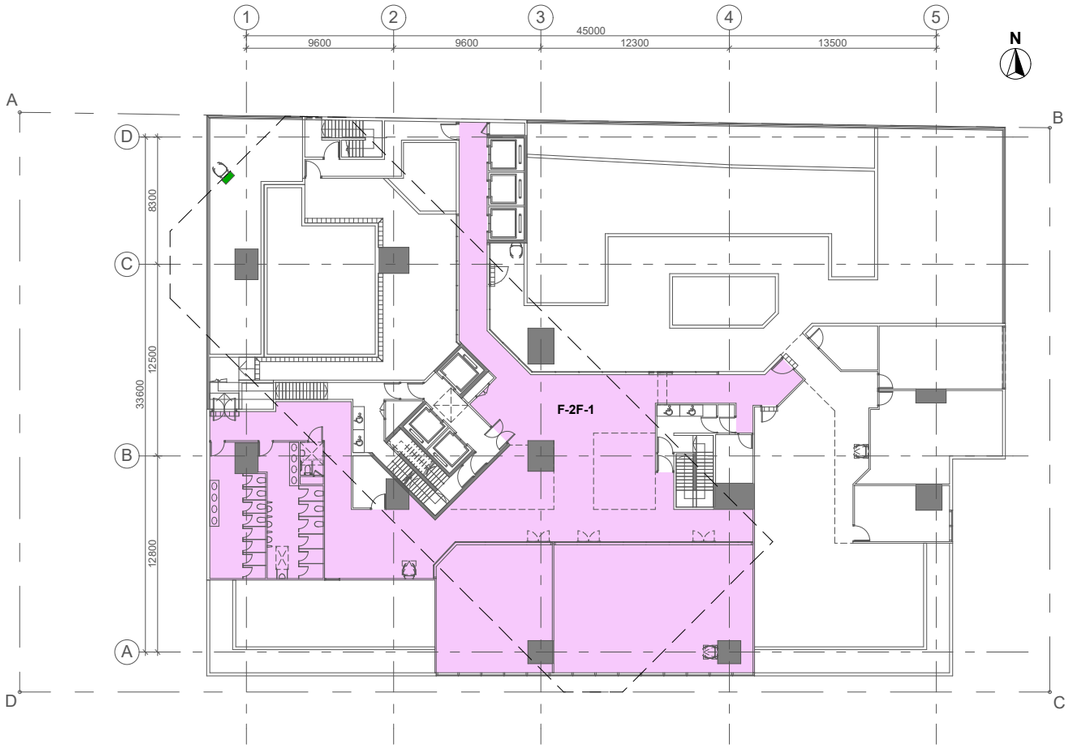
DRAWING NO.	REV. NO.
C062	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



FIRE COMPARTMENT CALCULATION AT 2/F

AREA NO.			(s.m.)	Height (m)	(cu.m.)
F-2F-1	2/F (RRF & LOBBY)	=	494.963	4.050	2004.600
	TOTAL	=			2004.600

FIRE COMPARTMENT B1-1 = 2004.6 < 7000 cu.m.

FIRE COMPARTMENT DIAGRAM OF 2/F

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

14/2/2023 4:06

PROJECT

BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE

FIRE COMPARTMENT DIAGRAMS & CALCULATIONS (3)

SCALE 1:200 (A1)

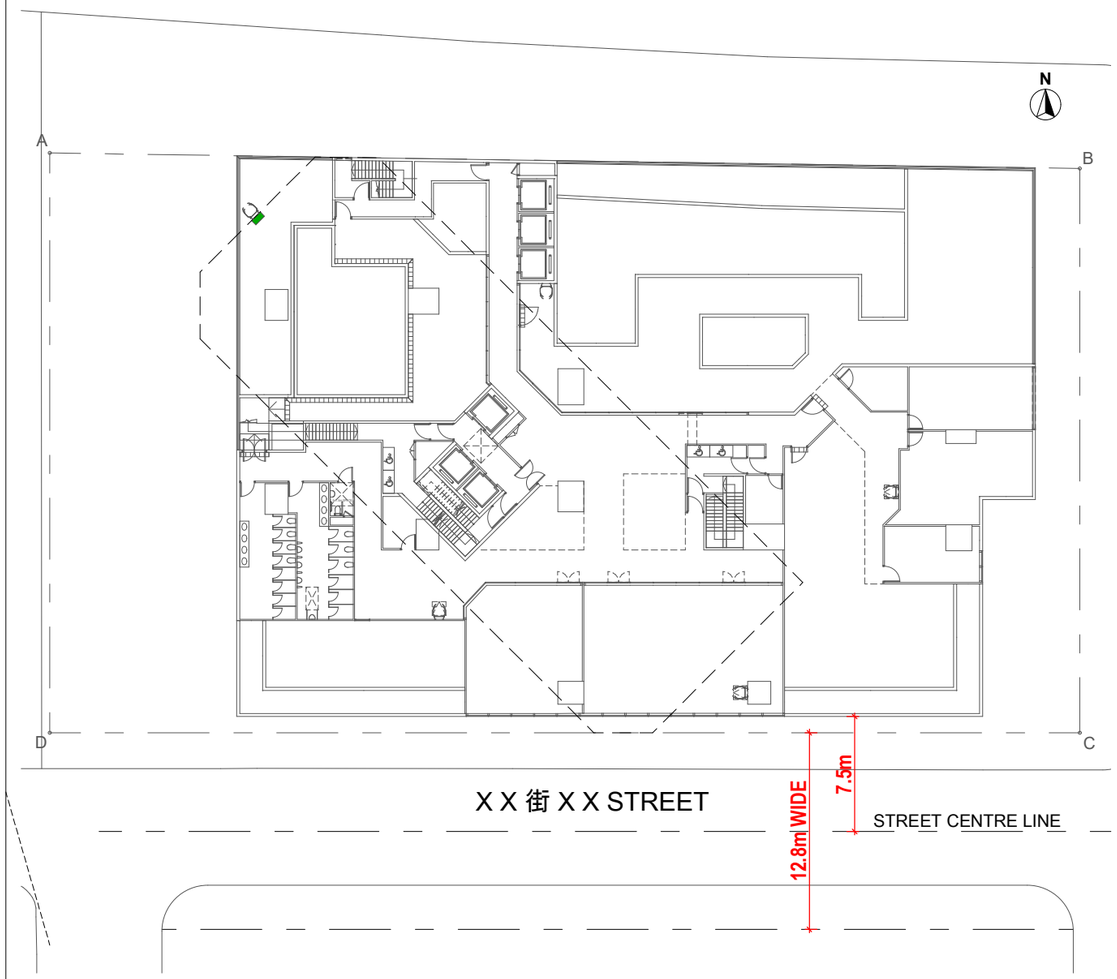
DRAWING NO.	REV. NO.
C063	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

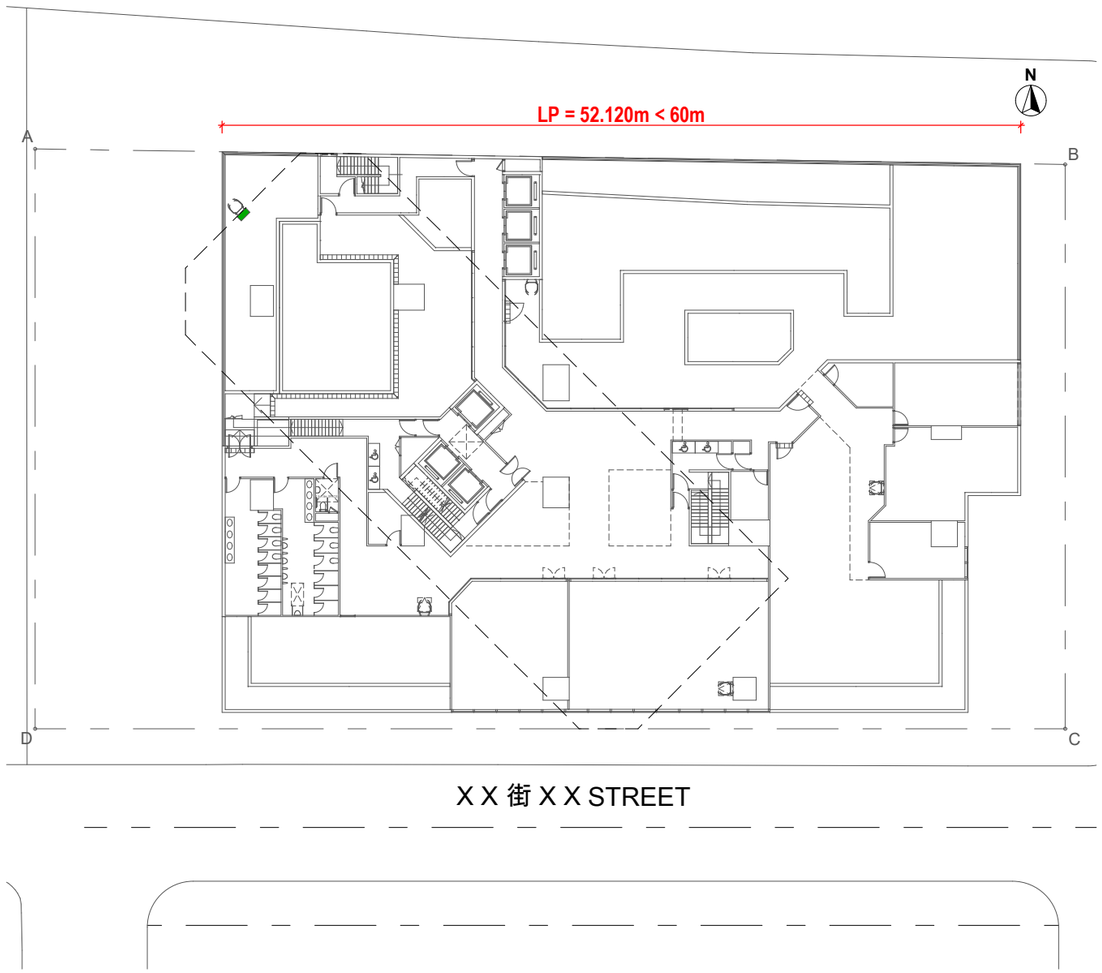


(SHALL COMPLY WITH PNAP AP152)

IN ORDER TO IMPROVE AIR VENTILATION , ENHANCE THE ENVIRONMENTAL QUALITY AT PEDESTRIAN LEVEL AND MITIGATE DEEP STREET CANYON EFFECT, BUILDINGS ABUTTING A NARROW STREET LESS THAN 15m WIDE SHALL SETBACK

i.e. SETBACK REQUIREMENT COMPLIED

BUILDING SETBACK DIAGRAM



MAXIMUM FACADE LENGTH Lp = 52.120m < 60m ENTIRE BUILDING AND SITE AREA 20,000 s.m.

i.e. NO REQUIREMENT ON BUILDING SEPARATION

BUILDING SEPARATION DIAGRAM

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

14/2/2023 4:06

PROJECT

BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE

SUSTAINABLE BUILDING DESIGN DEMONSTRATION DIAGRAMS & CALCULATIONS

SCALE 1:200 (A1)

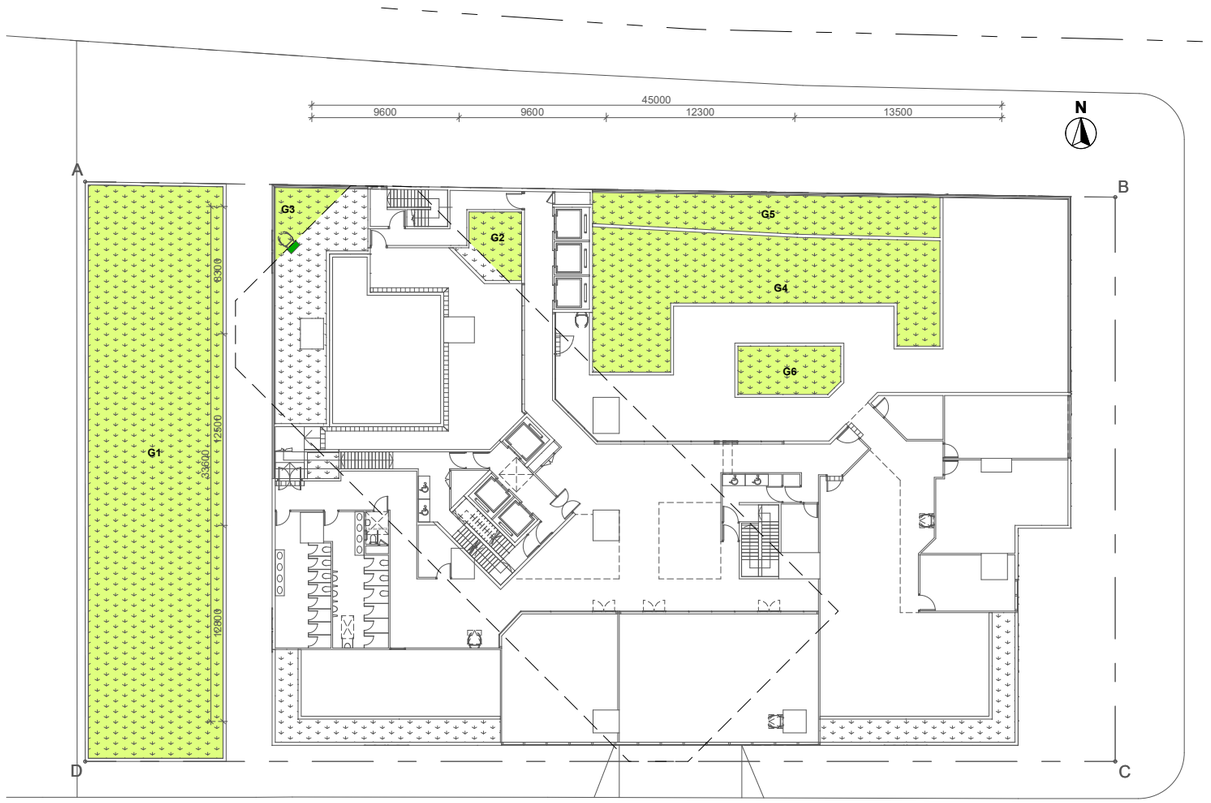
DRAWING NO.	REV. NO.
C071	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



G/F GREENERY AREA

G1	=	328.339	s.m.
SUB-TOTAL	=	328.339	s.m.

2/F GREENERY AREA

G2	=	12.173	s.m.
G3	=	11.331	s.m.
G4	=	131.699	s.m.
G5	=	54.430	s.m.
G6	=	20.753	s.m.
SUB-TOTAL	=	230.386	s.m.

TOTAL PEDESTRIAN AREA = 558.725 s.m.

TOTAL SITE COVERAGE OF GREENERY ON PRIMARY ZONE (UNDER APP-152)

SITE AREA = 2507.826 s.m. < 20000 s.m.,
MIN. SITE COVERAGE OF GREENERY (PRIMARY ZONE = 10% & OVERALL 20%)

ACTUAL SITE COVERAGE OF GREENERY = $\frac{\text{GREENERY AREA ON PRIMARY ZONE}}{\text{SITE AREA}} \times 100\ \%$

= $\frac{558.725}{2507.730} \times 100\ \%$

= 22.280% > 10%

TOTAL AREA OF GREENERY = GREENERY AREA ON PRIMARY ZONE + GREENERY AREA ON ROOF FLOOR
= 558.725 s.m.

ACTUAL SITE COVERAGE OF GREENERY = $\frac{\text{TOTAL AREA OF GREENERY}}{\text{SITE AREA}} \times 100\ \%$

= $\frac{558.725}{2507.730} \times 100\ \%$

= 22.280% > 20%

GREENERY DIAGRAM OF G/F & 2/F

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

14/2/2023 4:06

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
GREENERY DIAGRAMS & CALCULATIONS

SCALE 1:200 (A1)

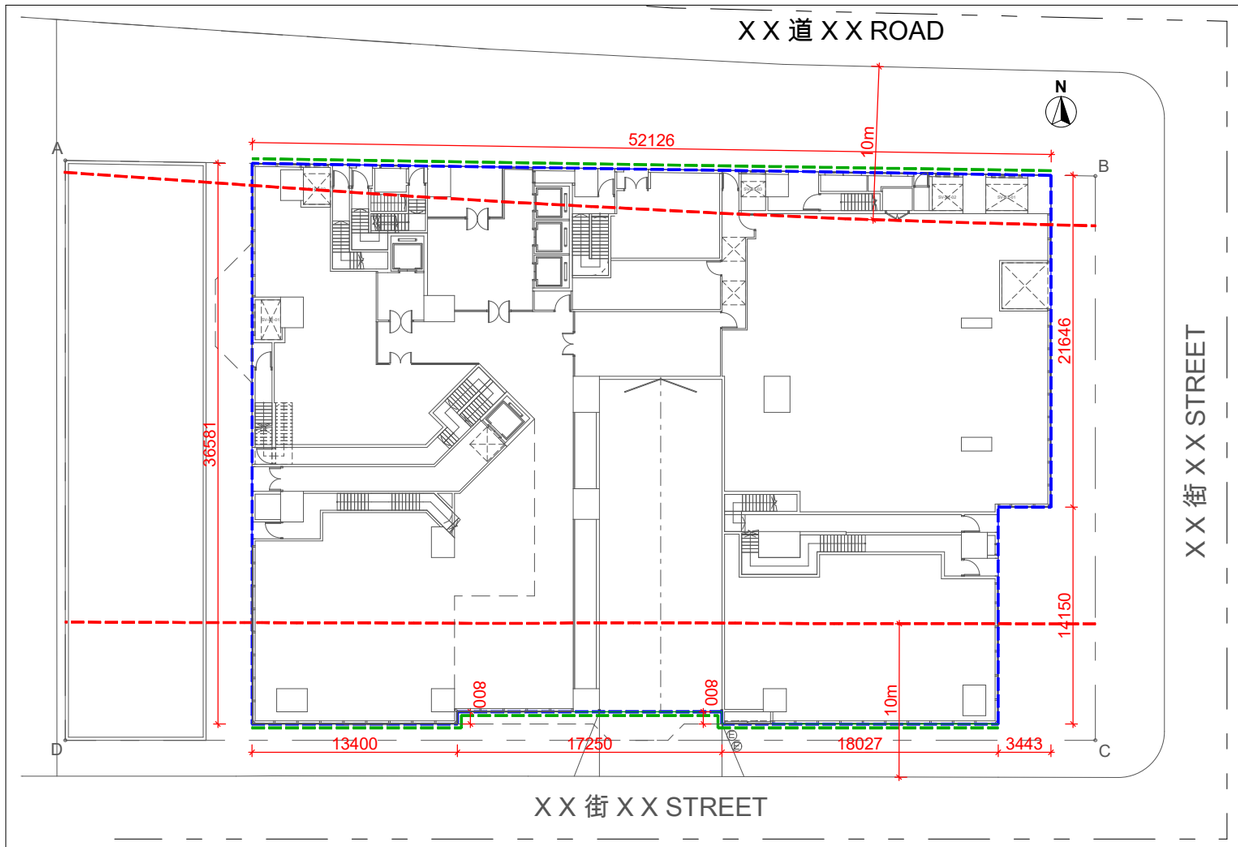
DRAWING NO.	REV. NO.
C072	-

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



LEGEND :

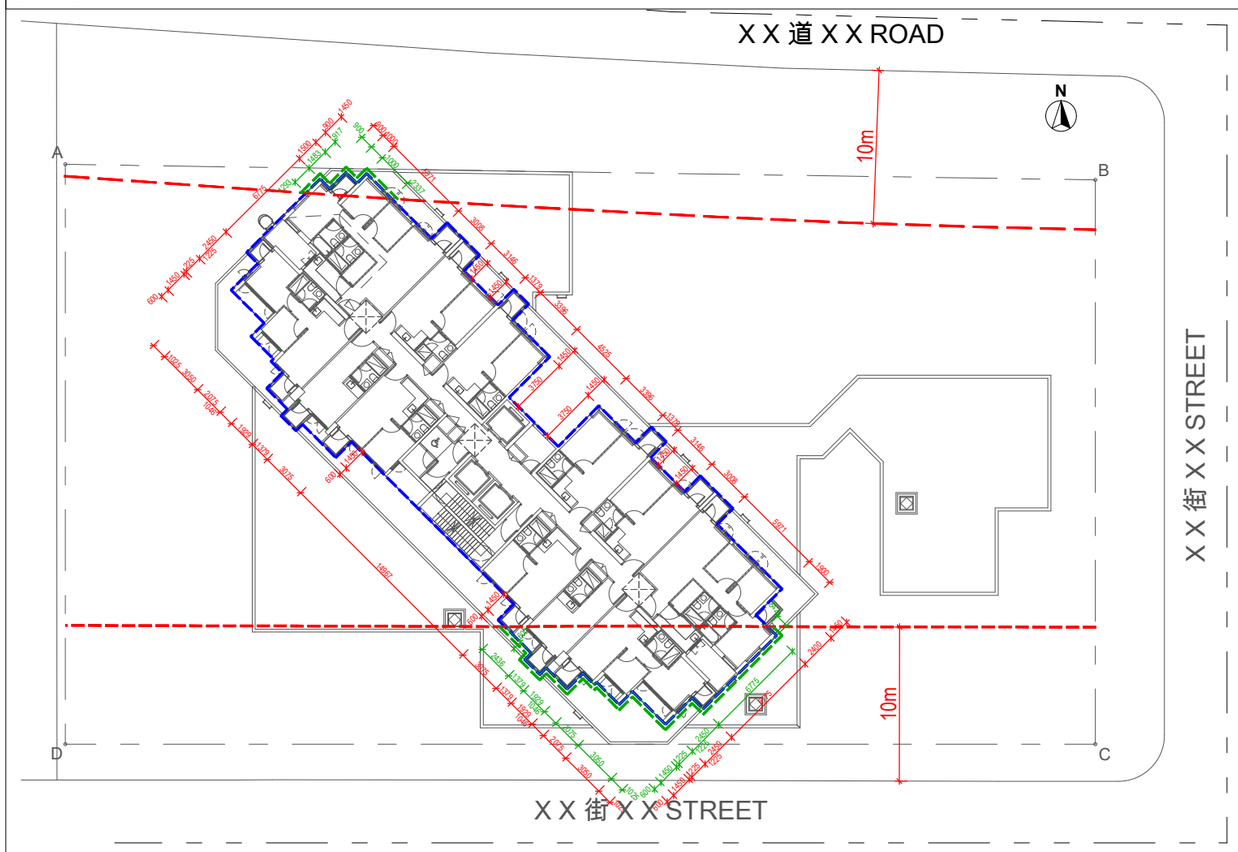
EMERGENCY VEHICULAR ACCESS (EVA)
WITHSTAND LOADING 30000 KG
HARD PAVE WIDTH - OPERATION ≥ 6M ; FOR PASSAGE ≥ 4.5M
GRADIENT - OPERATION ≤ 1 : 10 ; FOR PASSAGE ≤ 1 : 6
OVERALL HEADROOM MIN. 4.5M

SITE BOUNDARY
CENTRE LINE OF STREET
LENGTH OF PERIMETER WALL FOR PODIUM
LENGTH OF THE FACADE FOR PODIUM SERVED BY EVA

LENGTH CALCULATION OF FACADE TO BE SERVED BY E.V.A.

TOTAL LENGTH OF PERIMETER WALL FOR PODIUM PORTION (G/F~2/F)		=	178.22	m
TOTAL LENGTH OF THE FACADE FOR PODIUM PORTION (G/F~2/F) SERVED BY THE XX ROAD & XX STREET		=	102.40	m
PERCENTAGE OF PERIMETER WALL FOR PODIUM SERVED BY THE XX ROAD & XX STREET				
(102.40 / 178.22) x 100%	=	57.46	%	> 25 %

EVA PLAN OF GF



LEGEND :

EMERGENCY VEHICULAR ACCESS (EVA)
WITHSTAND LOADING 30000 KG
HARD PAVE WIDTH - OPERATION ≥ 6M ; FOR PASSAGE ≥ 4.5M
GRADIENT - OPERATION ≤ 1 : 10 ; FOR PASSAGE ≤ 1 : 6
OVERALL HEADROOM MIN. 4.5M

SITE BOUNDARY
CENTRE LINE OF STREET
LENGTH OF PERIMETER WALL FOR TOWER
LENGTH OF THE FACADE FOR TOWER SERVED BY EVA

LENGTH CALCULATION OF FACADE TO BE SERVED BY E.V.A.

TOWER (FROM 3/F TO 22/F)				
TOTAL LENGTH OF PERIMETER WALL FOR TOWER		=	137.70	m
TOTAL LENGTH OF THE FACADE FOR TOWER TO BE SERVED BY THE XX ROAD & XX STREET		=	35.062	m
PERCENTAGE OF PERIMETER WALL FOR TOWER SERVED BY THE XX ROAD & XX STREET				
(35.062 / 137.700) x 100%	=	25.463	%	> 25 %

EVA PLAN OF TYPICAL FLOOR

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

14/2/2023 4:06

PROJECT
BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE
E.V.A. PLAN DIAGRAMS & CALCULATIONS

SCALE 1:200 (A1)

DRAWING NO.	REV. NO.
C073	-

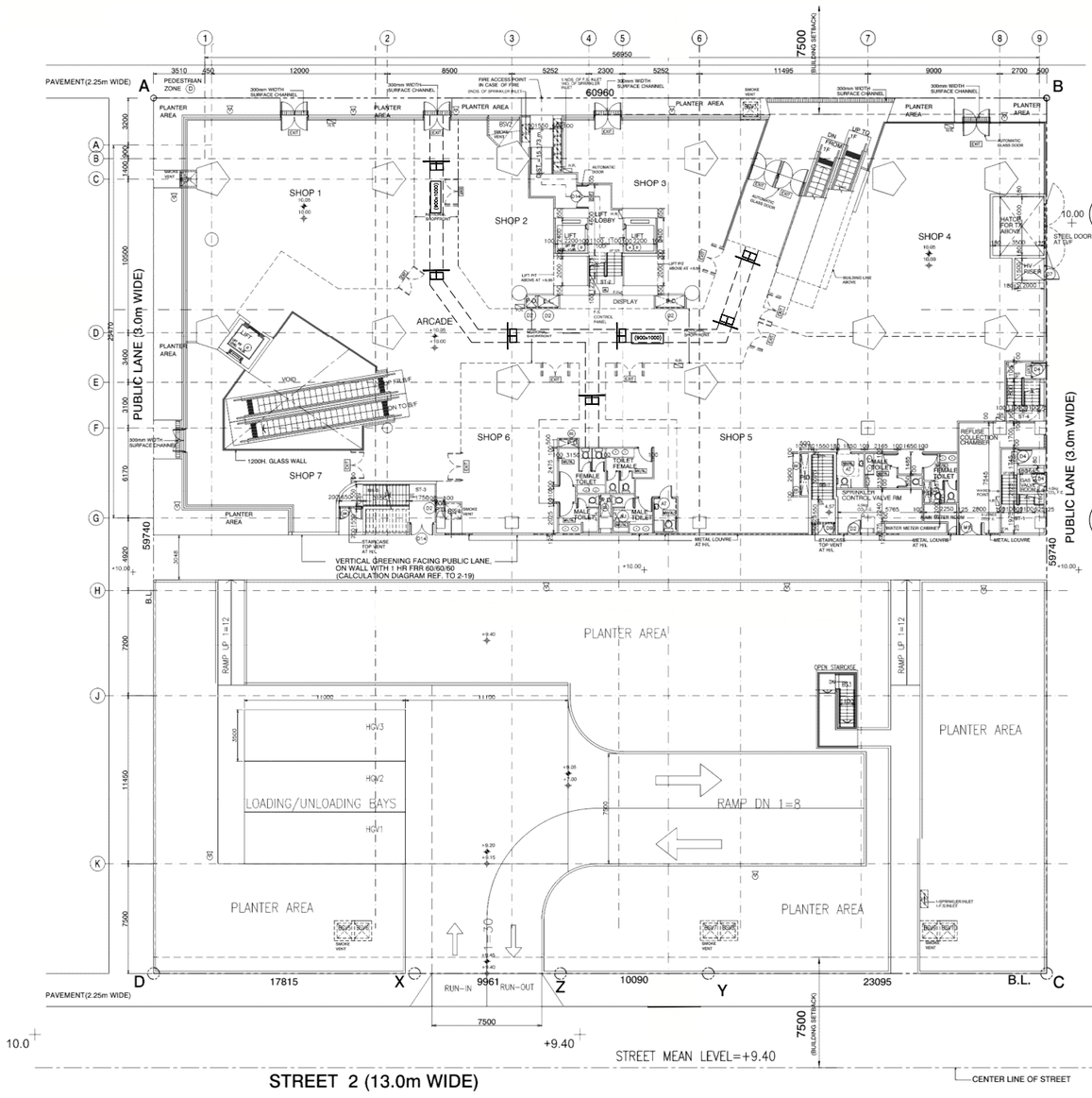
SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

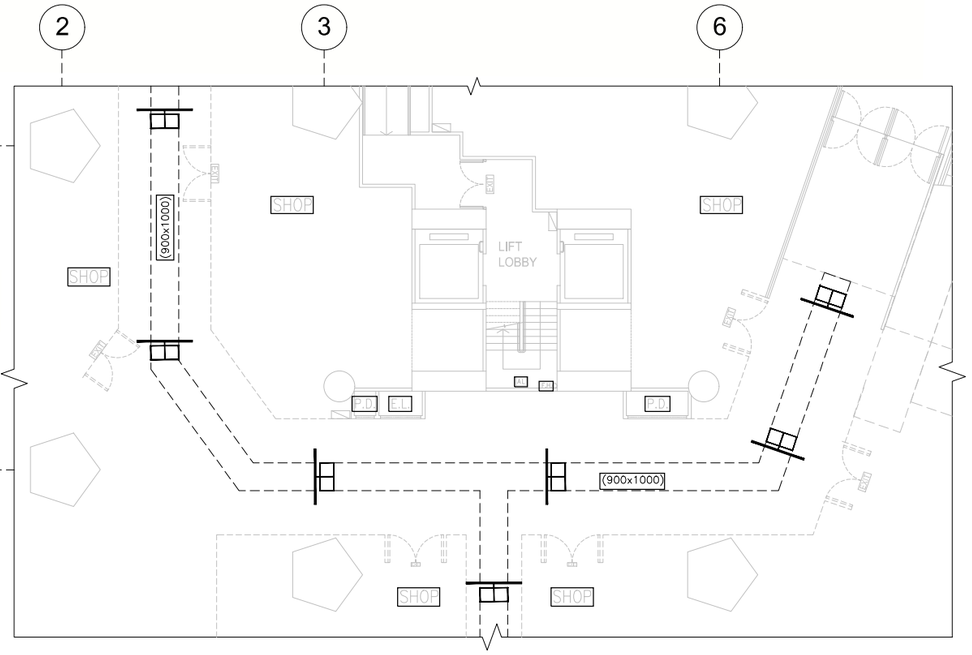
90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

STAGE III



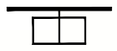
GROUND FLOOR PLAN
LAYOUT FOR REFERENCE ONLY



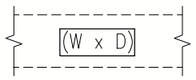
Part plan for supporting frames for suspending air-conditioning plants or mechanical ventilation plants and metal ventilation ducts
(Sample for illustration purpose)

Notes:

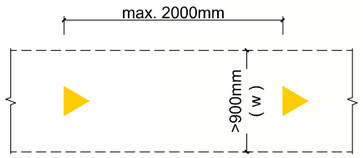
1. Supporting frame for suspending an air-conditioning plant/ mechanical ventilation plant >150kg



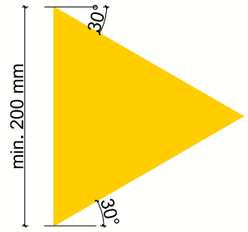
2. Proposed metal ventilation ducts with the smallest cross-sectional dimension >900mm and associated supporting frames



3. Standard colour marking for the approved metal ventilation ducts should be provided at the underside of the ducts before application for an occupation permit or submission for the completion of works



4. Standard colour marking to match PANTONE 116 C



BD REF

BIM REF

FSD REF

Rev.	Date	Amendment	Purpose

COMMENTARY

1. VENTILATION DUCTS AND SIGN SHOWING, DIRECTION, INFORMATION AND PROVISIONS FOR PERSONS WITH DISABILITY (PwD) MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR OCCUPATION PERMIT / TEMPORARY OCCUPATION PERMIT (STAGE III).

3/3/2023 17:58

PROJECT
SAMPLE

DRAWING TITLE
GROUND FLOOR PLAN - VENTILATION DUCTS

SCALE - (A1)

DRAWING NO. REV. NO.

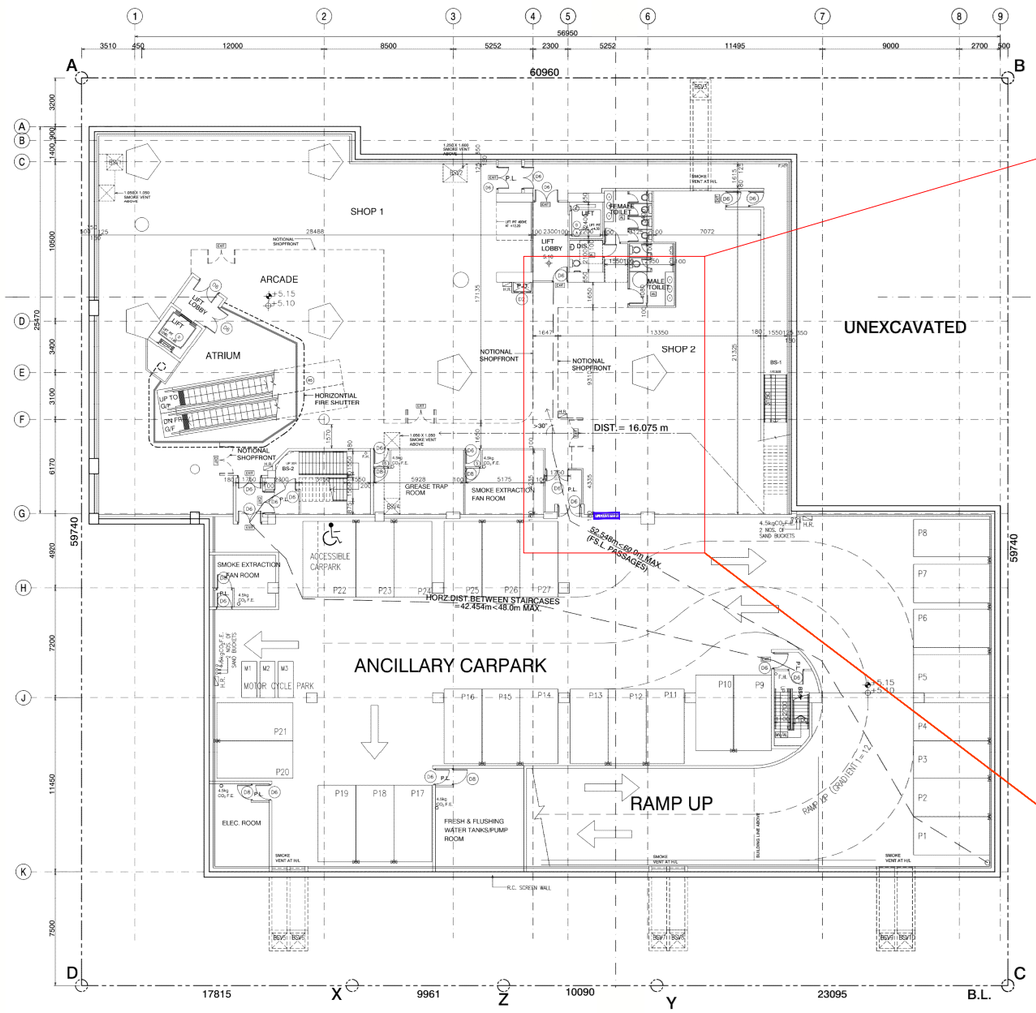
SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

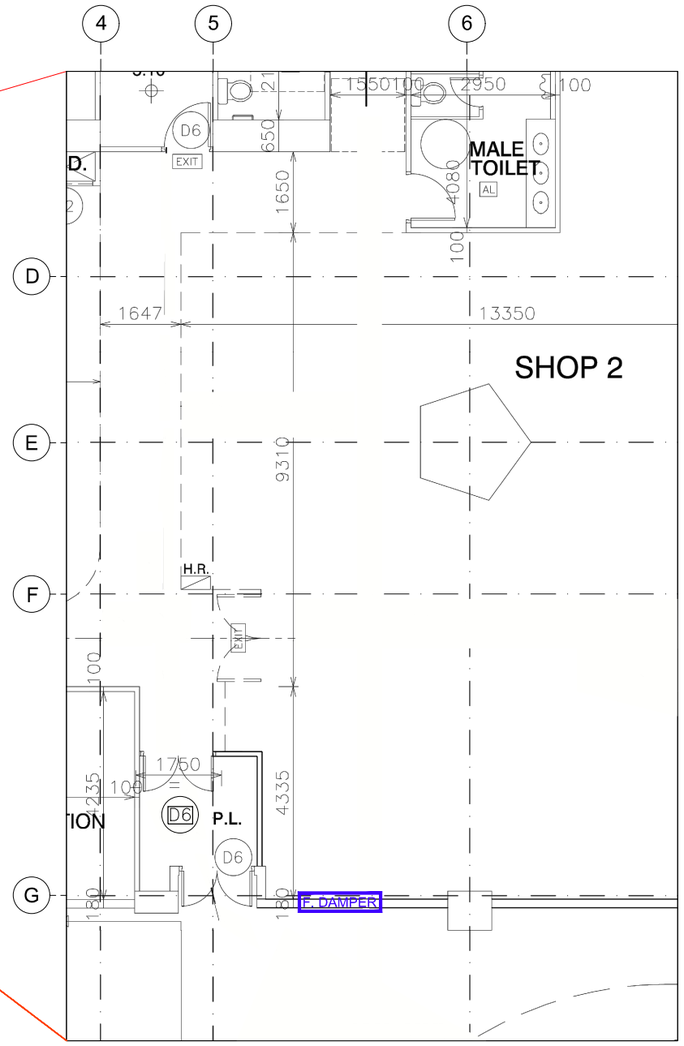
90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

STAGE III



BASEMENT FLOOR PLAN
LAYOUT FOR REFERENCE ONLY



Part plan for fire damper on basement floor
(Note - only one damper on basement floor)
(Sample for illustration purpose)

LEGEND:

F. DAMPER — Fire damper in a ventilation system having fire resistance rating not less than that of the fire barrier it protects

BD REF

BIM REF

FSD REF

Rev.	Date	Amendment	Purpose

COMMENTARY

1. FIRE DAMPERS MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR OCCUPATION PERMIT / TEMPORARY OCCUPATION PERMIT (STAGE III).

23/3/2023 10:51

PROJECT
SAMPLE

DRAWING TITLE
FIRE DAMPER ON BASEMENT FLOOR

SCALE (A1)

DRAWING NO. REV. NO.

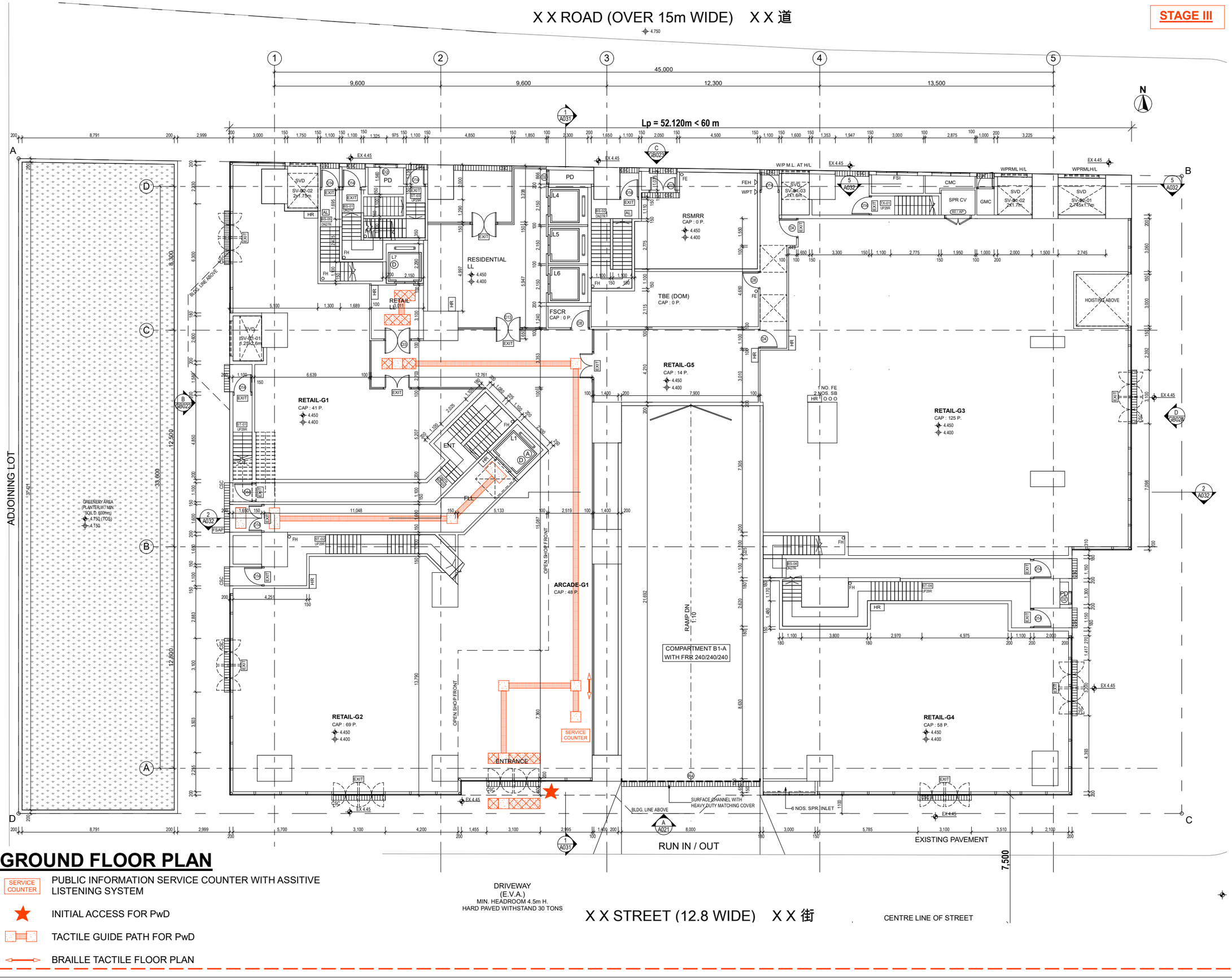
SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

STAGE III



GROUND FLOOR PLAN

SERVICE COUNTER — PUBLIC INFORMATION SERVICE COUNTER WITH ASSITIVE LISTENING SYSTEM

INITIAL ACCESS FOR PwD

TACTILE GUIDE PATH FOR PwD

BRAILLE TACTILE FLOOR PLAN

BD REF	2/1234/18
BIM REF	2-1234-18-A21-01
FSD REF	FP 8/

Rev.	Date	Amendment	Purpose

COMMENTARY

1. ASSISTIVE PROVISIONS FOR PERSONS WITH A DISABILITY MIGHT BE PROVIDED IN GBP BEFORE APPLICATION FOR OCCUPATION PERMIT / TEMPORARY OCCUPATION PERMIT (STAGE III).

17/3/2023 12:11

PROJECT

BD SAMPLE - PROPOSED 20-STOREY RESIDENTIAL BUILDING OVER 3-STOREY PODIUM AT TKO

DRAWING TITLE

ASSISTIVE PROVISIONS FOR PERSONS WITH DISABILITY

SCALE (A1)

DRAWING NO. **REV. NO.**

SOURCE

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

Checklist for Foundation Plan Submissions
(This checklist is **not** required to be submitted to the BD.)

Part A–Administration

Typical Items		Requirements	Reference
1.	Statutory Forms	◯ Form BA 4 (for appointment of AP/RSE/RGE)	ADM-8 B(A)R 18A and 29(1)
		◯ Form BA 5 (for application for approval)	
		◯ Form BA6 (Stability Certificate as necessary)	
		◯ Form BA16 (Application for exemption/ modification as necessary)	
2.	Fee for plan processing	◯ Payment required when fees are charged according to total number of plans submitted	APP-55
3.	Plans and Documents	◯ 2 signed sets of plans and 1 signed set of all documents	ADM-8 APP-141
4.	Additional sets of plans and/or documents for referrals to relevant organizations required when the proposed foundation works involve or affect the areas	◯ Scheduled Area Nos. 1, 2 & 4 (1 set of plans and 1 sets of documents)	ADM-8 APP-24 APP-30 APP-32 APP-61 APP-62 APP-134
		◯ Railway Protection Areas (2 sets of plans)	
		◯ Scheduled Area No. 5 (2 sets of plans and 1 set of documents)	
		◯ Designated Area of Northshore Lantau (1 set of plans and 1 set of documents)	
		◯ Slopes/Retaining Structures/ deep excavation/ disused tunnel (1 set of plans and 1 set of documents)	
		◯ Culvert, nullah, stream course (3 sets of plans)	
		◯ Chek Lap Kok Airport (1 set of plans)	
		◯ Structures to be erected in, over, under or upon street (2 sets of plans)	
		◯ Highway structures (1 set of plans and 1 set of documents)	
		◯ Sea walls, adjacent to sea front (1 set of plans and 1 set of documents)	
		◯ Reclamation, piers (2 sets of plans and 2 sets of design documents)	
		◯ Public drainage or water mains (1 set of plans)	

Part B - Documents

Typical Items		Requirements	Reference
1.	Design Document : Part I - Synopsis and Essential information	A description of the foundation system includes: ☐ Types of the foundation works ☐ Design codes/standards with edition ☐ Grade of materials to recognized standards ☐ Geotechnical parameters ☐ Groundwater conditions ☐ Design assumption for footings/rafts/pile caps of pile foundations for the transfer of the assumed loads to the founding strata ☐ A summary abstracted from the appraisal and assessment report on the effects on adjoining buildings, structures, lands, streets, utility services, slopes and retaining walls, etc. affected by the proposed works, including vibration, tilting, settlement, etc. together with the proposed precautionary measures and monitoring system ☐ Assumed loadings considered, including: • Dead and Imposed loads • Wind loads • Earth loads, including ground water pressure ☐ Information on computerized calculations: • Structural/geotechnical computer program statement signed by RSE and/or RGE • Assumptions made and justifications on parameters used in the computer model, e.g. material properties, boundary conditions, etc. • Input data with computer-generated graphics or hand sketch showing the framing & layout of the system, nodes & elements, connection fixity, etc.	ADM-8 ADM-19 APP-18 ADM-6 ADM-8
2.	Design Document : Part II - Detailed analysis and design	☐ Analysis and design on the structural elements of the foundation system to design codes adopted and B(C)R, for example: • Design check on combined axial and flexural stresses for piled foundations • Calculation of Final set table based on dynamic pile driving formula • Design on the allowable load capacities of the foundation • Combinations of loads on each pile/footing	ADM-8 ADM-19 APP-18 B(C)R 15

Typical Items		Requirements	Reference
		☐ Design check on the margins of safety of the foundations in accordance with Code of Practice for Foundations: • FOS against overturning • FOS against sliding • FOS against uplift	
3.	Geotechnical Assessment Report together with Ground/Site Investigation Report	☐ Justification on geotechnical parameters & assumptions adopted with G.I. information and tests from Ground/Site Investigation Reports ☐ For foundations in Scheduled Area Nos. 1, 2 & 4 and Designated Area of Northshore of Lantau and foundations affecting slopes and retaining walls, RGE to sign geotechnical assessment reports and supporting documents	ADM-8 ADM-19 APP-18 APP-22 APP-49 APP-141
4.	Appraisal report together with assessment on the effects on adjoining buildings, structures, lands, streets, utility services, slopes and retaining walls, etc. affecting and/or be affected by the proposed works	☐ Construction method ☐ Estimates on vibration on adjoining buildings, structures, lands, streets, utility services, slopes and retaining walls, etc. e.g. due to pile driving operation ☐ Estimates on the envisaged amount of settlement induced on adjoining buildings, structures, lands, streets, utility services, slopes and retaining walls, etc., e.g. due to loss of ground caused by the pile installation operation and/or dewatering required for the construction of the foundation system ☐ Assessment of the effects on subsurface structures/tunnels, e.g. additional stress on MTR structures/sewage tunnels ☐ Precautionary measures together with construction sequence required to safeguard the adjoining buildings, structures, lands, streets, utility services, slopes and retaining walls, etc. affected, e.g. shoring, underpinning, grouting, etc. ☐ Instrumentation and monitoring required to safeguard the adjoining buildings, structures, lands, streets, utility services, slopes and retaining walls, etc. affected	ADM-8 ADM-19 APP-18 APP-22 APP-24 APP-30 APP-62 APP-137

PART C – Plans

Typical Items		Requirements	Reference
1.	Plans properly indexed and space reserved at the lower right corner for	☐ Plans to be properly indexed and each drawing to bear a title and number ☐ Vertical space (90mm wide x 200 mm	ADM-8 ADM-10

Typical Items		Requirements	Reference
	official stamps of approval	high) or horizontal space (245mm wide x 80mm high) for accommodating official stamps of approval, curtailed check and true copy certification by the BA on every plan at the lower right corner	
2.	A block plan showing the location of the site and relevant details	☐ Block plan to be in scale not less than 1:500 ☐ Location of the site with adjoining buildings, structures, lands, streets, utility services, slopes, retaining walls, access road over which right of way, if any, granted, etc. ☐ Remarks provided below the block plan, if site within boundaries of Scheduled Area(s), Designated Area(s), etc.	APP-18 B(A)R Section 13
3.	Plans and sections in appropriate scales for readability	☐ Plans and sections/elevation to be in a scale not less than 1:100; except that a scale of not less than 1:200 may be accepted for cases of very extensive works ☐ Details to be in scale not less than 1:75	B(A)R Section 13
4.	Details showing the characteristic features of the site and environments	☐ Locations of all boreholes contained in G.I. ☐ Existing adjoining buildings, underground structures, tunnels, basement, etc. with types, layouts and depths/levels of foundations ☐ Ground profile with levels of all adjoining slopes ☐ Existing retaining walls with layouts, sizes and depths/levels of foundations ☐ Layouts and depths/levels of all adjoining existing nullahs, underground services and utility services	APP-18 APP-30
5.	General Notes on Design Codes and Standards	☐ Building (Construction) Regulations ☐ Updated editions of relevant Design Codes of Practices and Standards	ADM-8 ADM-19 APP-18
6.	General Notes on Material specifications with limiting stresses	☐ Grade of materials complying with updated editions of relevant Codes of Practices and standards ☐ Founding stratum of presumed allowable bearing pressure with the category of rock/soil strata complying with Code of Practice for Foundations	
7.	General Notes on quality control standards and testing on workmanship	☐ For conventional construction materials, statements on sampling method, frequency of tests, testing methods and acceptance criteria of tested materials complying with Building (Construction)	APP-18

Typical Items		Requirements	Reference
		Regulations, updated editions of relevant Codes of Practices and standards ☐ For unconventional construction materials, details of sampling method, frequency of tests, testing methods and acceptance criteria of tested materials complying with relevant standards to be provided ☐ Testing proposal and method statement for non-recognised pile types ☐ For piles and raft/footings founded on category 1(c) or of better rock, pre-drilling with UCS/PLI_{50} tests and post-installation drilling to verify the quality of rock founding strata complying with Code of Practice for Foundations ☐ For piles with pile resistance derived from shaft friction, pre-drilling with SPT tests complying with Code of Practice for Foundations ☐ <u>Particulars for Large Diameter Bored Piles</u>: • Post-installation proof drilling at concrete/rock interface confirming the quality of concrete and rock at interface • Remedial works proposal for rectifying minor imperfection observed during the interface core-drilling • Ultrasonic echo sounder test to measure the profile of excavation of the pile shafts and the dimensions of the bell-outs ☐ <u>Particulars for Small Diameter Bored Piles</u>: • Pre-drilling with SPT tests complying with Code of Practice for Foundations for piles with pile resistance derived from shaft friction ☐ <u>Particulars for Driven Precast Prestressed Spun Concrete Piles</u>: • Core test proposal for verification of the concrete strength of piles • Final set table based on dynamic pile	

Typical Items		Requirements	Reference
		driving formula • Visual inspection to every pile section delivered to site • Stress wave dynamic tests - PDA test with CAPWAP analysis during driving ☐ <u>Particulars for Driven Steel Bearing Piles</u>: • Stress wave dynamic tests - PDA test with CAPWAP analysis during driving for piles driven to and founded on bedrock • Final set tables based on dynamic pile driving formula ☐ <u>Particulars for Socketed Steel H-Piles</u>: • Boring method with precautionary measures, including monitoring procedures and measures to prevent excessive overbreak and ground loss etc. ☐ <u>Particulars for Footings/Rafts</u>: • For cases without adequate justification by ground investigation information and soil tests, static plate load tests or Standard Penetration tests to verify the bearing capacity of soil founding strata complying with Code of Practice for Foundations	
8.	Notes on details of construction method/sequence	☐ Construction method and plant used ☐ For sites situated in close proximity to existing buildings/structures/ services and vibration-sensitive buildings/structures/ services, sequence of construction for control of vibrations and/or settlement induced due to construction of the proposed foundations (such as, driven steel H-piles), including number of plants used, phasing of works, number of piles being installed concurrently in each phase, etc. ☐ Method of overcoming underground obstruction with typical details	APP-18 APP-137
9.	Notes on Precautionary Measures	☐ Precautionary measures with details, e.g. shoring, underpinning, grouting, etc., to safeguard adjoining buildings, structures, lands, streets, utility services, slopes and retaining walls, etc. affected	ADM-19

Typical Items		Requirements	Reference
10.	Locations and details of instrumentation and monitoring requirements	☐ Ground settlement, building settlement, building tilting, building vibration and utilities settlement to be monitored ☐ Frequency of monitoring ☐ Monitoring criteria in three triggering levels, namely the alert, alarm and action levels respectively and the corresponding contingency measures ☐ Locations of monitoring points on adjoining buildings, structures, lands, streets, utility services, slopes, retaining walls, sea walls, etc.	ADM-19 APP-18 APP-22 APP-24 APP-61 APP-62 APP-137
11.	Plans showing the layout arrangement of the foundation systems	☐ Layout with identification, setting-out dimensions, tentative founding levels, sizes of the foundation and cut-off levels of each pile & cap/tie-beam layout for the piled foundation ☐ Setting-out dimensions of piles/spread footings/rafts from site lot boundaries ☐ Locations of all boreholes in the G.I. ☐ Contour lines of the founding strata based on boreholes in G.I. ☐ Layout with identification and setting-out dimensions of columns/walls supported by the foundation	APP-18
12.	Information on sections and elevations	☐ Ground investigation boreholes with profile of the existing ground and soil/rock strata with SPT values for cohesionless soil and undrained shear strength (s_u) values for cohesive soil ☐ Design groundwater levels ☐ Estimated profile of founding soil/rock strata based on G.I. ☐ Existing adjoining buildings, structures nullahs, underground structures, tunnels and basement, etc. with types, layouts and depths/levels of foundations ☐ Ground profile with levels of all adjoining slopes ☐ Existing retaining walls with layouts, sizes and depths/levels of foundations ☐ Identification, setting-out dimensions, tentative founding levels and cut-off levels of piles & caps/tie-beams for the piled foundation ☐ Identification, setting-out dimensions, tentative founding levels, sizes of spread footings/rafts	APP-18

Typical Items		Requirements	Reference
		☐ Soil backfill/retained soil of future screen/ basement walls	
13.	Structural details	☐ Detailed information on brand name, sizes, shape, areas and grades of steel piles ☐ Typical cross section showing the assembly of the proposed foundation ☐ Reinforced concrete details for reinforced concrete foundations ☐ Typical details on pile shoes, pile head, pile splices and cap/pile connections, etc.	APP-18
14.	Column/wall loading tables	☐ Assumed loads on each column/wall of the superstructure on the foundation, e.g. dead loads, imposed loads, wind loads, earth loads including ground water pressure, etc. ☐ Orientation of forces and moments	ADM-19 APP-18
15.	Piling/Footing Schedules	☐ Identification with sizes, tentative founding levels, design minimum rock socketed lengths for piled foundation and allowable bearing capacities/ultimate uplift resistance of the foundations ☐ Magnitude of characteristic dead, imposed, wind and earth loads, including ground water pressure, negative skin friction (if applicable), and others, and their critical combinations acting on each pile/footing	ADM-19 APP-18

(2/2016)

Checklist for Excavation & Lateral Support Plan Submissions
(This checklist is **not** required to be submitted to the BD.)

Part A – Administration

Typical Items		Requirements	Reference
1.	Statutory Forms	◯ Form BA 4 (for appointment of AP/RSE/RGE)	ADM-8 B(A)R 18A and 29(1)
		◯ Form BA 5 (for application for approval)	
		◯ Form BA6 (Stability Certificate as necessary)	
		◯ Form BA16 (Application for exemption/ modification as necessary)	
2.	Fee for plan processing	◯ Payment required when fees are charged according to total number of submitted plans	APP-55
3.	Plans and Documents	◯ 3 signed sets of plans and 2 signed sets of all documents	ADM-8 APP-141
4.	Additional sets of plans and/or documents for referrals to relevant organizations required when the proposed excavation & lateral support works involve or affect the areas	◯ Scheduled Area Nos. 1, 2 & 4 (1 set of plans)	ADM-8 APP-24 APP-30 APP-32 APP-61 APP-62 APP-134
		◯ Railway Protection Areas (2 sets of plans)	
		◯ Scheduled Area No. 5 (2 sets of plans and 1 set of documents)	
		◯ Designated Area of Northshore Lantau (1 set of plans)	
		◯ Slopes/Retaining Structures/ deep excavation/disused tunnel (1 set of plans)	
		◯ Culvert, nullah, stream course (3 sets of plans)	
		◯ Chek Lap Kok Airport (1 set of plans)	
		◯ Structures to be erected in, over, under or upon street (2 sets of plans)	
		◯ Highway structures (1 set of plans and 1 set of documents)	
		◯ Sea walls, adjacent to sea front (1 set of plans and 1 set of documents)	
		◯ Reclamation, piers (2 sets of plans and 2 sets of documents)	
		◯ Public drainage or water mains (1 set of plans)	

Part B - Documents

Typical Items		Requirements	Reference
1.	Design Document : Part I - Synopsis and Essential information	A description of the E&LS system includes: ☐ Types of the E&LS works ☐ Design codes/standards with edition ☐ Grade of materials to recognized standards ☐ Geotechnical parameters ☐ Groundwater conditions ☐ A summary abstracted from the appraisal and assessment report on the effects on adjoining buildings, structures, lands, streets, utility services, slopes and retaining walls affected by the proposed works, including vibration, tilting, settlement and groundwater drawdown together with the proposed precautionary measures and monitoring system ☐ Loadings considered, including: • Design soil pressures • Design surcharge loads • Design groundwater levels • Additional surcharge loads due to adjoining buildings, structures, slopes and retaining walls, etc. ☐ Information on computerized calculations • Structural/geotechnical computer program statement signed by RSE and/or RGE • Assumptions made and justifications on parameters used in the computer model, e.g. material properties, boundary conditions, etc. • Input data with computer-generated graphics or hand sketch showing the framing & layout of the system, nodes & elements, connection fixity, etc.	ADM-8 ADM-19 APP-57 ADM-6 ADM-8
2.	Design Document : Part II - Detailed analysis and design	☐ Analysis and design on the structural elements, e.g. struts, waling, pile wall, etc., of the E&LS system to design codes adopted ☐ Design check on the structural adequacy of structural elements at each stage of construction sequence	ADM-8 ADM-19 APP-57 B(C)R 15

Typical Items		Requirements	Reference
		☐ Design check on the margins of safety: • FOS against overturning • FOS against sliding • FOS against hydraulic failure including base heave ☐ Sensitivity analysis in Ultimate Limit State Checks and risk assessment on progressive failure (for Limit State Partial Factor method only)	
3.	Geotechnical Assessment Report together with Ground/Site Investigation Report	☐ Justification on geotechnical parameters & assumptions adopted with G.I. information and tests from Ground/Site Investigation Reports ☐ RGE to sign geotechnical assessment reports and supporting documents (for ELS submission with excavation depth greater than 4.5 m only)	ADM-8 ADM-19 APP-22 APP-49 APP-57 APP-141
4.	Appraisal report together with assessment on the effects on adjoining buildings, structures, lands, streets, utility services, slopes and retaining walls affecting and/or be affected by the proposed works	☐ Construction method and works sequence adopted, including construction of basement structure, backfilling, subsoil drainage, etc. ☐ Estimates on vibration on adjoining buildings, structures, lands, streets, utility services, slopes and retaining walls, etc. due to pile wall installation process ☐ Estimates on the envisaged amount of settlement, tilting & ground water drawdown induced on adjoining buildings, structures, lands, streets, utility services, slopes and retaining walls, etc. ☐ Estimates on the additional stress on MTR structures/sewage tunnels ☐ Precautionary measures together with construction sequence required to safeguard the adjoining buildings, structures, lands, streets, utility services, slopes and retaining walls, etc. , e.g. for potential damming up of groundwater in sloping ground ☐ Instrumentation and monitoring required to safeguard the adjoining buildings, structures, lands, streets, utility services, slopes and retaining walls, etc.	ADM-8 ADM-19 APP-22 APP-24 APP-30 APP-62 APP-137

Part C - Plans

Typical Items		Requirements	Reference
1.	Plans properly indexed and space reserved at the lower right corner for official stamps of approval	☐ Plans to be properly indexed and each drawing to bear a title and number ☐ Vertical space (90mm wide x 200 mm high) or horizontal space (245mm wide x 80mm high) for accommodating official stamps of approval, curtailed check and true copy certification by the BA on every plan at the lower right corner	ADM-8 ADM-10
2.	A block plan showing the location of the site and relevant details	☐ Block plan to be in scale not less than 1:500 ☐ Location of the site with adjoining buildings, structures, lands, streets, utility services, slopes, retaining walls, access road over which right of way, if any, granted, etc. ☐ Remarks provided below the block plan, if site within boundaries of Scheduled Area(s), Designated Area(s), etc.	APP-22 B(A)R Section 13
3.	Plans and sections shown in appropriate scales for readability.	☐ Plans and sections/elevation to be in a scale not less than 1:100; except that a scale of not less than 1:200 may be accepted for cases of very extensive works ☐ Details to be in scale not less than 1:75	B(A)R Section 13
4.	Details showing the characteristic features of the site and environments	☐ Locations of all boreholes contained in G.I. ☐ Design ground water levels ☐ Existing adjoining buildings with types, layouts and depths/levels of foundations ☐ Ground profile with levels of all adjoining slopes ☐ Existing retaining walls with layouts, sizes and depths/levels of foundations ☐ Layouts and depths/levels of all adjoining existing nullahs, underground structures, tunnels, basement, underground services and utility services	APP-22 APP-30
5.	General Notes on Design Codes and Standards	☐ Building (Construction) Regulations ☐ Updated editions of relevant Design Code of Practices and Standards ☐ Design method (Global Safety Factor method/Limit State Partial Factor method) ☐ Requirement on the submission of a performance review (for Limit State Partial Factor method only)	ADM-8 ADM-19 APP-22 APP-57 APP-115

Typical Items		Requirements	Reference
6.	General Notes on Material specifications with limiting stresses	☐ Grade of materials complying with updated editions of relevant Code of Practices and standards adopted	ADM-8 ADM-19 APP-15 APP-22
7.	General Notes on quality control standards and testing on workmanship	☐ Details of sampling method, frequency of tests, testing methods and acceptance criteria of tested materials complying with relevant standards, e.g. ● Grouted soil strata when ground strengthening is proposed under particular ground conditions ● soil tests, such as dry densities, moisture contents and relative compaction, etc., for soil backfill works complying with Geospec 3	APP-15
8.	Notes on details of construction method/sequence	☐ Construction method and plant used ☐ Sequence of construction, including installation of pile wall, grout curtain works, installation of tiebacks with precautionary measures and testing requirements (e.g. pull-out tests for tiebacks), installation and removal of struts, waling & pile wall, backfilling and formation of haul roads/working platforms by slope cutting and/or filling in a sloping ground (with the maximum gradient more than 15^{o} across the site from boundary to boundary) as part of the preparation works before bulk excavation, if any ☐ Measures for the control of vibrations induced due to construction of the proposed E&LS (such as, pile wall installation), including pre-boring, phasing of works, etc. ☐ Measures for the control of settlement induced by the proposed works due to ground loss during pile wall installation, groundwater drawdown, soil excavation ☐ Method of overcoming underground obstruction with typical details ☐ Method statement, including preloading of struts, ground treatment (e.g. grouting and recharging) and acceptance criteria for pumping tests for dewatering ☐ Location, extent and installation depth of grouting works, grouting materials used, grouting pressure, holding time and number of strokes during injection, criteria for grouting to stop, and any relevant testing requirements	ADM-19 APP-22 APP-137

Typical Items		Requirements	Reference
9.	Notes on Precautionary Measures	☐ Precautionary measures with details, such as shoring, underpinning, grouting, etc., to safeguard adjoining buildings, structures, lands, streets, utility services, slopes and retaining walls, etc. affected, if any ☐ Precautionary measures, such as temporary drainage, sheet cover, etc., to protect earthworks against heavy rainfall	ADM-19
10.	Locations and details of instrumentation and monitoring requirements	☐ Ground settlement, building settlement, building tilting, building vibration, utilities settlement, groundwater level and allowable groundwater drawdown to be monitored ☐ Frequency of monitoring ☐ Monitoring criteria in three triggering levels, namely the alert, alarm and action levels respectively and the corresponding contingency measures ☐ Locations of monitoring points on adjoining buildings, structures, lands, streets, utility services, slopes, retaining walls, sea walls, etc.	ADM-19 APP-22 APP-24 APP-61 APP-62 APP-137
11.	Plans showing the layout arrangement of the E&LS systems	1st Stage E&LS plan submission (showing details of vertical elements, e.g. sheet piles or diaphragm wall etc.) : ☐ Layout with identification, setting-out dimensions and design penetration depth of each pile wall type relative to the existing ground and to the proposed excavation levels ☐ Schedules with identification, size, grade and design penetration depth, etc. for each pile wall type ☐ Schedules with design level, stiffness, loads and/or preloading forces, if any, of each layer of struts to be adopted in the 2nd Stage E&LS plan submission ☐ Schedules with design level, stiffness, loads, etc. of each layer of tiebacks to be adopted in the 2nd Stage E&LS plan submission ☐ Extent and depth of ground treatment, such as grout curtain with levels, etc. ☐ Locations of all boreholes in the G.I. Report ☐ Locations of pumping wells, observation wells and recharge wells for pump tests, if any ☐ Extent of works and/or pile wall elements installation outside site lot boundaries ☐ Contour lines of the founding bedrock strata based on boreholes in ground investigation (for pile wall socketted into category 1(c) or better rock only)	ADM-19 APP-22 APP-30 APP-57 B(C)R21

Typical Items		Requirements	Reference
		2nd Stage E&LS plan submission (showing details of lateral support elements, e.g. struts/waling for each excavation stage): ☐ Layout and level of excavation/filling works for each stage of construction sequence to be shown separately ☐ Determined bulk excavation limit contours (for Scheduled Area No. 1 only) ☐ Layout, identification and levels of each layer of tiebacks/struts and waling with pile wall elements and king posts for each stage of construction sequence to be shown separately ☐ Schedules with identification, grade, levels, stiffness, strut loads and/or preloading forces, if any, of each layer of struts to be in agreement with the 1st Stage E&LS plan submission ☐ Locations of strut with preloading, if any ☐ Schedules with identification, levels, stiffness, loads, etc. of each layer of tiebacks to be in agreement with the 1st Stage E&LS plan submission	
12.	Information on sections and elevations	1st Stage E&LS plan submission (showing details of vertical elements, e.g. sheet piles or diaphragm wall etc.): ☐ Ground investigation boreholes nearest to the sections with profile of the existing ground and soil/rock strata with SPT values for cohesionless soil and undrained shear strength (s_u) values for cohesive soil ☐ Design groundwater levels ☐ Adjoining existing buildings, structures, nullahs, underground structures, tunnels and basement, etc. with types, layouts and depths/levels of foundations ☐ Ground profile with levels of all adjoining slopes ☐ Existing retaining walls with layouts, sizes and depths/levels of foundations ☐ Design depth of ground treatment, such as grout curtain ☐ Design penetration depth of pile wall elements ☐ Pile wall, levels of the associated layers of struts/tiebacks and the excavation level at each stage of construction sequence to be shown ☐ Sequence of construction includes removal of struts, waling, pile wall and backfilling, if any	ADM-19 APP-22 APP-30 APP-57 B(C)R21

Typical Items		Requirements	Reference
		2nd Stage E&LS plan submission (showing details of lateral support elements, e.g. struts/waling for each excavation stage): ☐ Excavation/filling works for each stage of construction sequence to be shown separately ☐ Determined bulk excavation limit profile (for Scheduled Area No. 1 only) ☐ Each layer of struts/tiebacks and waling at each level with pile wall, king posts and grout curtain, if any, at each stage of construction sequence to be shown separately and to be in agreement with the 1st Stage E&LS plan submission ☐ Sequence of construction includes removal of struts, waling, pile wall and backfilling, if any, to be in agreement with the 1st Stage E&LS plan submission ☐ Struts with preloading, if any ☐ King posts supporting struts and their embedment	
13.	Structural details	1st Stage E&LS plan submission (showing details of vertical elements, e.g. sheet piles or diaphragm wall etc.): ☐ Typical details of pile wall elements and/or grout curtain with design penetration depth ☐ Typical details showing the interlocking pile wall elements and welded joints at splices	ADM-8 ADM-19 APP-57
		2nd Stage E&LS plan submission (showing details of lateral support elements, e.g. struts/waling for each excavation stage): ☐ Typical details showing the welded joints at strut splices and connections with pile wall elements/waling and secondary struts/ties ☐ Typical support details at pile wall elements and king posts for waling and struts ☐ Typical pressure jet set-up details for strut preloading ☐ Typical details of lagging wall	

(2/2016)

Checklist for Superstructure Plan Submissions
(This checklist is **not** required to be submitted to the BD.)

PART A - Administration

Typical Items		Requirements	Reference
1.	Statutory Forms	◯ Form BA 4 (for appointment of AP/RSE/RGE)	ADM-8 B(A)R 18A and 29(1) APP-143
		◯ Form BA 5 (for application for approval)	
		◯ Form BA6 (Stability Certificate as necessary)	
		◯ Form BA16 (Application for exemption/ modification as necessary)	
		◯ Statutory Forms for separate RSE appointed for precast concrete works, if any	
2.	Fees for plan processing	◯ Payment required when fees are charged according to total number of submitted plans	APP-55
3.	Plans and Documents	◯ 2 signed sets of plans and 1 signed set of all documents	ADM-8 APP-141

PART B - Documents

Typical Items		Requirements	Reference
1.	Design Document : Part I - Synopsis and Essential Information	☐ Synopsis of structural design: • Compatibility statement with approval or submission date of corresponding general building plans • Checklist for checking fundamental issues of superstructural plans • A general description of foundation and structural system and basic anatomy of stability by which applied loads are transferred to ground • Design codes/standards with year of version • Material specifications to recognised standards with limitation of stresses • Fire resistance requirement and durability requirement • Design assumptions to be realistic	ADM-6 ADM-8 ADM-19

Typical Items		Requirements	Reference
		in modeling and analysing of structures • Lateral deflection/acceleration of building due to wind within design limit and other types of deformation ☐ Essential information on computerised calculation: • Pre-accepted structural or geotechnical computer program statement endorsed by RSE/RGE • Assumptions made and justifications on parameters used in computer model • Input data with computer-generated graphics or hand sketch showing framing and layout of system, etc. • Summary of salient output results in text and graphical format • Interpretation of salient output results in compliance with design standards and requirements ☐ Essential information on design to resist wind load: • A general description of wind-resisting system and mathematical modeling • Diagrams illustrating location and identification of all structural frames and members in wind-resisting system • A summary of sectional properties of wind-resisting elements • Description of wind tunnel test including methodology of testing, dynamic properties, name of wind tunnel testing laboratory, testing results and wind loading adopted in superstructure design • A summary of wind loads applied to building and distribution of wind forces at each floor level • A summary of equilibrium check on applied lateral forces and calculated reactions of vertical structural members at foundation and other critical levels where there is a major change in structural configuration	

Typical Items		Requirements	Reference
		☐ Essential information on design to resist dead and imposed loads: • Design data on dead and imposed loads (including allowance for partitions, screeds, service loads, dynamic loads, temperature loads and the like) with floor usage • A summary of principal reactions (moments, shear forces and axial forces) in vertical structural members at foundation and all floor levels • Design data on loads imposed from adjoining buildings/ structures, e.g. earth loads, surcharge loads, etc. • Compatibility check with load from superstructure with those loading approved in foundation plans ☐ Design of unconventional structural elements: • Detailed design of special structures, e.g. shell, long span girder, space truss, etc. • Detailed design of major transfer members where failure of which would induce cumulative instability, e.g. transfer plate • Detailed design of prestressed concrete members • Detailed design of cantilevered canopies, balconies and major structural appendages	
2.	Design Document : Part II - Detailed analysis and design	☐ Detailed analysis and design of all structural elements including beam, slab, wall, column, staircase, water tank, etc.	ADM-8 ADM-19

PART C - Plans

Typical Items		Requirements	Reference
1.	Plans properly indexed and space reserved at the lower right corner for official stamps of approval	☐ Plans to be properly indexed and each drawing to bear a title and number ☐ Vertical space (90mm wide x 200mm high) or horizontal space (245mm wide x 80mm high) for accommodating official stamps of approval, curtailed check and true copy certification by the BA on every plan at lower right corner	ADM-8 ADM-10
2.	Location plan/key plan	☐ Proposed structure to be clearly shown and easily identified from location plan/key plan ☐ Location of site together with adjoining buildings, structures, lands, streets, access road over which right-of-way, if any, granted, etc.	APP-18
3.	Plans and sections in appropriate scales for readability	☐ Plans and sections/elevations to be in a scale not less than 1:100; except that a scale of not less than 1:200 may be accepted for cases of very extensive works	B(A)R Section 13
4.	Compatibility with building plans	☐ A compatibility statement to be given on one of drawings with approval or submission date of corresponding general building plans	ADM-19
5.	General Notes on Design Codes and Standards	☐ Building (Construction) Regulation ☐ Updated editions of relevant design codes of practice and standards	ADM-8 ADM-19
6.	General Notes on Material Specifications with limiting stresses	☐ Grade of materials complying to updated editions of relevant codes of practice and standards	ADM-8 ADM-19
7.	Design load	☐ Dead and imposed load (including allowance for partitions, screeds, service loads, dynamic loads, temperature loads and the like) with floor usages ☐ A summary of principle wind forces in all wind directions at each floor level if wind loads is determined based on wind tunnel test results ☐ Uplift loads due to ground water for basement structures ☐ Earth loads, surcharge loads, protective barrier loads, etc.	ADM-8 ADM-19

Typical Items		Requirements	Reference
8.	General Notes on fire resistance requirement and protection against corrosion to recognized standards	☐ Concrete cover to Code of Practice for Fire Safety in Buildings and Code of Practice for Structural Use of Concrete ☐ Fire resistance material on structural steel ☐ Corrosion protection for structural steelworks to Code of Practice for Structural Use of Steel ☐ Method of preventing bi-metallic reaction ☐ Galvanisation to BS EN ISO 1461:2009, etc. ☐ Painting system to BS 4652:1995, etc.	ADM-8 ADM-19
9.	General Notes on quality control standards and testing on workmanship	☐ Control of material, production, construction and workmanship to Code of Practice for Structural Use of Concrete, Code of Practice for Structural Use of Steel, etc. ☐ Allowance for precast concrete construction inaccuracies to Code of Practice for Precast Concrete Construction	ADM-8 APP-53 APP-143
10.	Notes on construction sequence of unconventional structures	☐ Prestressed concrete construction ☐ Precast concrete construction ☐ Top-down basement construction	ADM-8 APP-53
11.	Typical reinforced concrete details	☐ Typical reinforcement lapping/anchorage details ☐ Typical extra reinforcement at slab opening <300 mm with larger opening indicated on framing plans and details ☐ Typical location and arrangement of coupler/mechanical splice ☐ Typical details of construction joint between beam/slab and column/ wall ☐ Typical details for changing of different concrete grade ☐ Typical details showing arrangement of reinforcement in cantilevered slabs/beams projected from different types of support ☐ Typical details of minor structural elements with design loads, allowable soil bearing capacities adopted, e.g. protective barrier, fence wall, etc.	ADM-8 ADM-19

Typical Items		Requirements	Reference
12.	Plans showing the layout arrangement of the structural system	☐ Floor plans and sections/elevations showing layout, dimensions, levels and identification of all structural frames and members of proposed structures ☐ Locations of movement joint ☐ Layout, setting out, details, sizes and loadings allowed for corbels, e.g. bridge, escalator, etc. ☐ Basement structures with details of adjoining underground structures shown for information	ADM-8 ADM-19
13.	Corresponding floor plans showing fire resistance requirements and designed loads	☐ Fire resistance rating of each floor (shown for different areas if applicable) to Code of Practice for Fire Safety in Buildings ☐ Diagrammatic illustration of different types of superimposed dead loads including allowance for partitions(refer to GBP for partition layout), screeds and the like to building regulations and Code of Practice for Dead and Imposed Loads ☐ Diagrammatic illustration of different types of imposed loads together with intended use of floor to building regulations and Code of Practice for Dead and Imposed Loads ☐ Dynamic loads with provision of operating weight of machinery ☐ Reserved loads, e.g. for curtain wall	ADM-8 ADM-19
14.	Structural details of conventional reinforced concrete elements	☐ Plans, schedules and sectional details showing quantity and arrangement of steel reinforcement of each structural member ☐ Enlarged details showing interconnection of structural elements ☐ Reinforcement details of corbel	ADM-8 ADM-19
15.	Structural details of conventional structural steel elements	☐ Plans and sectional details showing structural elements and their connections with other structural elements at supports ☐ A schedule showing sizes and grades of all steel members ☐ Cover details for steel support plates for fire resistance requirements	ADM-8 ADM-19

Typical Items		Requirements	Reference
16.	Structural details of transfer plates/transfer beams	☐ Plans, schedule and sectional details showing quantity and arrangement of steel reinforcement of each structural member ☐ Details showing connection details with other structural members, including those supported by the transfer structure and those supporting the transfer structure	ADM-8 ADM-19
17.	Steel reinforcement details of external cantilevered slabs or beams	☐ Concrete cover to the steel reinforcement ☐ Connection details of the steel reinforcement at the supporting beams, columns or structural walls ☐ Layout and details of steel reinforcement bars spacers ☐ A schedule of members showing the number and size of all external cantilevered R C slabs with a span exceeding 750 mm exposed to weathering	ADM-8 ADM-19 APP-68
18.	Precast concrete details	☐ Details of lifting inserts/anchors and method statement for lifting and handling the precast units during construction ☐ Bracing/tie at temporary stages submitted for information ☐ Typical column/wall/slab/beam joint details ☐ Locations of cast-in embeds ☐ Location of movement joints	ADM-8 ADM-19 APP-53
19.	Prestressed concrete details	☐ Minimum concrete cube strength at transfer ☐ Material specification of strands/tendons ☐ Plans and sections showing tendon profile ☐ Details of anchorage at end blocks ☐ Material specification of ducts and cement grout ☐ Maximum prestress forces and prestress losses ☐ Stressing sequence	ADM-8 ADM-19 APP-53
20.	Movement joint details	☐ Layout and setting out details of bearings to be shown on framing plans ☐ Bearing schedule with details on manufacturers, material specification, loading, etc.	ADM-8 ADM-19

Typical Items		Requirements	Reference
21.	Miscellaneous details of minor structural elements	☐ Typical details with member schedule showing the structural arrangement of minor structural elements, e.g. supporting frames for air-conditioning plants, mechanical ventilation plants and metal ventilation ducts inside a building, etc. ☐ Material specifications and design loads allowed.	ADM-19 Appendix B11 of ADV-33

(Rev. 5/2024)

Checklist for Curtain Wall Details Submissions
(This checklist is **not** required to be submitted to the BD.)

Part A–Administration

Typical Items		Requirements	Reference
1.	Statutory Forms	○ Form BA 4 (for appointment of AP/RSE/RGE)	ADM-8 APP-37 B(A)R 18A and 29(1)
		○ Form BA 5 (for application for approval)	
		○ Form BA6 (Stability Certificate as necessary)	
		○ Form BA16 (Application for exemption/ modification as necessary)	
		○ Separate RSE appointed (Scope of works responsible and assessment report if necessary)	
2.	Fee for plan processing	○ Payment required when fees are charged according to total number of plans submitted	APP-55
3.	Plans and Documents	○ 2 signed sets of plans and 1 signed set of all documents	ADM-8 APP-141

Part B - Documents

Typical Items		Requirements	Reference
1.	Design Document : Part I – Synopsis and Essential Information	A description of the curtain wall system includes: ☐ Description of the curtain wall system • e.g. load path and load transfer ☐ Updated design codes and standards adopted ☐ Design approach • e.g. limit state or permissible stress ☐ Updated material and workmanship specifications ☐ Building materials and components • e.g. fire stop materials, fire resisting glazing, structural fixings, structural sealants, etc. with BD CDB ref. no., if applicable ☐ Allowable load capacities of structural fixings • e.g. embeds and anchors, etc. ☐ Allowable limits of deflection for all mullions, glass panel, etc. ☐ Summary of reaction forces of cast-in anchorages for checking against superstructure plans	ADM-8 ADM-20

Typical Items		Requirements	Reference
		Specifications on design loads: ☐ Wind loads • comply with HK Wind Code • in accordance with Wind Tunnel Test ☐ Wind channel down effect for external building elements • like canopy, etc. ☐ Horizontal imposed loads • protective barrier loads adopted in accordance with Table 3 of B(C)R 17(3) ☐ Effect of temperature and atmospheric pressure changes for IGU glass • e.g. allowing an additional wind load or other approach	ADM-19 APP-37 APP-139
		☐ Pre-accepted structural computer program: • Statement endorsed by RSE	ADM-6
		☐ Information on the computerized calculations: • Assumptions made and justifications on parameters used e.g. material properties, boundary conditions, etc. • Input data with computer-generated graphics or hand sketch showing the framing & layout of the system, nodes & elements, joint fixity, etc.	ADM-8
2.	Design Document: Part II - Detailed analysis and design	☐ Detailed analysis and design: • Design check on anchor fixing of the parent supporting structure • Analysis on the structural adequacy and stability of the proposed curtain wall system • Primary and secondary element design for mullions, aluminium alloy, fixing components and glazing • Deflection check on major load carrying members	APP-37

PART C – Plans

Typical Items		Requirements	Reference
1.	Plans properly indexed and space reserved at the lower right corner for official stamps of approval	☐ Plans to be properly indexed and each drawing to bear a title and number ☐ Vertical space (90mm wide x 200 mm high) or horizontal space (245mm wide x 80mm high) for accommodating official stamps of approval, curtailed check and true copy certification by the BA on every plan at the lower right corner	ADM-8 ADM-10

Typical Items		Requirements	Reference
2.	A block plan showing the location of the site and relevant details	☐ Location of the site together with adjoining buildings, structures, lands, streets, access road over which right of way, if any, granted, etc. to be shown.	APP-18
3.	Plans and sections in appropriate scales for readability	☐ Scale to follow B(A)R 13: • Avoid excessive large scale shop drawing details • Plans and sections/elevation to be in a scale not less than 1:100; except that a scale of not less than 1:200 may be accepted for cases of very extensive works	B(A)R 13
4.	General Notes on Design Codes and Standards	☐ Design Codes and Standards: • Design code of practice • Construction standards • Design loading • FRR	APP-37 Appendix A
5.	General Notes on Material Specifications with limiting stresses	☐ Material specifications: • Structural steel, aluminium alloy, cast-in anchors, fixing screws, structural sealant, glazing, fire stop,	APP-37 Appendix A
6.	General Notes on quality control standards and testing on workmanship	☐ Workmanship specifications: • Welding, galvanization, measures to overcome bi-metallic effects and corrosion prevention ☐ Specifications on allowable tolerance of the positioning of curtain wall supports: • Remedial arrangements in cases where such tolerance is exceeded ☐ Safety test: • Location of safety test on a representative portion	APP-37 Appendix B
7.	Plans showing the layout arrangement of the structural system	☐ Structural framing: • Elevations including pane arrangements • Type and thickness of glass • Members schedule and sectional properties of aluminium sections • The location of different types of cast-in anchorages demarcated on plans ☐ Protection of openings: • Protective barriers at openings ☐ Allowable load capacities of structural fixings: • Embeds and drill in anchor	APP-37

Typical Items		Requirements	Reference
8.	Structural details of curtain wall	☐ Key structural details: • Main and secondary elements • Installation procedures if applicable excluding any unnecessary shop fabrication details • Typical and non-typical sections showing structural members and supports • Typical and non-typical connections details for different steel sections • Mode of support form and connection to the load-bearing structure of the building • Anchorages in structural concrete members or welded connections to structural steel members • Bite width of structural sealant to comply with relevant standard ☐ Projection of the curtain wall system from the outer face of the structural elements • e.g. from beams, columns and floor slabs to comply with relevant Regulations ☐ Sections showing compliance with Regulation 90 of the B(C)R and the Code of Practice for Fire Safety in Buildings 2011, such as:- • 300mm solid upstand in accordance with APP-2 • Fire-rated spandrel in accordance with Clause 11.1 of FS Code 2011 • Effective smoke and fire barrier in accordance with Clause 10.2 of FS Code 2011 ☐ Location of openable window should be shown and marked “for approval in locked position only”	APP-2 APP-37

(2/2016)

Checklist for Glass Balustrade Plan Submissions

(This checklist is **not** required to be submitted to the BD)

□ : information to be shown on plan and given in supporting document
○ : information to be accompanied with the submission

Part A – Administration

Typical Items		Requirements	Reference
1.	Statutory Forms	○ Form BA4 (for appointment of AP/RSE/RGE) ○ Form BA5 (for application for approval) ○ Form BA6 (Stability Certificate if applicable) ○ Form BA16 (Application for exemption/modification as necessary)	ADM-8 B(A)R 18A and 29(1)
2.	Fee for plan processing	○ Payment required when fees are charged according to total number of plans submitted	APP-55
3.	Plans and Documents	○ 2 signed sets of plans and 1 signed set of all documents	ADM-8 APP-141

Part B – Documents

Typical Items		Requirements	Reference
1.	Design Document: Part I – Synopsis and Essential Information	□ Approved GBP and superstructure plan (parent structure) □ Design standards and references □ Design approach (e.g. ultimate limited state) □ Description of the glass balustrade system: • spanning of glass • load path • load transfer, etc. □ Building materials/components and workmanship specifications: • structural sealants, with BD CDB reference no. (if applicable), etc. □ Design data for glass balustrade system: • design thickness of glass panes • adoption of composite action for laminated glass • design strength of glass/steel/stainless steel/ aluminium • allowable deflection limits, etc. □ Summary of reaction forces, loading capacity for fixing brackets and adequacy check of assumed loading on parent structures	ADM-8 ADM-19 ADM-20 APP-53 APP-110
		□ Specifications on design loads: • horizontal imposed loads • wind loads	Table 3 of B(C)R ADM-8 ADM-19 APP-110

Typical Items		Requirements	Reference
		☐ BD pre-accepted structural computer program (if applicable): ● BD reference no. ● RSE's statement	ADM-6
		☐ Information on the computerised calculations: ● assumptions made and justifications on parameters used such as material properties, boundary conditions, etc. ● input data with computer-generated graphics or hand sketch showing the framing and layout of the system, nodes & elements, joint fixity, etc.	ADM-8 ADM-19
2.	Design Document: Part II – Detailed analysis and design	☐ Glass: ● minimum glass pane thickness ● the glass pane or top handrail should be designed to resist the most unfavorable condition of horizontal imposed load or wind pressure ● for free-standing glass balustrade at area with congregation of people, the top handrail should be designed to bridge over the failed glass unless the remaining intact layer of glass pane of laminated glass can resist the working load ● for laminated glass with composite action, maximum degree of composite action = 70% For laminated glass without composite action, load sharing is in accordance with individual pane's stiffness ● deflection of glass pane should be checked under the most unfavorable loading conditions ☐ Supporting members (steel/stainless steel/ aluminium): ● design for bending, shear and deflection ● welding design ● fixing brackets with anchor bolts or cast-in embeds ☐ Supporting parent structures: ● adequacy check of assumed loading on parent structures	Table 3 of B(C)R ADM-8 ADM-19 APP-53 APP-110

Part C – Plans

Typical Items		Requirements	Reference
1.	Plans properly indexed and space reserved at the lower right corner for official stamps of approval	☐ Plans to be properly indexed and each drawing to bear a title and number ☐ Vertical space (90mm wide x 200mm high) or horizontal space (245mm wide x 80mm high) for accommodating official stamps of approval, curtailed check and true copy certification by the BA on every plan at the lower right corner	ADM-8 ADM-10
2.	Plans showing the layout and arrangement of glass balustrade	☐ Plans including the panel arrangement and setting out ☐ The location of fixing brackets with setting out	ADM-8 APP-110
3.	Plans and sections in appropriate scales for readability	☐ Scale to follow B(A)R 13: • avoid excessive large scale shop drawing details • plans and sections/elevation to be in a scale not less than 1:100 except that a scale of not less than 1:200 may be accepted for cases of very extensive works	B(A)R 13
4.	General Notes	☐ Design codes and standards: • design code of practices • construction standards ☐ Design loading ☐ Location/general layout of glass balustrade tallying with the latest approved GBP and superstructure plans with the approval date	ADM-8 ADM-19 APP-53 APP-110
5.	General Notes on Material Specifications and quality control standards	☐ Glass: • a schedule of glass type and thickness • ultimate design strength of glass (state if deviates from the code) • type and fritted pattern (if applicable) of glass pane • laminated glass (if applicable) with type (e.g. PVB) and thickness of interlayer material, and adopting (state the percentage, e.g. 70%) composite action • CDB reference no. of structural sealant ☐ Structural steel, stainless steel and aluminium (if applicable): • a schedule of major structural steel members indicating the member mark, steel grade, general dimensions and thickness • corrosion protection specification for steel • protection against bimetallic action ☐ Cast-in embeds (if applicable): • a schedule of design loads	ADM-8 ADM-19 ADM-20 APP-53 APP-110

Typical Items		Requirements	Reference
		☐ Drilled-in anchors (if applicable): ● design and material specifications ● product name, model no. and CDB reference no. ● a schedule of drilled-in anchors indicating the anchor type, embedment length, loading capacity and test load	
6.	Structural details of glass balustrade	☐ Typical elevations showing arrangements of all types of glass balustrade, end panel, fixing brackets and span direction of glass panes ☐ Typical details of all types of fixing brackets to the parent structures (e.g. slabs, beams, curbs, plinths, etc.), height from FFL and clamping details (reference to Figures 6.1 and 6.2 of Code of Practice for the Structural Use of Glass 2018) ☐ Top handrail details (if applicable)	ADM-8 ADM-19 APP-53 APP-110

Checklist for Metal Cladding Plan Submissions

(This checklist is **not** required to be submitted to the BD)

□ : information to be shown on plan and given in supporting document
○ : information to be accompanied with the submission

Part A – Administration

Typical Items		Requirements	Reference
1.	Statutory Forms	○ Form BA4 (for appointment of AP/RSE/RGE) ○ Form BA5 (for application for approval) ○ Form BA6 (Stability Certificate if applicable) ○ Form BA16 (Application for exemption/modification as necessary)	ADM-8 B(A)R 18A and 29(1)
2.	Fee for plan processing	○ Payment required when fees are charged according to total number of plans submitted	APP-55
3.	Plans and Documents	○ 2 signed sets of plans and 1 signed set of all documents	ADM-8 APP-141

Part B – Documents

Typical Items		Requirements	Reference
1.	Design Document: Part I – Synopsis and Essential Information	□ Approved GBP and superstructure plan (parent structure) □ Design standards and references □ Design approach (e.g. ultimate limited state) □ Description of the metal cladding system: • spanning of metal panels • load path • load transfer, etc. □ Building materials/components and workmanship specifications □ Design data for metal cladding system: • design strength of steel/stainless steel/aluminium, etc. • allowable deflection limits, etc. □ Summary of reaction forces, loading capacity for fixing brackets, adequacy check of assumed loading on parent structures and deflection of metal cladding members	ADM-8 ADM-19 APP-16 APP-53
		□ Specifications on design loads: • wind loads • thermal loads	ADM-8 ADM-19 APP-16
		□ BD pre-accepted structural computer program (if applicable): • BD reference no. • RSE's statement	ADM-6

Typical Items		Requirements	Reference
		☐ Information on the computerised calculations: • assumptions made and justifications on parameters used such as material properties, boundary conditions, etc. • input data with computer-generated graphics or hand sketch showing the framing & layout of the system, nodes & elements, joint fixity, etc.	ADM-8 ADM-19
2.	Design Document: Part II – Detailed analysis and design	☐ The metal panel and its sub-frame should be designed to resist the most unfavorable condition of dead, imposed load or wind pressure with consideration of overall lateral stability ☐ Supporting members (steel / stainless steel / aluminium): • thermal effect consideration (if appropriate) • design for bending, shear and deflection • connection details design • fixing brackets with anchor bolts or cast-in embeds ☐ Supporting parent structures: • adequacy check of assumed loading on parent structures	ADM-8 ADM-19 APP-16 APP-53
3.	Other Document	☐ Test report on non-combustibility of infill core material of composite panel (if applicable)	s.28 of B(C)R

Part C – Plans

Typical Items		Requirements	Reference
1.	Plans properly indexed and space reserved at the lower right corner for official stamps of approval	☐ Plans to be properly indexed and each drawing to bear a title and number ☐ Vertical space (90mm wide x 200mm high) or horizontal space (245mm wide x 80mm high) for accommodating official stamps of approval, curtailed check and true copy certification by the BA on every plan at the lower right corner	ADM-8 ADM-10
2.	Plans showing the layout and arrangement of metal cladding	☐ Plans including setting out and layout arrangement of the metal cladding together with main and secondary elements with sections ☐ Structural layout of the supporting frames ☐ The location of fixing brackets with setting out	ADM-8
3.	Plans and sections in appropriate scales for readability	☐ Scale to follow B(A)R 13: • avoid excessive large scale shop drawing details • plans and sections/elevation to be in a scale not less than 1:100 except that a scale of not less than 1:200 may be accepted for cases of very extensive works	B(A)R 13

Typical Items		Requirements	Reference
4.	General Notes	☐ Design Codes and Standards: • design code of practice • construction standards ☐ Design loading ☐ Location/general layout of metal cladding tallying with the latest approved GBP and structural information of the parent structures in superstructure plans with the approval date	ADM-8 ADM-19 APP-16 APP-53
5.	General Notes on Material Specifications and quality control standards	☐ Structural steel, stainless steel or aluminium, etc (if applicable): • a schedule of major structural steel, stainless steel or aluminium members indicating the member mark, grade, general dimensions and thickness • specification and standard of weld/bolt/fastener • welding standard and material grade of aluminium studs • corrosion protection specification for steel • protection against bimetallic action ☐ Cast-in embeds (if applicable) • a schedule of design loads ☐ Drilled-in anchors (if applicable) • design and material specifications • product name, model no. and CDB reference no. • a schedule of drilled-in anchors indicating the anchor type, embedment length, loading capacity and test load	ADM-8 ADM-19 ADM-20 APP-16 APP-53
6.	Structural details of metal cladding	☐ Typical layout, sections and elevations showing all types, setting-out dimensions and span direction of cladding panels ☐ Typical details of metal panel with metal stiffeners and studs (profile, dimension, thickness, size and arrangement of metal stiffeners) with connection details to the supporting frame ☐ Typical details of all types of fixings of the metal panel to the supporting members/frames, stiffener arrangement and studs/bolts connections ☐ Typical details of all types of connections (e.g. embeds/anchor bolt) between members of supporting frames and fixing details to the parent structures (e.g. fixing brackets to slabs, beams, columns, walls, curbs, plinths, etc.) ☐ Cladding zone (not more than 90 mm from the external wall of building)	ADM-8 ADM-19 APP-2 APP-16 APP-53

Typical Items		Requirements	Reference
		☐ Location of representative unit for performance test where aluminium/stainless steel/steel or the like extruded section is to be used and the method of connection of the extruded section to its supporting structure relies solely on interlocking without mechanical fixing, such as bolting or welding (if applicable)	

Checklist for Metal Ceiling / Grille / Louvre Plan Submissions

(This checklist is **not** required to be submitted to the BD)

□ : information to be shown on plan and given in supporting document
○ : information to be accompanied with the submission

Part A – Administration

Typical Items		Requirements	Reference
1.	Statutory Forms	○ Form BA4 (for appointment of AP/RSE/RGE) ○ Form BA5 (for application for approval) ○ Form BA6 (Stability Certificate if applicable) ○ Form BA16 (Application for exemption/modification as necessary)	ADM-8 APP-16 B(A)R 18A and 29(1)
2.	Fee for plan processing	○ Payment required when fees are charged according to total number of plans submitted	APP-55
3.	Plans and Documents	○ 2 signed sets of plans and 1 signed set of all documents	ADM-8 APP-141

Part B – Documents

Typical Items		Requirements	Reference
1.	Design Document: Part I – Synopsis and Essential Information	□ Approved GBP and superstructure plan (parent structure) □ Design standards and references □ Design approach (e.g. ultimate limited state) □ Description of the metal ceiling, grille or louvre system: • spanning of metal ceiling, grille or louvre and its supporting frame • load path • load transfer, etc. □ Building materials/components and workmanship specifications □ Design data for metal ceiling, grille or louvre system: • design strength of steel/stainless steel/aluminium, etc. • allowable deflection limits, etc. □ Summary of reaction forces, loading capacity for fixing brackets, adequacy check of assumed loading on parent structures and deflection of metal ceiling, grille or louvre members	ADM-8 ADM-19 APP-16 APP-53
		□ Specifications on design loads: • wind loads • thermal loads (for metal ceiling / grille only) • maintenance loads • lateral notional loads (for design of bracing members of metal ceiling only)	ADM-8 ADM-19 APP-16

Typical Items		Requirements	Reference
		☐ BD pre-accepted structural computer program (if applicable): ● BD reference no. ● RSE's statement	ADM-6
		☐ Information on the computerised calculations: ● assumptions made and justifications on parameters used such as material properties, boundary conditions, etc. ● input data with computer-generated graphics or hand sketch showing the framing & layout of the system, nodes & elements, joint fixity, etc.	ADM-8 ADM-19
2.	Design Document: Part II – Detailed analysis and design	☐ The metal ceiling panel, grille or louvre and its supporting frame should be designed to resist the most unfavorable condition of dead, imposed and wind load with consideration of overall lateral stability ☐ Supporting members (steel/stainless steel/aluminium): ● thermal effect consideration (if appropriate) ● design for bending, shear and deflection ● connection details design ● fixing brackets with anchor bolts or cast-in embeds ☐ Supporting parent structures: ● adequacy check of assumed loading on parent structures	ADM-8 ADM-19 APP-16 APP-53

Part C – Plans

Typical Items		Requirements	Reference
1.	Plans properly indexed and space reserved at the lower right corner for official stamps of approval	☐ Plans to be properly indexed and each drawing to bear a title and number ☐ Vertical space (90mm wide x 200mm high) or horizontal space (245mm wide x 80mm high) for accommodating official stamps of approval, curtailed check and true copy certification by the BA on every plan at the lower right corner	ADM-8 ADM-10
2.	Plans showing the layout and arrangement of metal ceiling, grille or louvre	☐ Plans including setting out and layout arrangement of the metal ceiling, grille or louvre together with main and secondary elements with sections Structural layout of the supporting frames ☐ Location and setting out of fixing brackets	ADM-8
3.	Plans and sections in appropriate scales for readability	☐ Scale to follow B(A)R 13: ● avoid excessive large scale shop drawing details ● plans and sections/elevation to be in a scale not less than 1:100 except that a scale of not less than 1:200 may be accepted for cases of very extensive works	B(A)R 13

Typical Items		Requirements	Reference
4.	General Notes	☐ Design Codes and Standards: • design code of practice • construction standards ☐ Design loading (e.g. wind load, maintenance load, notional load, etc) ☐ Location/general layout of metal ceiling, grille and louvre tallying with the latest approved GBP and structural information of the parent structures in superstructure plans with the approval date	ADM-8 ADM-19 APP-16 APP-53
5.	General Notes on Material Specifications and quality control standards	☐ Structural steel, stainless steel or aluminium, etc (if applicable): • a schedule of major structural steel, stainless steel or aluminium members indicating the member mark, grade, general dimensions and thickness • specification and standard of weld/bolt/fastener • welding standard and material grade of aluminium studs • corrosion protection specification for steel • protection against bimetallic action ☐ Cast-in embeds (if applicable) • a schedule of design loads ☐ Drilled-in anchors (if applicable) • design and material specifications • product name, model no. and CDB reference no. • a schedule of drilled-in anchors indicating the anchor type, embedment length, loading capacity and test load	ADM-8 ADM-19 ADM-20 APP-16 APP-53
6.	Structural details of metal ceiling, grille or louvre	☐ Typical layout plans, sections and elevations showing all types of metal ceiling, grille or louvre, setting-out dimensions, and span direction of metal panels ☐ Typical details of metal panel with metal stiffeners and studs (profile, dimension, thickness, size and arrangement of metal stiffeners) with connection details to the supporting frame ☐ Typical details of all types of fixings of the metal ceiling, grille or louvre to the supporting members/frames, stiffener arrangement and studs/bolts connections ☐ Typical details of all types of connections (e.g. embeds/anchor bolt) between members of supporting frames and fixing details to the parent structures (e.g. fixing brackets to slabs, beams, columns, walls, curbs, plinths, etc.)	ADM-8 ADM-19 APP-16 APP-53

Typical Items		Requirements	Reference
		☐ Location of representative unit for performance test (where aluminium/stainless steel/steel or the like extruded section is to be used and the method of connection of the extruded section to its supporting structure relies solely on interlocking without mechanical fixing, such as bolting or welding) (if applicable)	

SAMPLE DRAWING FOR TYPICAL DETAILS OF FREE STANDING GLASS BALUSTRADE

GENERAL NOTES

1. THE DESIGN AND CONSTRUCTION OF GLASS BALUSTRADE IS IN ACCORDANCE WITH THE BUILDING (CONSTRUCTION) REGULATION, HONG KONG.
2. THE MINIMUM HORIZONTAL IMPOSED LOAD ON PROTECTIVE BARRIERS IS (*STATE THE CATEGORY) IN ACCORDANCE WITH THE CODE OF PRACTICE FOR DEAD AND IMPOSED LOADS 2011.
3. THE WIND LOAD ON GLASS BALUSTRADE IS IN ACCORDANCE WITH THE CODE OF PRACTICE ON WIND EFFECTS IN HONG KONG 2019.
4. THE LOCATION OF GLASS BALUSTRADE AS SHOWN IN THIS SUBMISSION SHOULD BE READ IN CONJUNCTION WITH THE LATEST GENERAL BUILDING PLAN APPROVED ON (*DATE OF GBP APPROVAL).
5. STRUCTURAL INFORMATION FOR THE PARENT STRUCTURE SHOULD BE READ IN CONJUNCTION WITH THE LATEST STRUCTURAL PLAN APPROVED ON (*DATE OF STRUCTURAL PLAN APPROVAL).
6. PVC TAPE TO BE APPLIED BETWEEN DISSIMILAR METAL TO PREVENT BIMETALLIC CORROSION (*ALTERNATIVE SHALL BE PROPOSED IF APPLICABLE).

NOTES ON GLASS

1. THE DESIGN OF GLASS IS IN ACCORDANCE WITH THE CODE OF PRACTICE FOR STRUCTURAL USE OF GLASS 2018.
2. GLASS TO BE 15mm THK + 2.28mm PVB + 15mm THK LAMINATED TEMPERED GLASS (*ADJUSTMENT OF GLASS TYPE AND THICKNESS SHALL BE PROPOSED IF APPLICABLE).
3. (PROVISION OF ULTIMATE DESIGN STRENGTH OF GLASS, *STATE ONLY IF ITS STRENGTH DEVIATED FROM THE CODE)
4. (PROVISION OF THE TYPE AND FRITTED PATTERN OF GLASS PANE, *STATE ONLY IF APPLICABLE).
5. THE USE OF COMPOSITE ACTION FOR LAMINATED GLASS IS APPLIED (*STATE ONLY TOGETHER WITH THE BRAND NAME AND THICKNESS OF THE INTERLAYER MATERIAL IF APPLICABLE).
6. BD REFERENCE NO. FOR STRUCTURAL SEALANT (*STATE ONLY FROM THE CENTRAL DATA BANK IF APPLICABLE).

NOTES ON STRUCTURAL STEEL

1. THE DESIGN OF STRUCTURAL STEEL IS IN ACCORDANCE WITH THE CODE OF PRACTICE FOR STRUCTURAL USE OF STEEL 2011.
2. SCHEDULE OF MAJOR STRUCTURAL STEEL MEMBERS:

MEMBER MARK	GRADE	GENERAL DIMENIONS	THICKNESS

3. SURFACE TREATMENT SHALL BE HOT-DIP GALVANIZED COMPLYING WITH (*BS EN ISO 1461:2009 IF APPLICABLE). (MIN. THICKNESS = _____ MICRONS).

NOTES ON STRUCTURAL STAINLESS STEEL (IF APPLICABLE)

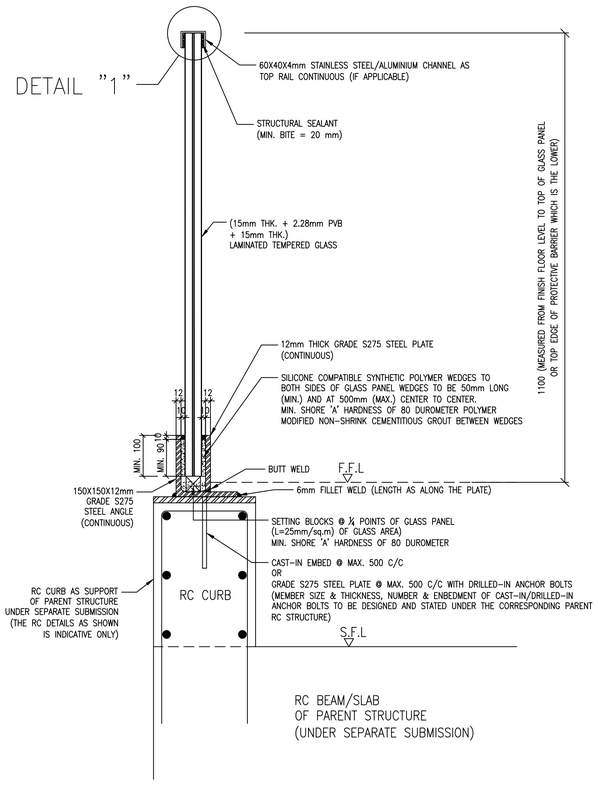
1. THE DESIGN OF STRUCTURAL STAINLESS STEEL IS IN ACCORDANCE WITH (*BS EN 10088, ASTM, JIS, AS/NZS, SCI PUBLICATION P291 WHICH IS APPLICABLE).
2. SCHEDULE OF MAJOR STRUCTURAL STAINLESS STEEL MEMBERS:

MEMBER MARK	GRADE	GENERAL DIMENIONS	THICKNESS

NOTES ON STRUCTURAL ALUMINIUM (IF APPLICABLE)

1. THE DESIGN OF STRUCTURAL ALUMINIUM IS IN ACCORDANCE WITH (*BS 8118 WITH MODIFICATION OF PARTIAL LOAD FACTOR FOR WIND LOAD IN ACCORDANCE WITH PNAP APP-53, BS EN 1999 WHICH IS APPLICABLE).
2. SCHEDULE OF MAJOR STRUCTURAL ALUMINIUM MEMBERS:

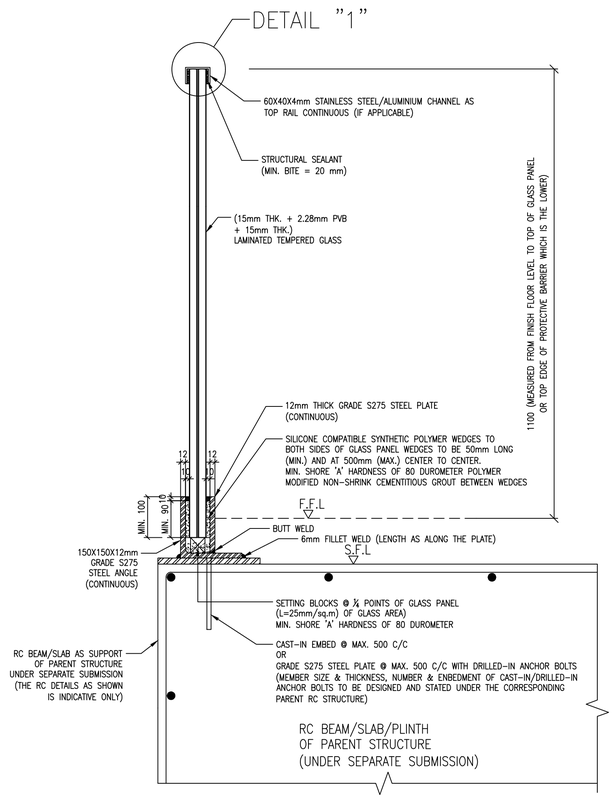
MEMBER MARK	GRADE	GENERAL DIMENIONS	THICKNESS



TYPICAL DETAIL OF FREE STANDING GLASS BALUSTRADE (FOR REST ON RC CURB)

(N.T.S.)

NOTES:
1.ALL SIZE, THICKNESS OF STRUCTURAL MEMBER AND GLASS TO BE ADJUSTED FOR GREATER HEIGHT OF BALUSTRADE OR ADDITIONAL LOAD ON GLASS IF NEEDED
2. BOLW-UP DETAILS SHOULD BE PROVIDED IF NECESSARY.



TYPICAL DETAIL OF FREE STANDING GLASS BALUSTRADE (FOR REST ON RC BEAM/SLAB/PLINTH)

(N.T.S.)

NOTES:
1.ALL SIZE, THICKNESS OF STRUCTURAL MEMBER AND GLASS TO BE ADJUSTED FOR GREATER HEIGHT OF BALUSTRADE OR ADDITIONAL LOAD ON GLASS IF NEEDED
2. BOLW-UP DETAILS SHOULD BE PROVIDED IF NECESSARY.

NOTES ON CAST-IN EMBEDS (IF APPLICABLE)

1. THE DESIGN OF CAST-IN EMBEDS IS IN ACCORDANCE WITH THE CODE OF PRACTICE FOR STRUCTURAL USE OF STEEL 2011, CODE OF PRACTICE FOR STRUCTURAL USE OF CONCRETE 2013 AND CS2:2012.
2. SCHEDULE FOR LOADING CAPACITY:

AXIAL LOAD (COMPRESSION)	AXIAL LOAD (TENSION)	SHEAR FORCE (X-DIRECTION), Vx	SHEAR FORCE (Y-DIRECTION), Vy	MOMENT (X-DIRECTION), Mx	MOMENT (Y-DIRECTION), My

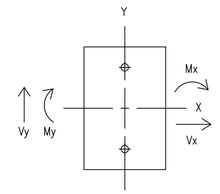
3. TEST LOAD OF HALFEN CHANNEL = _____ kN FOR TENSION AND _____ kN FOR SHEAR (IF APPLICABLE).

NOTES ON DRILLED-IN ANCHORS (IF APPLICABLE)

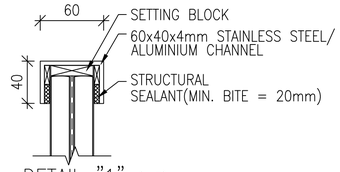
1. (*STATE THE DESIGN AND MATERIAL SPECIFICATIONS OF DRILLED-IN ANCHORS.)
2. (*STATE PRODUCT NAME, MODEL NO. AND BD REFERENCE NO. FROM THE CENTRAL DATA BANK).
3. SCHEDULE FOR DRILLED-IN ANCHORS:

ANCHOR TYPE	EMBEDMENT LENGTH	MIN. EDGE DISTANCE	MIN. SPACING	LOADING CAPACITY/ RECOMMNEDED LOAD	TEST LOAD

4. CONCRETE GRADE OF PARENT STRUCTURE = ____MPa.



SIGN CONVENTION OF EMBED



DETAIL "1" (1:3)

BD REF
BIM REF
FSD REF

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
NOTES AND DETAILS OF FREE STANDING GLASS BALUSTRADE

SCALE

DRAWING NO. A001 REV. NO.

SORUCE

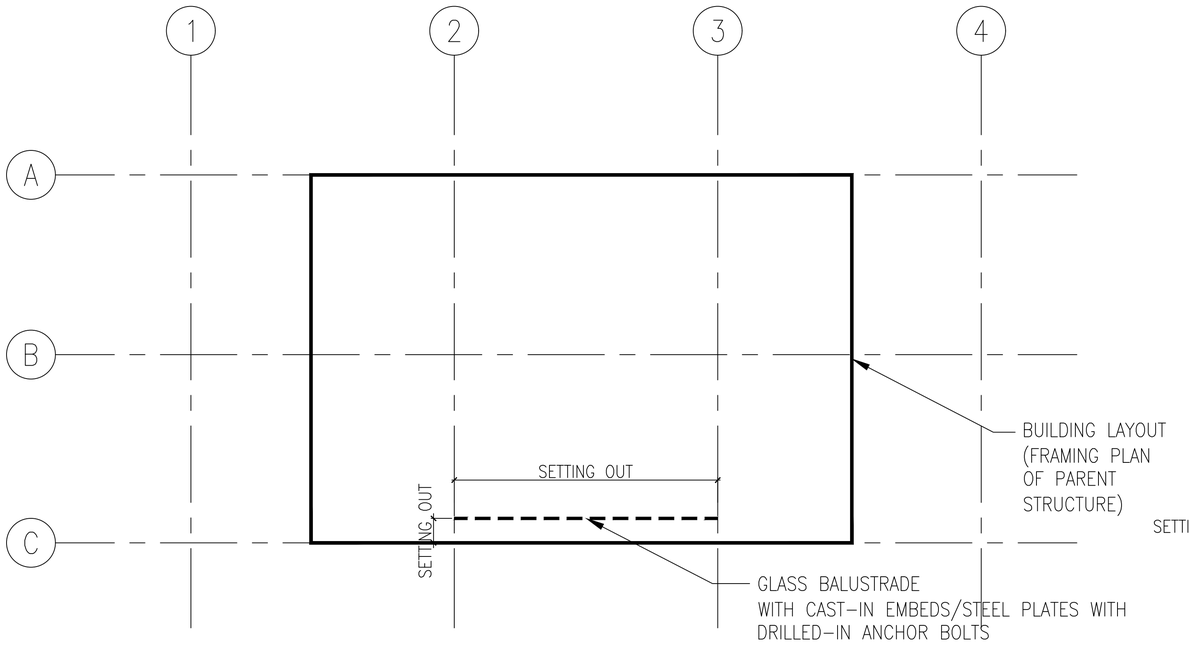
90mm(W) x 40mm(H) space for COMPANY LOGO

90mm(W) x 60mm(H) space for AP/RSE/RGE's signature/ and stamp chop

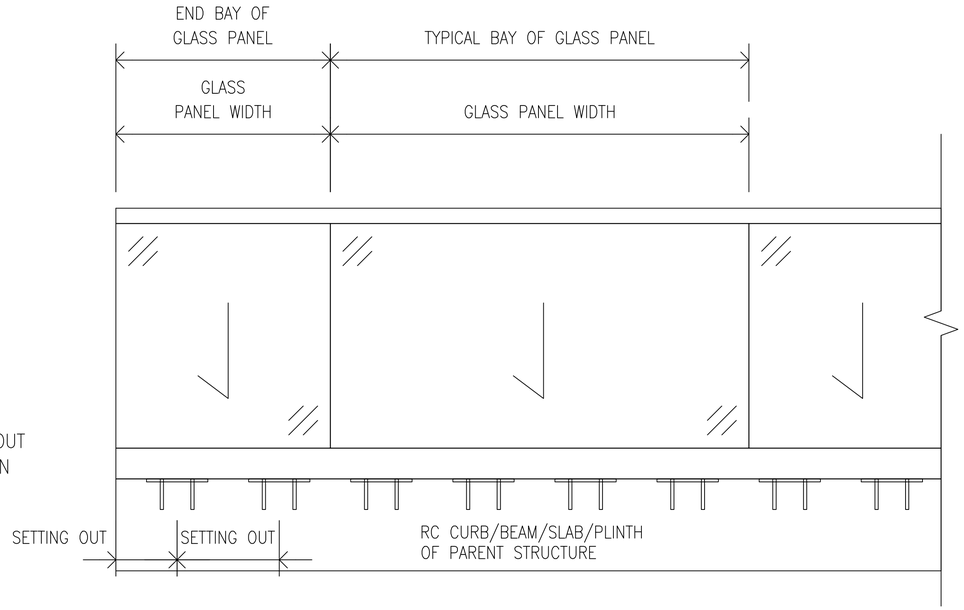
BD's OFFICIAL USE

90mm(W) x 150mm(H) space for BD's approval stamp/ certification of copies of approved plans (PNAP ADM-10 APP A)

SAMPLE DRAWING FOR TYPICAL DETAILS OF FREE STANDING GLASS BALUSTRADE



LAYOUT PLAN OF FREE STANDING GLASS BALUSTRADE



ELEVATION OF FREE STANDING GLASS BALUSTRADE

BD REF
BIM REF
FSD REF

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
LAYOUT PLAN AND ELEVATION OF FREE STANDING GLASS BALUSTRADE

SCALE

DRAWING NO. A002 REV. NO.

SORUCE

90mm(W) x 40mm(H) space
for COMPANY LOGO

90mm(W) x 60mm(H) space
for AP/RSE/RGE's
signature/ and stamp chop

BD's OFFICIAL USE

90mm(W) x 150mm(H) space
for BD's approval stamp/
certification of copies of
approved plans
(PNAP ADM-10 APP A)

SAMPLE DRAWING FOR TYPICAL DETAILS OF METAL CLADDING

1. THE DESIGN AND CONSTRUCTION OF METAL CLADDING IS IN ACCORDANCE WITH THE BUILDING (CONSTRUCTION) REGULATION, HONG KONG
2. THE LOCATION OF METAL CLADDING AS SHOWN IN THIS SUBMISSION SHOULD BE READ IN CONJUNCTION WITH THE LATEST GENERAL BUILDING PLAN APPROVED ON ('DATE OF GBP APPROVAL).
3. STRUCTURAL INFORMATION FOR THE PARENT STRUCTURE SHOULD BE READ IN CONJUNCTION WITH THE LATEST STRUCTURAL PLAN APPROVED ON ('DATE OF STRUCTURAL PLAN APPROVAL).
4. PVC TAPE TO BE APPLIED BETWEEN DISSIMILAR METAL TO PREVENT BIMETALLIC CORROSION (ALTERNATIVE SHALL BE PROPOSED IF APPLICABLE).

STANDARD AND CODES

1. CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.
2. THE STRUCTURAL USE OF ALUMINIUM – BS 8118: PART 1: 1991 WITH MODIFICATION OF PARTIAL LOAD FACTOR FOR WIND LOAD IN ACCORDANCE WITH PNAP APP–53.
3. CODE OF PRACTICE FOR DEAD AND IMPOSED LOAD 2011.
4. CODE OF PRACTICE ON WIND EFFECTS IN HONG KONG 2019.

NOTES ON DESIGN LOADS

1. WIND LOAD

DESIGN WIND REFERENCE PRESSURE, Qz =
PRESSURE COFFICIENT, Cp =
SIZE FACTOR, Ss =
DESIGN WIND PRESSURE, P = Qz x Cp x Ss
=

NOTES ON STRUCTURAL STEEL (IF APPLICABLE)

1. THE DESIGN OF STRUCTURAL STEEL IS IN ACCORDANCE WITH THE CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.
2. SCHEDULE OF MAJOR STRUCTURAL STEEL MEMBERS:

MEMBER MARK	GRADE	GENERAL DIMENSIONS	THICKNESS

3. ALL WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS IN ACCORDANCE WITH BS EN 287–1:2004 AND BS EN 288–3:1992.
4. SURFACE TREATMENT SHALL BE HOT–DIP GALVANIZED COMPLYING WITH BS EN ISO 1461:2009 (IF APPLICABLE)/
(MIN. THICKNESS = ___ MICRONS)

NOTES ON STRUCTURAL STAINLESS STEEL (IF APPLICABLE)

1. THE DESIGN OF STRUCTURAL STAINLESS STEEL IS IN ACCORDANCE WITH BS EN 10088, ASTM, JIS, AS/NZS, SCI PUBLICATION P291. (IF APPLICABLE)
2. SCHEDULE OF MAJOR STRUCTURAL STAINLESS STEEL MEMBERS:

MEMBER MARK	GRADE	GENERAL DIMENSIONS	THICKNESS

NOTES ON STRUCTURAL ALUMINIUM (IF APPLICABLE)

THE DESIGN OF STRUCTURAL ALUMINIUM IS IN ACCORDANCE WITH BS 8118 WITH MODIFICATION OF PARTIAL LOAD FACTOR FOR WIND LOAD IN ACCORDANCE WITH PNAP APP–53, BS EN 1999. (IF APPLICABLE)

1. SCHEDULE OF MAJOR STRUCTURAL ALUMINIUM MEMBERS:

MEMBER MARK	GRADE	GENERAL DIMENSIONS	THICKNESS

2. ALL ALUMINIUM EXTRUSION SHALL BE GRADE _____ COMPLYING WITH BS 8118: PART 1: 1991, BS EN 755: PART 2: 2008, AND BS EN 573: PART 3: 2009.
3. ALL ALUMINIUM SHEET SHALL BE GRADE _____ TO BS EN 485 PART 2: 2008 AND BS EN 573 PART 3: 2009.
4. NOTE ON ALUMINIUM STUDS:
   a) ALL ALUMINUM STUD SHALL BE GRADE _____.
   b) DESIGN AND QUALITY ASSURANCE OF THE DRAWN ARC STUD WELDING PROCESS SHALL SATISFY THE REQUIREMENTS OF BS EN ISO 14555: 2017.
   c) THE STUD SHALL FOLLOW THE DEFINED PROFILE M5 AS SPECIFIED UNDER TABLE 14 OF BS EN ISO 13918:2008.

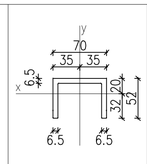
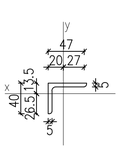
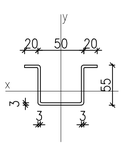
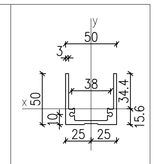
NOTES ON DRILLED–IN ANCHORS (IF APPLICABLE)

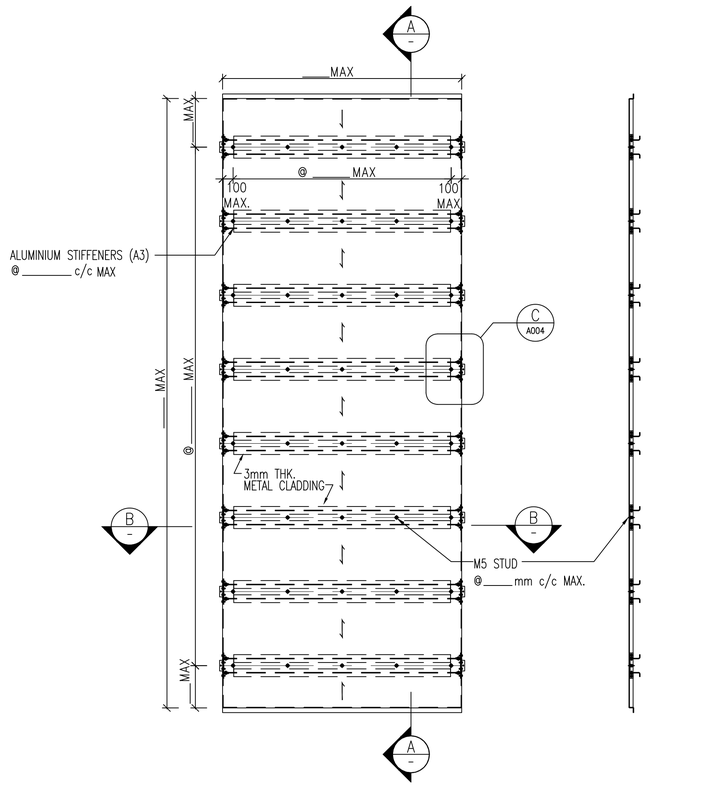
1. DESIGN AND INSTALLATION OF ANCHOR BOLTS SHALL BE STRICTLY IN ACCORDANCE WITH _____.
2. ANCHOR BOLT SHALL BE INSTALLED IN SOUND CONCRETE (IF APPLICABLE) WITH F.O.S. = 3.
3. SCHEDULE OF DRILLED–IN ANCHORS:

ANCHOR TYPE	EMBEDMENT LENGTH	MIN. EDGE DISTANCE	MIN. SPACING	LOADING CAPACITY/ RECOMMENDED LOAD	TEST LOAD	B.D. REF.

4. CONCRETE GRADE OF PARENT STRUCTURE = _____ MPa.

MEMBER PROPERTIES SCHEDULE (IF APPLICABLE)

SECTION				
MEMBER MARK:	A1	A2	A3	A4
DESCRIPTION:	ALUMINIMUM MULLION	ALUMINIMUM ANGLE	ALUMINIMUM STIFFENER	ALUMINIMUM STIFFENER
AREA (mm^2):	–	–	–	–
MOMENTS OF INERTIA – X (mm^4):	–	–	–	–
MOMENTS OF INERTIA – Y (mm^4):	–	–	–	–
ELASTIC MODULUS – Zx (mm^3):	–	–	–	–
ELASTIC MODULUS – Zy (mm^3):	–	–	–	–
REMARK:	–	–	–	–
MIN. THICKNESS:	–	–	–	–



– TYPICAL METAL CLADDING ELEVATION

A – SECTION

B – SECTION

BLOCK PLAN
SCALE _____

BD REF
BIM REF
FSD REF

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
NOTES AND DETAILS OF METAL CLADDING

SCALE

DRAWING NO. A003 REV. NO.

SORUCE

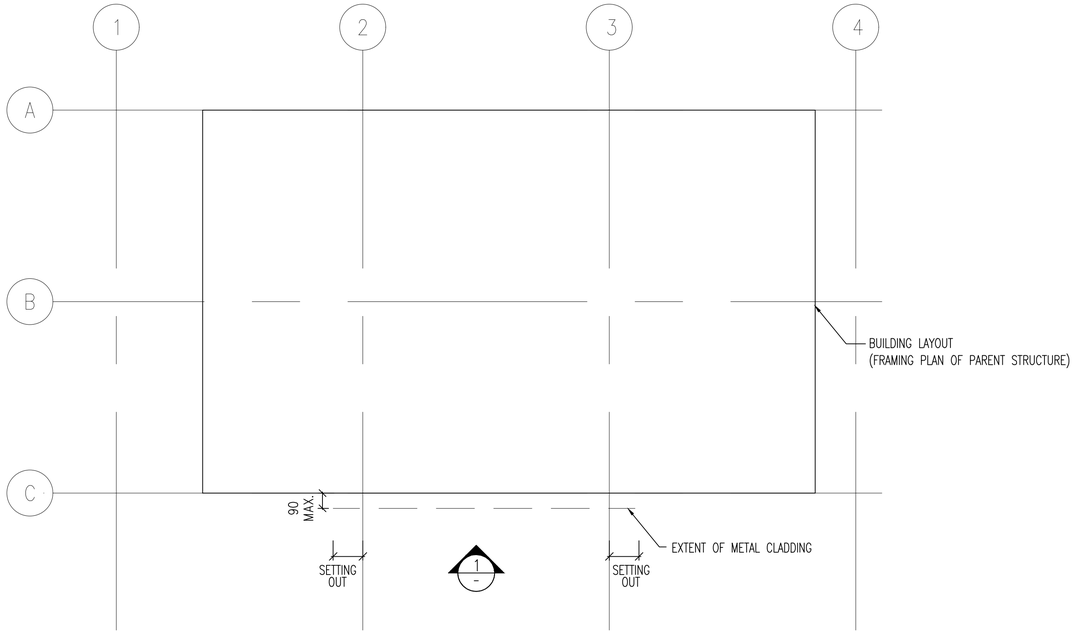
90mm(W) x 40mm(H) space for COMPANY LOGO

90mm(W) x 60mm(H) space for AP/RSE/RGE's signature/ and stamp chop

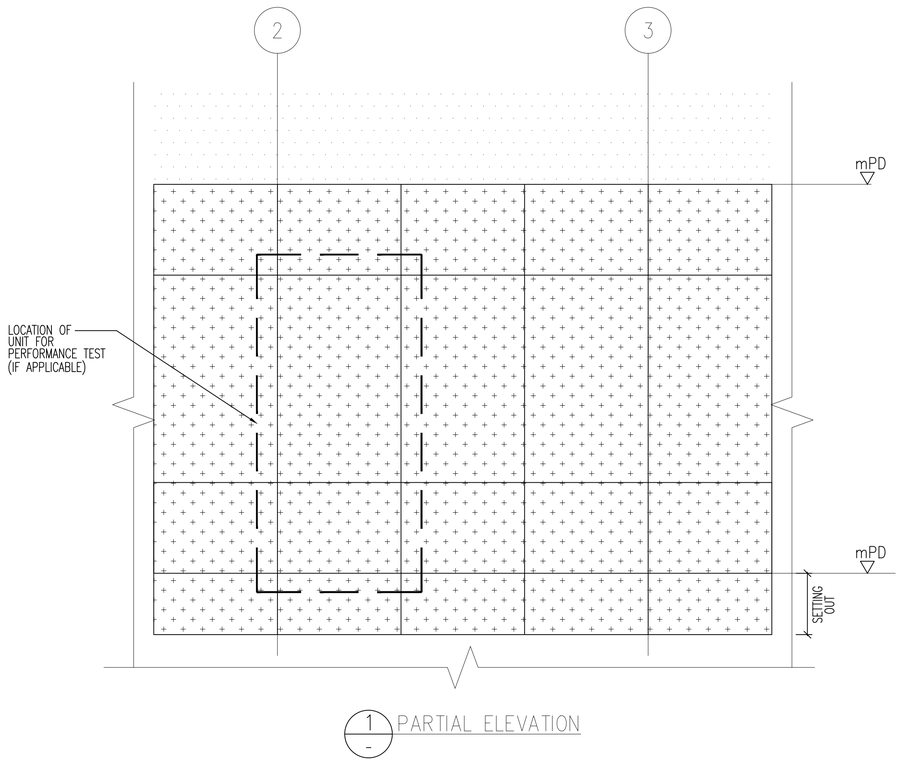
BD's OFFICIAL USE

90mm(W) x 150mm(H) space for BD's approval stamp/ certification of copies of approved plans (PNAP ADM–10 APP A)

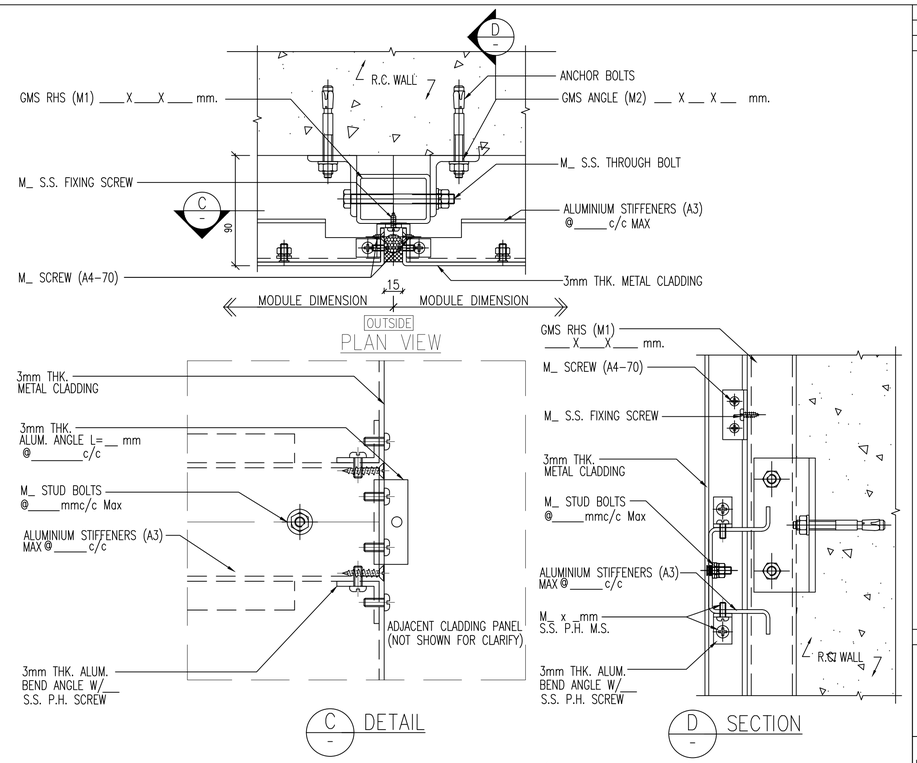
SAMPLE DRAWING FOR TYPICAL DETAILS OF METAL CLADDING



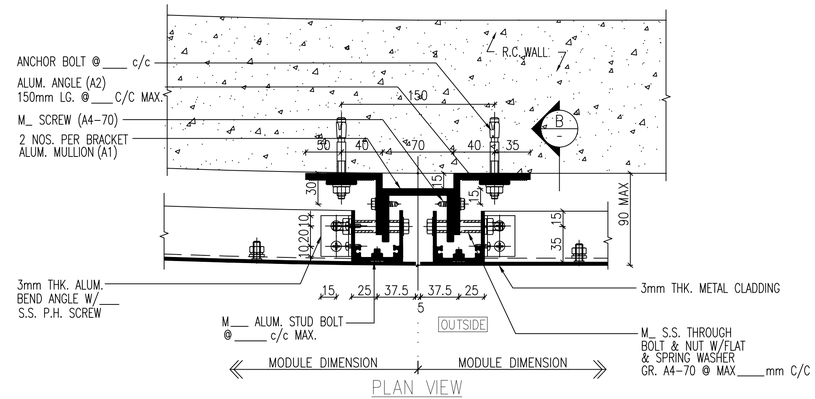
LAYOUT PLAN OF METAL CLADDING

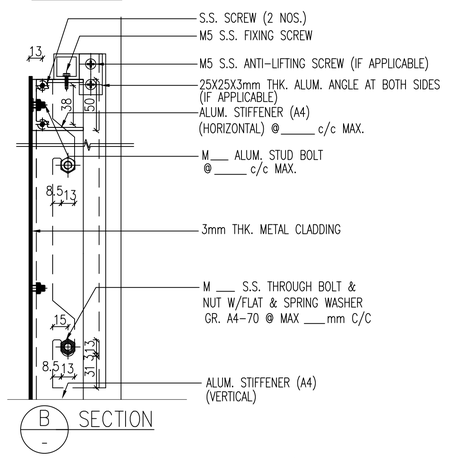


1 PARTIAL ELEVATION



TYPICAL CONNECTION DETAILS FOR MECHANICAL FIXING (IF APPLICABLE)





TYPICAL CONNECTION DETAILS FOR INTERLOCKING FIXING (IF APPLICABLE)

BD REF

BIM REF

FSD REF

REV.	DATE	AMENDMENT

PROJECT

SAMPLE

DRAWING TITLE

LAYOUT PLAN, ELEVATION AND CONNECTION DETAILS OF METAL CLADDING

SCALE

DRAWING NO. A004

REV. NO.

SORUCE

90mm(W) x 40mm(H) space
for COMPANY LOGO

90mm(W) x 60mm(H) space
for AP/RSE/RGE's
signature/ and stamp chop

BD's OFFICIAL USE

90mm(W) x 150mm(H) space
for BD's approval stamp/
certification of copies of
approved plans
(PNAP ADM-10 APP A)

SAMPLE DRAWING FOR TYPICAL DETAILS OF METAL CEILING

1. GENERAL NOTE

1.1. THE DESIGN AND CONSTRUCTION OF METAL CEILING ARE IN ACCORDANCE WITH THE BUILDING (CONSTRUCTION) REGULATION, HONG KONG.
1.2. THE DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE LATEST APPROVED GENERAL BUILDING PLAN APPROVED ON __(DATE)__ .
1.3. THE STRUCTURAL INFORMATION FOR THE PARENT STRUCTURE SHOULD BE READ IN CONJUNCTION WITH THE LATEST STRUCTURAL PLAN APPROVED ON __(DATE)__ .

2. STANDARD AND CODES

2.1. CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.
2.2. THE STRUCTURAL USE OF ALUMINIUM – BS 8118: PART 1: 1991 WITH MODIFICATION OF PARTIAL LOAD FACTOR FOR WIND LOAD IN ACCORDANCE WITH PNAP APP–53.
2.3. CODE OF PRACTICE FOR DEAD AND IMPOSED LOAD 2011.
2.4. CODE OF PRACTICE ON WIND EFFECTS IN HONG KONG 2019.

3. NOTE ON DESIGN LOADS

3.1. DESIGN WIND LOAD:

DESIGN WIND PRESSURE / DESIGN WIND REFERENCE PRESSURE	Q_z = ____
PRESSURE COEFFICIENT	C_p = ____
SIZE FACTOR	S_s = ____
DESIGN WIND PRESSURE	$P = Q_z \times C_p \times S_s$ = ____

4. NOTE ON STRUCTURAL STEEL

4.1. STRUCTURAL STEEL SHALL BE GRADE ___ . ALL STEEL SECTIONS SHALL BE CLASS 1 AS SPECIFIED IN CLAUSE 3.1.1 OF THE CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.
4.2. ALL STRUCTURAL STEELWORK SHALL BE HOT–DIP GALVANIZED IN ACCORDANCE WITH BS EN ISO 1461: 2009 TO 85 MICRON MINIMUM THICKNESS.
4.3. ALL WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS IN ACCORDANCE WITH BS EN 287–1:2004 AND BS EN 288–3:1992.
4.4. WELD STRENGTH SHALL BE ___ N/mm^2.
4.5. ALL WELDING SHALL BE 6mm FILLET WELDS, UNLESS OTHERWISE SPECIFIED.
4.6. WELDING ELECTRODE SHALL BE CLASS___TO BS EN ISO 2560:2009.
4.7. WELDING TESTS SHALL COMPLY WITH CLAUSE 14.3.6 OF THE CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.

5. NOTE ON STRUCTURAL STAINLESS STEEL

5.1. STAINLESS STEEL SCREW / BOLT SHALL BE OF GRADE ___ TO BS EN ISO 3506: PART 1 TO 3: 2009.

6. NOTE ON STRUCTURAL ALUMINIUM

6.1. ALL ALUMINIUM EXTRUSION SHALL BE GRADE ___ COMPLYING WITH BS 8118: PART 1: 1991, BS EN 755: PART 2: 2008, AND BS EN 573: PART 3: 2009.
6.2. ALL ALUMINIUM SHEET SHALL BE GRADE ___ TO BS EN 485 PART 2: 2008 AND BS EN 573 PART 3: 2009.
6.3. NOTE ON ALUMINIUM STUDS
a) ALL ALUMINUM STUD SHALL BE GRADE _____ .
b) DESIGN AND QUALITY ASSURANCE OF THE DRAWN ARC STUD WELDING PROCESS SHALL SATISFY THE REQUIREMENTS OF BS EN ISO 14555: 2017.
c) THE STUD SHALL FOLLOW THE DEFINED PROFILE M5 AS SPECIFIED UNDER TABLE 14 OF BS EN ISO 13918:2008.

7. NOTE ON BIMETALLIC EFFECT

7.1. ALL CONTACT FACES BETWEEN DISSIMILAR METALS AND ALUMINIUM SHALL BE COATED WITH BITUMINOUS PAINT FOR INSULATION.

8. NOTE ON DRILLED–IN ANCHOR

8.1. DESIGN AND INSTALLATION OF DRILLED–IN ANCHORS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
8.2. DRILLED–IN ANCHORS SHALL BE INSTALLED IN SOUND CONCRETE WITH F.O.S. = 3.
8.3. SCHEDULED OF DRILLED–IN ANCHORS:

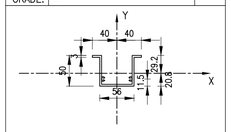
ANCHOR TYPE	EMBEDMENT DEPTH	MIN. EDGE DISTANCE	MIN. SPACING	LOADING CAPACITY/ RECOMMENDED LOAD	TEST LOAD	B.D. REF.

8.4. DESIGN CONCRETE STRENGTH OF PARENT STRUCTURE = ____ N/mm^2.

9. MEMBER SCHEDULE

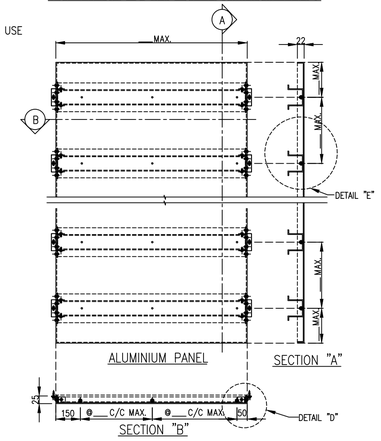
MEMBER MARK	DESCRIPTION	GRADE
MC2/MC3/MC4/EC2	–	–
SC1	–	–
SC2	–	–
AL1	–	–

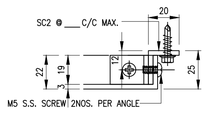
3mm THK. ALUM. STIFFENER		AL1
DIE No:	–	
GRADE:	–	



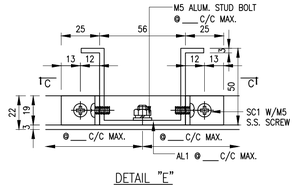
MASS PROPERTIES(UNIT)	VALUES
AREA (mm^2):	–
PERIMETER (mm):	–
BENDING BOX–X(mm):	–
BENDING BOX–Y(mm):	–
MOMENT OF INERTIA–X(mm^4):	–
MOMENT OF INERTIA–Y(mm^4):	–
ELASTIC MODULUS–X(mm^3):	–
ELASTIC MODULUS–Y(mm^3):	–

10. TYPICAL DETAIL OF ALUMINIUM PANEL

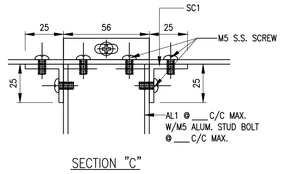




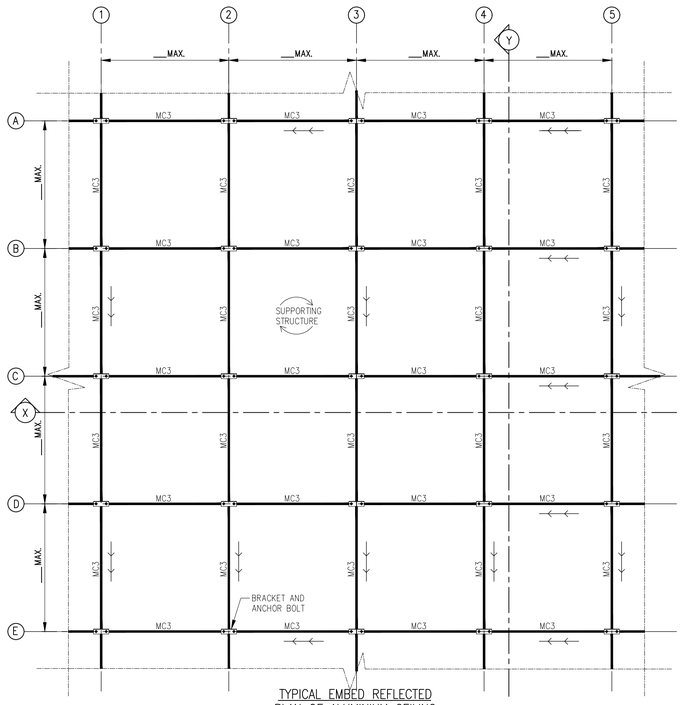
DETAIL "D"



DETAIL "E"

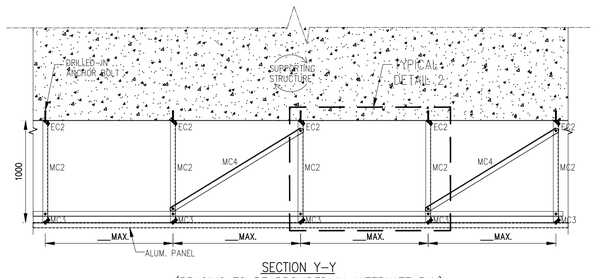


SECTION "C"

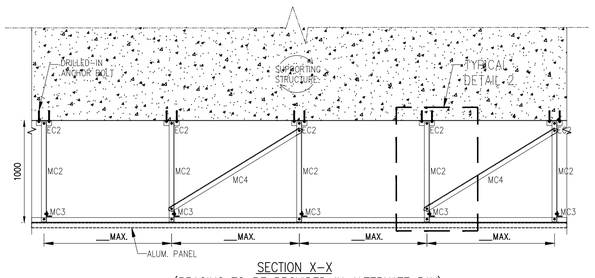


TYPICAL EMBED REFLECTED PLAN OF ALUMINIUM CEILING

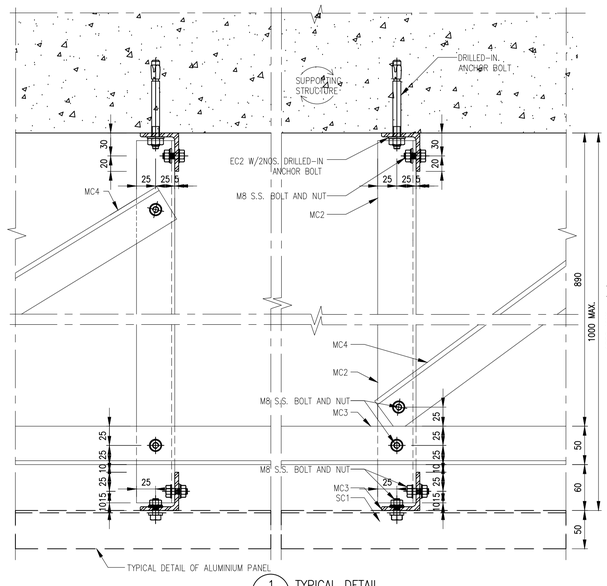
←← DIAGONAL BRACING, MC4 (NOTE: DIAGONAL BRACING SHOWN IS INDICATIVE ONLY, LAYOUT AND NOS. OF BRACING SHALL BE DESIGNED TO SUIT)



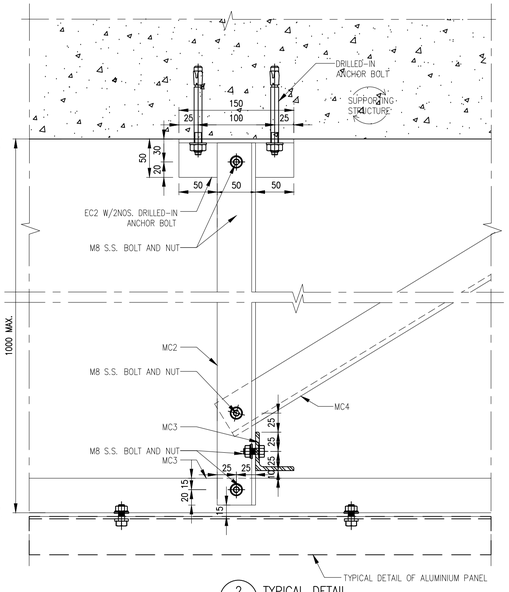
SECTION Y–Y
(BRACING TO BE PROVIDED IN ALTERNATE BAY)
(NOTE: DIAGONAL BRACING SHOWN IS INDICATIVE ONLY, LAYOUT AND NOS. OF BRACING SHALL BE DESIGNED TO SUIT)



SECTION X–X
(BRACING TO BE PROVIDED IN ALTERNATE BAY)
(NOTE: DIAGONAL BRACING SHOWN IS INDICATIVE ONLY, LAYOUT AND NOS. OF BRACING SHALL BE DESIGNED TO SUIT)



1 / – TYPICAL DETAIL 1:4



2 / – TYPICAL DETAIL 1:4

BLOCK PLAN

BD REF
BIM REF
FSD REF

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
NOTES AND DETAILS OF METAL CEILING

SCALE

DRAWING NO. A005
REV. NO.

SORUCE

90mm(W) x 40mm(H) space for COMPANY LOGO

90mm(W) x 60mm(H) space for AP/RSE/RGE's signature/ and stamp chop

BD's OFFICIAL USE

90mm(W) x 150mm(H) space for BD's approval stamp/ certification of copies of approved plans (PNAP ADM–10 APP A)

SAMPLE DRAWING FOR TYPICAL DETAILS OF METAL LOUVRE

1. GENERAL NOTE

1.1. THE DESIGN AND CONSTRUCTION OF METAL LOUVRE ARE IN ACCORDANCE WITH THE BUILDING (CONSTRUCTION) REGULATION, HONG KONG.
1.2. THE DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE LATEST APPROVED GENERAL BUILDING PLAN APPROVED ON (DATE) .
1.3. THE STRUCTURAL INFORMATION FOR THE PARENT STRUCTURE SHOULD BE READ IN CONJUNCTION WITH THE LATEST STRUCTURAL PLAN APPROVED ON (DATE) .

2. STANDARD AND CODES

2.1. CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.
2.2. THE STRUCTURAL USE OF ALUMINIUM – BS 8118: PART 1: 1991 WITH MODIFICATION OF PARTIAL LOAD FACTOR FOR WIND LOAD IN ACCORDANCE WITH PNAP APP–53.
2.3. CODE OF PRACTICE FOR DEAD AND IMPOSED LOAD 2011.
2.4. CODE OF PRACTICE ON WIND EFFECTS IN HONG KONG 2019.

3. NOTE ON DESIGN LOADS

3.1. DESIGN WIND LOAD:

DESIGN WIND PRESSURE / DESIGN WIND REFERENCE PRESSURE	Q_z = ____
PRESSURE COEFFICIENT	C_p = ____
SIZE FACTOR	S_s = ____
DESIGN WIND PRESSURE	P = Q_z x C_p x S_s = ____

4. NOTE ON STRUCTURAL STAINLESS STEEL

4.1. STAINLESS STEEL SCREW/BOLT SHALL BE OF GRADE __ TO BS EN ISO 3506: PART 1 TO 3: 2009.

5. NOTE ON STRUCTURAL ALUMINIUM

5.1. ALL ALUMINIUM EXTRUSION SHALL BE GRADE __ COMPLYING WITH BS 8118: PART 1: 1991, BS EN 755: PART 2: 2008, AND BS EN 573: PART 3: 2009.

5.2. ALL ALUMINIUM SHEET SHALL BE GRADE __ TO BS EN 485 PART 2: 2008 AND BS EN 573 PART 3: 2009.

6. NOTE ON BIMETALLIC EFFECT

6.1. ALL CONTACT FACES BETWEEN DISSIMILAR METALS AND ALUMINIUM SHALL BE COATED WITH BITUMINOUS PAINT FOR INSULATION.

7. NOTE ON DRILLED–IN ANCHOR

7.1. DESIGN AND INSTALLATION OF DRILLED–IN ANCHORS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
7.2. DRILLED–IN ANCHORS SHALL BE INSTALLED IN SOUND CONCRETE WITH F.O.S. = 3.
7.3. SCHEDULED OF DRILLED–IN ANCHORS:

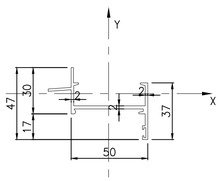
ANCHOR TYPE	EMBEDMENT DEPTH	MIN. EDGE DISTANCE	MIN. SPACING	LOADING CAPACITY/ RECOMMENDED LOAD	TEST LOAD	B.D. REF.

7.4. DESIGN CONCRETE STRENGTH OF PARENT STRUCTURE = ____ N/mm².

8. MEMBER SCHEDULE

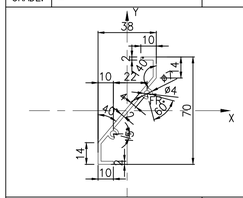
MEMBER MARK	DESCRIPTION	GRADE
AL1	–	–
A1	–	–
A2	–	–
A3	–	–
A4	–	–

2mm THK. ALUM. LOUVRE		A3
DIE NO.:	–	
GRADE:	–	

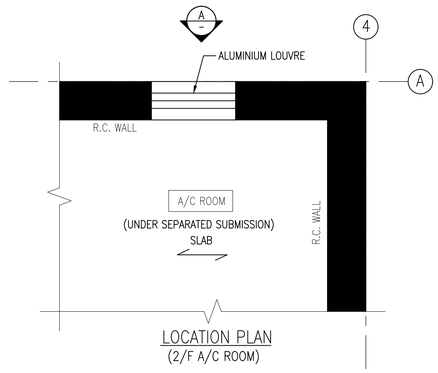


MASS PROPERTIES (UNIT)	VALUES
AREA (mm²)	–
PERIMETER (mm)	–
BENDING BOX–X (mm)	–
BENDING BOX–Y (mm)	–
MOMENT OF INERTIA–X (mm⁴)	–
MOMENT OF INERTIA–Y (mm⁴)	–
ELASTIC MODULUS–X (mm³)	–
ELASTIC MODULUS–Y (mm³)	–

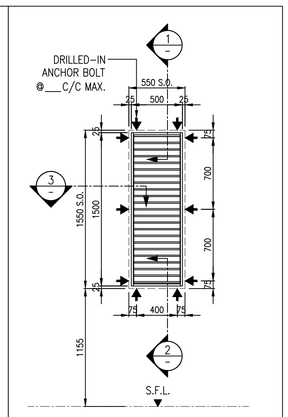
2mm THK. ALUM. LOUVRE BLADE		A4
DIE NO.:	–	
GRADE:	–	



MASS PROPERTIES (UNIT)	VALUES
AREA (mm²)	–
PERIMETER (mm)	–
BENDING BOX–X (mm)	–
BENDING BOX–Y (mm)	–
MOMENT OF INERTIA–X (mm⁴)	–
MOMENT OF INERTIA–Y (mm⁴)	–
ELASTIC MODULUS–X (mm³)	–
ELASTIC MODULUS–Y (mm³)	–

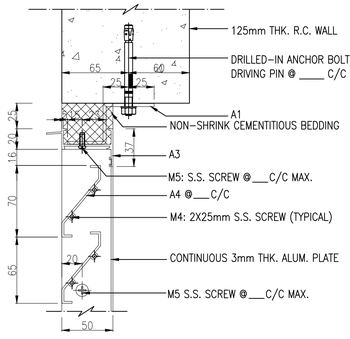


LOCATION PLAN
(2/F A/C ROOM)

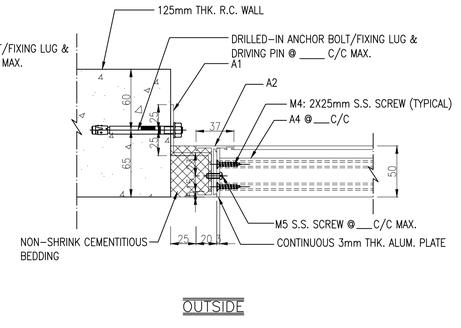


LOCATION	–

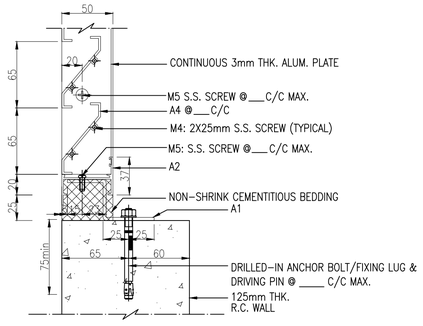
ELEVATION A



1 / – TYPICAL DETAIL
1:3

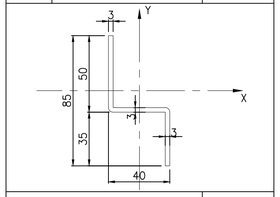


3 / – TYPICAL DETAIL
1:3



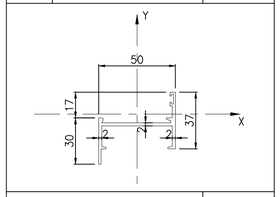
2 / – TYPICAL DETAIL
1:3

3mm THK. ALUM. BENT PLATE		A1
DIE NO.:	–	
GRADE:	–	



MASS PROPERTIES (UNIT)	VALUES
AREA (mm²)	–
PERIMETER (mm)	–
BENDING BOX–X (mm)	–
BENDING BOX–Y (mm)	–
MOMENT OF INERTIA–X (mm⁴)	–
MOMENT OF INERTIA–Y (mm⁴)	–
ELASTIC MODULUS–X (mm³)	–
ELASTIC MODULUS–Y (mm³)	–

2mm THK. ALUM. LOUVRE		A2
DIE NO.:	–	
GRADE:	–	



MASS PROPERTIES (UNIT)	VALUES
AREA (mm²)	–
PERIMETER (mm)	–
BENDING BOX–X (mm)	–
BENDING BOX–Y (mm)	–
MOMENT OF INERTIA–X (mm⁴)	–
MOMENT OF INERTIA–Y (mm⁴)	–
ELASTIC MODULUS–X (mm³)	–
ELASTIC MODULUS–Y (mm³)	–

BLOCK PLAN

BD REF
BIM REF
FSD REF

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
NOTES AND DETAILS OF METAL LOUVRE

SCALE

DRAWING NO. A006 | REV. NO.

SORUCE

90mm(W) x 40mm(H) space for COMPANY LOGO

90mm(W) x 60mm(H) space for AP/RSE/RGE's signature/ and stamp chop

BD's OFFICIAL USE

90mm(W) x 150mm(H) space for BD's approval stamp/ certification of copies of approved plans (PNAP ADM–10 APP A)

SAMPLE DRAWING FOR TYPICAL DETAILS OF METAL GRILLE

1. GENERAL NOTE

1.1. THE DESIGN AND CONSTRUCTION OF METAL GRILLE ARE IN ACCORDANCE WITH THE BUILDING (CONSTRUCTION) REGULATION, HONG KONG.
1.2. THE DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE LATEST APPROVED GENERAL BUILDING PLAN APPROVED ON __(DATE)__ .
1.3. THE STRUCTURAL INFORMATION FOR THE PARENT STRUCTURE SHOULD BE READ IN CONJUNCTION WITH THE LATEST STRUCTURAL PLAN APPROVED ON __(DATE)__ .

2. STANDARD AND CODES

2.1. CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.
2.2. THE STRUCTURAL USE OF ALUMINIUM – BS 8118: PART 1: 1991 WITH MODIFICATION OF PARTIAL LOAD FACTOR FOR WIND LOAD IN ACCORDANCE WITH PNAP APP-53.
2.3. CODE OF PRACTICE FOR DEAD AND IMPOSED LOAD 2011.
2.4. CODE OF PRACTICE ON WIND EFFECTS IN HONG KONG 2019.

3. NOTE ON DESIGN LOADS

3.1. DESIGN WIND LOAD:

DESIGN WIND PRESSURE / DESIGN WIND REFERENCE PRESSURE	Q_z = ____
PRESSURE COEFFICIENT	C_p = ____
SIZE FACTOR	S_s = ____
DESIGN WIND PRESSURE	$P = Q_z \times C_p \times S_s$ = ____

4. NOTE ON STRUCTURAL STEEL

4.1. STRUCTURAL STEEL SHALL BE GRADE ___ . ALL STEEL SECTIONS SHALL BE CLASS 1 AS SPECIFIED IN CLAUSE 3.1.1 OF THE CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.
4.2. ALL STRUCTURAL STEELWORK SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH BS EN ISO 1461: 2009 TO 85 MICRON MINIMUM THICKNESS.
4.3. ALL WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS IN ACCORDANCE WITH BS EN 287-1:2004 AND BS EN 288-3:1992.
4.4. WELD STRENGTH SHALL BE ___ N/mm².
4.5. ALL WELDING SHALL BE 6mm FILLET WELDS, UNLESS OTHERWISE SPECIFIED.
4.6. WELDING ELECTRODE SHALL BE CLASS____TO BS EN ISO 2560:2009.
4.7. WELDING TESTS SHALL COMPLY WITH CLAUSE 14.3.6 OF THE CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.

5. NOTE ON STRUCTURAL STAINLESS STEEL

5.1. STAINLESS STEEL SCREW / BOLT SHALL BE OF GRADE ___ TO BS EN ISO 3506: PART 1 TO 3: 2009.

6. NOTE ON STRUCTURAL ALUMINIUM

6.1. ALL ALUMINIUM EXTRUSION SHALL BE GRADE ___ COMPLYING WITH BS 8118: PART 1: 1991, BS EN 755: PART 2: 2008, AND BS EN 573: PART 3: 2009.

7. NOTE ON BIMETALLIC EFFECT

7.1. ALL CONTACT FACES BETWEEN DISSIMILAR METALS AND ALUMINIUM SHALL BE COATED WITH BITUMINOUS PAINT FOR INSULATION.

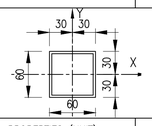
8. NOTE ON CAST-IN EMBED

8.1. CAST-IN BAR SHALL BE HIGH YIELD BAR OF GRADE 500B TO CS2:2012.
8.2. DESIGN CONCRETE STRENGTH OF PARENT STRUCTURE = ___ N/mm².

9. MEMBER SCHEDULE

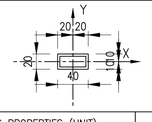
MEMBER MARK	DESCRIPTION	GRADE
SP1	–	–
SP2	–	–
AL1	–	–
AL2	–	–
M1	–	–
T1	–	–
T2	–	–

60x60x3mm THK. ALUMINIUM S.H.S.		T1
DIE NO.:	–	
GRADE:	–	

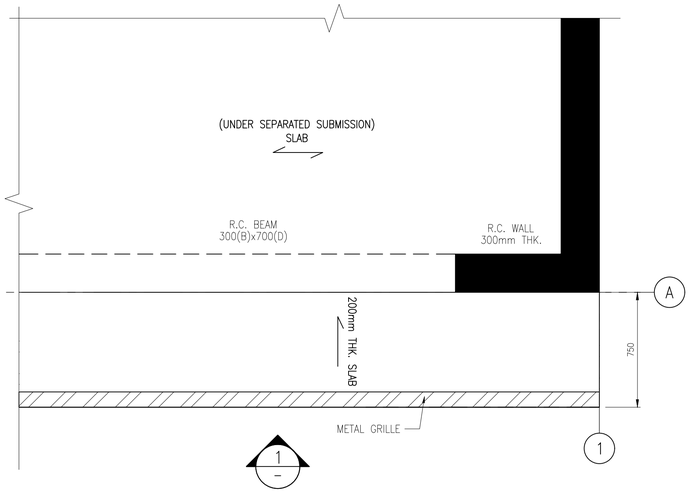


MASS PROPERTIES (UNIT)	VALUES
AREA (mm²)	–
PERIMETER (mm)	–
BENDING BOX-X (mm)	–
BENDING BOX-Y (mm)	–
MOMENT OF INERTIA-X (mm⁴)	–
MOMENT OF INERTIA-Y (mm⁴)	–
ELASTIC MODULUS-X (mm³)	–
ELASTIC MODULUS-Y (mm³)	–

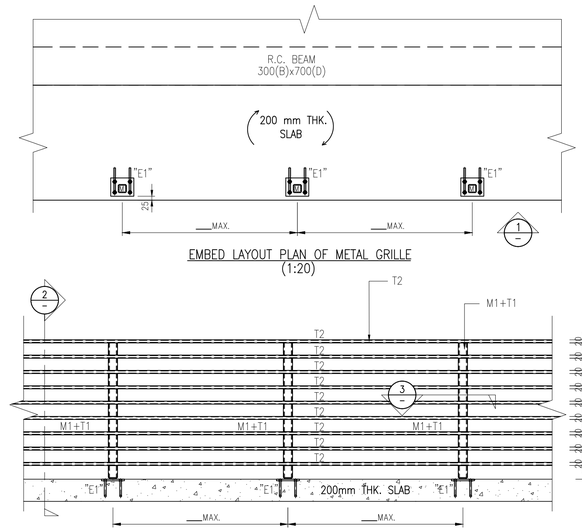
40X20X3mm THK. ALUMINIUM R.H.S.		T2
DIE NO.:	–	
GRADE:	–	



MASS PROPERTIES (UNIT)	VALUES
AREA (mm²)	–
PERIMETER (mm)	–
BENDING BOX-X (mm)	–
BENDING BOX-Y (mm)	–
MOMENT OF INERTIA-X (mm⁴)	–
MOMENT OF INERTIA-Y (mm⁴)	–
ELASTIC MODULUS-X (mm³)	–
ELASTIC MODULUS-Y (mm³)	–

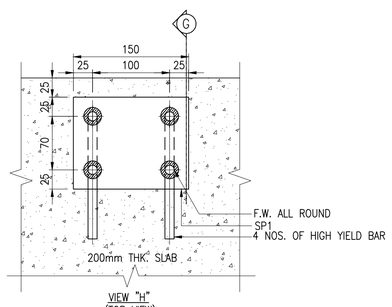


LOCATION PLAN
1:20

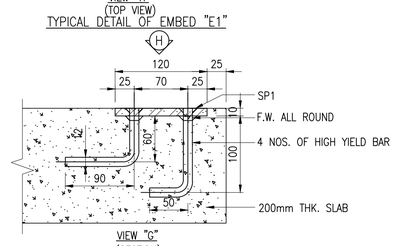


EMBED LAYOUT PLAN OF METAL GRILLE
(1:20)

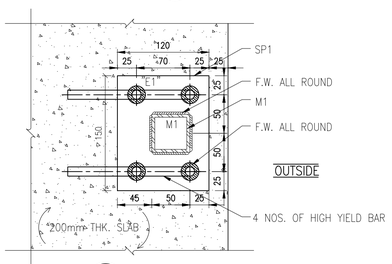
1 – ELEVATION OF METAL GRILLE
1:20



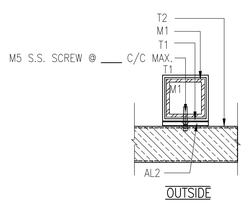
VIEW "H"
(TOP VIEW)
TYPICAL DETAIL OF EMBED "E1"



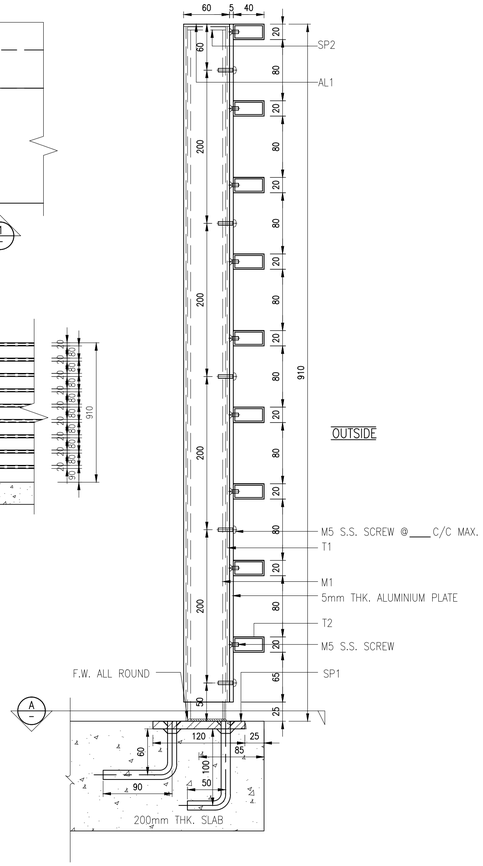
VIEW "G"
(SECTION)



A – SECTION A-A
1:4

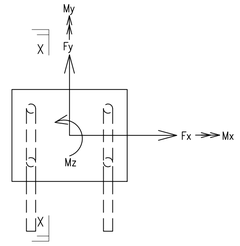


3 – TYPICAL DETAIL OF METAL GRILLE
1:4

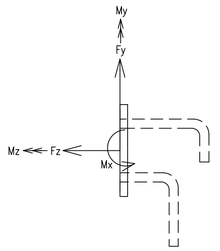


2 – TYPICAL DETAIL OF METAL GRILLE
1:4

BLOCK PLAN



PLAN



SECTION X-X

SIGN CONVENTION OF CAST-IN EMBED

LOAD SCHEDULE OF CAST-IN EMBED

	DL (kN)	WL (kN)
Fx	–	–
Fy	–	–
Fz	–	–
Mx	–	–
My	–	–
Mz	–	–

BD REF	
BIM REF	
FSD REF	

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
NOTES AND DETAILS OF METAL GRILLE

SCALE

DRAWING NO. A007 REV. NO.

SORUCE

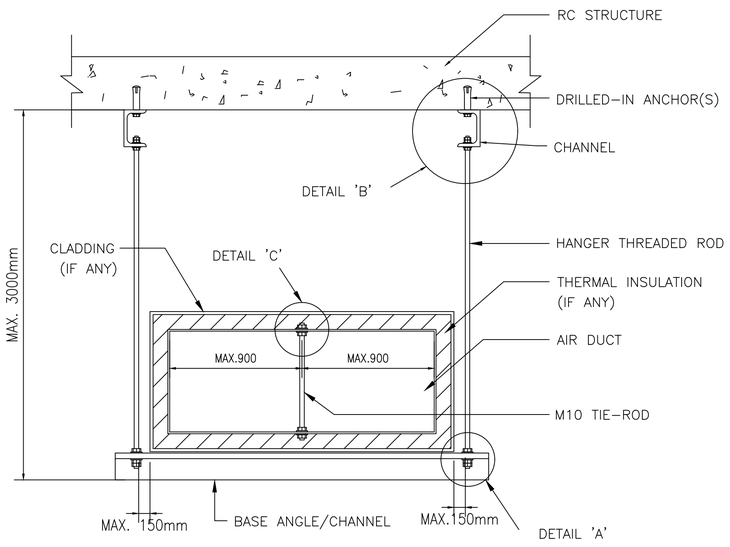
90mm(W) x 40mm(H) space for COMPANY LOGO

90mm(W) x 60mm(H) space for AP/RSE/RGE's signature/ and stamp chop

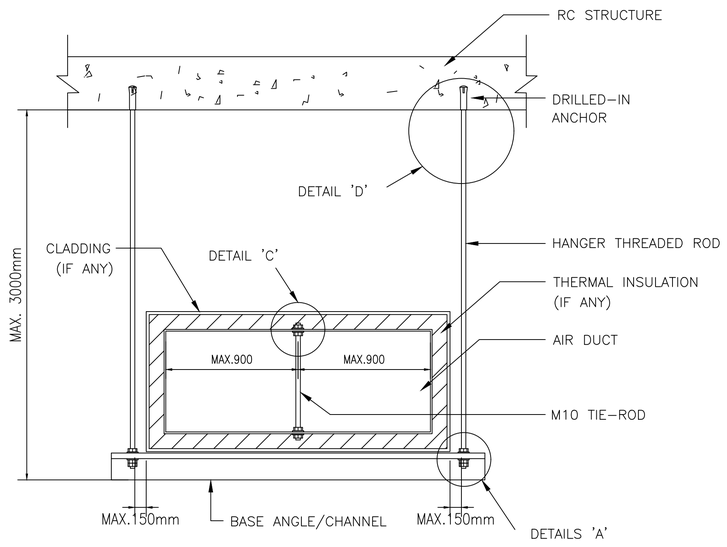
BD's OFFICIAL USE

90mm(W) x 150mm(H) space for BD's approval stamp/ certification of copies of approved plans (PNAP ADM-10 APP A)

STRUCTURAL DETAILS FOR SUSPENDED AIR DUCT



TYPICAL HANGER DETAILS (METHOD 1)



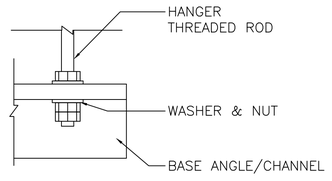
TYPICAL HANGER DETAILS (METHOD 2)

GENERAL NOTES

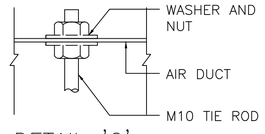
1. THE DESIGN AND CONSTRUCTION OF SUPPORTING FRAMES SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
   - BUILDING (CONSTRUCTION) REGULATION
   - CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011
2. ALL STRUCTURAL STEEL TO BE GRADE S275 COMPLYING WITH BS EN 10025:2004 OR Q235 COMPLYING WITH GB50017 CLASS 1 IN ACCORDANCE WITH CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.
3. ALL STRUCTURAL STEEL TO BE HOT-DIP GALVANIZED TO AT LEAST 85 MICRONS THICK IN ACCORDANCE WITH BS EN ISO 1461 OR EQUIVALENT.
4. REQUIREMENTS OF DRILLED-IN ANCHOR:
   a) THE MINIMUM BASE MATERIAL THICKNESS TO BE 100mm.
   b) THE MATERIAL SHOULD BE ANTI-CORROSION TYPE WITHOUT BI-METALLIC EFFECT WITH THE SUPPORTING FRAME
   c) A SAFETY FACTOR OF 3 SHOULD BE APPLIED TO THE CHARACTERISTIC TENSILE CAPACITY IN DETERMINING THE ALLOWABLE TENSILE LOAD
5. DESIGN AND INSTALLATION OF DRILLED-IN ANCHOR SHALL BE STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.
6. FOR THE DESIGN OF SUPPORTING FRAME FOR AXIAL FAN, CABINET FAN AND AIR HANDLING UNIT, NOTIONAL HORIZONTAL LOAD OF EITHER 0.5% OF FACTORED DEAD LOAD PLUS LIVE LOAD (IF APPLICABLE) OR A VALUE SPECIFIED IN THE PROPRIETARY PRODUCT CATALOGUE SHOULD BE CONSIDERED.
7. ALL THREADED RODS TO BE GRADE 4.8 TO DIN 975 AND BS EN ISO 898-1 OR EQUIVALENT STANDARD, OR STRUCTURAL STEEL COMPLYING WITH NOTE 2 ABOVE.
8. ALL THREADED RODS TO BE HOT-DIP GALVANIZED TO AT LEAST 50μm IN ACCORDANCE WITH BS EN ISO 1461/BS 7371 PART 6 OR TO BE ZINC-PLATED (ELECTROPLATED) TO AT LEAST 5μm IN ACCORDANCE WITH BS EN ISO 2081/ BS EN ISO 4042 / BS 7371 PART 3.

AIR DUCT HANGER SCHEDULE

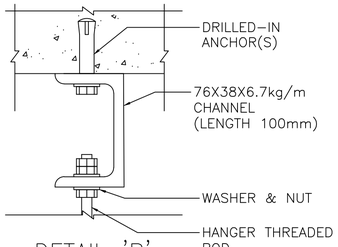
DUCT SIZE (INTERNAL WIDTH) (mm)	MAXIMUM DUCT SIZE (INTERNAL HEIGHT) (mm)	DUCT HANGER		MAXIMUM HANGER SPACING (mm)	ANCHOR SIZE	MIN. ALLOWABLE TENSILE LOAD PER ANCHOR (kN)	APPROXIMATE TOTAL DUCT WEIGHT (kg/m)
		BASE ANGLE/ CHANNEL MIN. SIZE (mm)	HANGER THREADED ROD MIN. SIZE (mm)				
UP TO 1000	1000	50X50X5 ANGLE	M8	3000	M8	2.0	60
1001 – 1500	1500	60X60X8 ANGLE	M10	2500	M10	2.5	105
1501 – 2000	1500	76X38X6.7 CHANNEL	M10	2500	M10 (2 NOS.) / M12	2.5 / 3.0	140
2001 – 3000	1800	102X51X10.4 CHANNEL	M12	2500	M10 (2 NOS.)	2.5	235



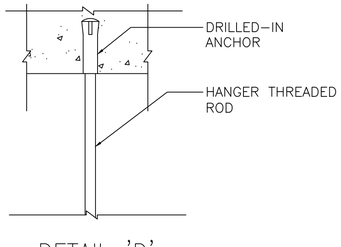
DETAIL 'A'



DETAIL 'C'



DETAIL 'B'



DETAIL 'D'

BD REF
BIM REF
FSD REF

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
SUPPORTING FRAMES FOR SUSPENDED HORIZONTAL AIR DUCT INSIDE A BUILDING

SCALE

DRAWING NO. REV. NO.

SORUCE

90mm(W) x 40mm(H) space for COMPANY LOGO

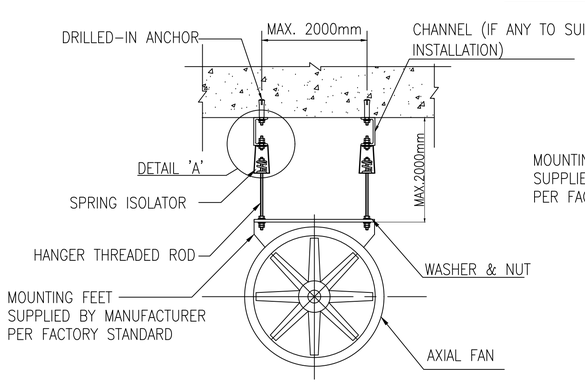
90mm(W) x 60mm(H) space for AP/RSE/RGE's signature/ and stamp chop

BD's OFFICIAL USE

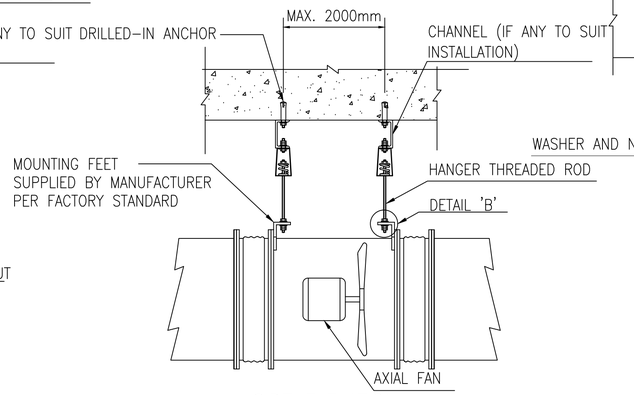
90mm(W) x 150mm(H) space for BD's approval stamp/ certification of copies of approved plans (PNAP ADM-10 APP A)

STRUCTURAL DETAILS FOR SUSPENDED AXIAL FAN

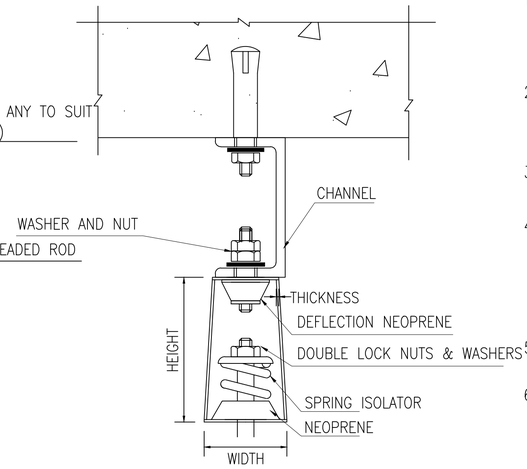
TYPE A



TYPICAL SECTION



SIDE ELEVATION



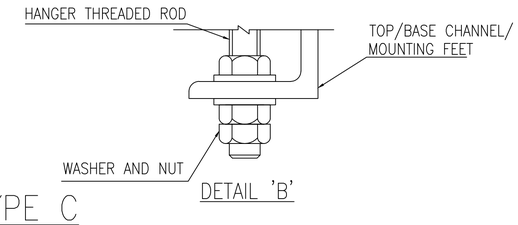
DETAIL 'A' (FOR INFORMATION)

AXIAL FAN HANGER SCHEDULE

	FAN SIZE	FAN WEIGHT	HANGER THREADED ROD NO.	APPROXIMATE LOAD PER ROD	HANGER THREADED ROD MIN. SIZE	ANCHOR SIZE	MIN. ALLOWABLE TENSILE LOAD PER ANCHOR (kN)	CHANNEL MIN. SIZE	SPRING ISOLATOR DIMENSION		
									MAX.WIDTH	MAX. HEIGHT	MIN. THICKNESS
TYPE A	UP TO 700mm	UP TO 200 kg	4	50 kg	M10	M10	2.5	76 X 38 X 6.7kg/m, LENGTH 100mm	132 mm	275 mm	3 mm
	UP TO 800mm	200 – 250 kg	4	65 kg	M10	M10	2.5	76 X 38 X 6.7kg/m, LENGTH 100mm	132 mm	275 mm	3 mm

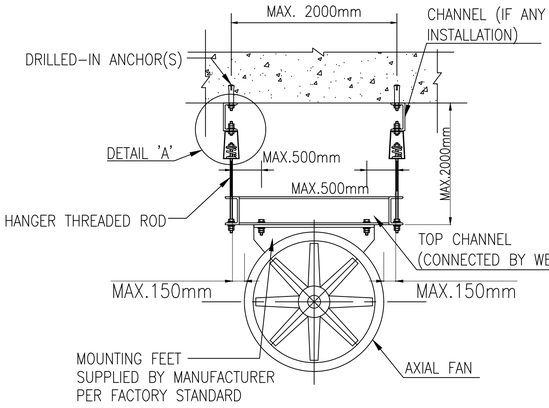
GENERAL NOTES

1. THE DESIGN AND CONSTRUCTION OF SUPPORTING FRAMES SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
   – BUILDING (CONSTRUCTION) REGULATION
   – CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011
2. ALL STRUCTURAL STEEL TO BE GRADE S275 COMPLYING WITH BS EN 10025:2004 OR Q235 COMPLYING WITH GB50017 CLASS 1 IN ACCORDANCE WITH CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.
3. ALL STRUCTURAL STEEL TO BE HOT-DIP GALVANIZED TO AT LEAST 85 MICRONS THICK IN ACCORDANCE WITH BS EN ISO 1461 OR EQUIVALENT.
4. REQUIREMENTS OF DRILLED-IN ANCHOR:
   a) THE MINIMUM BASE MATERIAL THICKNESS TO BE 100mm.
   b) THE MATERIAL SHOULD BE ANTI-CORROSION TYPE WITHOUT BI-METALLIC EFFECT WITH THE SUPPORTING FRAME
   c) A SAFETY FACTOR OF 3 SHOULD BE APPLIED TO THE CHARACTERISTIC TENSILE CAPACITY IN DETERMINING THE ALLOWABLE TENSILE LOAD
5. DESIGN AND INSTALLATION OF DRILLED-IN ANCHOR SHALL BE STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.
6. FOR THE DESIGN OF SUPPORTING FRAME FOR AXIAL FAN, CABINET FAN AND AIR HANDLING UNIT, NOTIONAL HORIZONTAL LOAD OF EITHER 0.5% OF FACTORED DEAD LOAD PLUS LIVE LOAD (IF APPLICABLE) OR A VALUE SPECIFIED IN THE PROPRIETARY PRODUCT CATALOGUE SHOULD BE CONSIDERED.
7. ALL THREADED RODS TO BE GRADE 4.8 TO DIN 975 AND BS EN ISO 898-1 OR EQUIVALENT STANDARD, OR STRUCTURAL STEEL COMPLYING WITH NOTE 2 ABOVE.
8. ALL THREADED RODS TO BE HOT-DIP GALVANIZED TO AT LEAST 50μm IN ACCORDANCE WITH BS EN ISO 1461/BS 7371 PART 6 OR TO BE ZINC-PLATED (ELECTROPLATED) TO AT LEAST 5μm IN ACCORDANCE WITH BS EN ISO 2081/ BS EN ISO 4042 / BS 7371 PART 3.

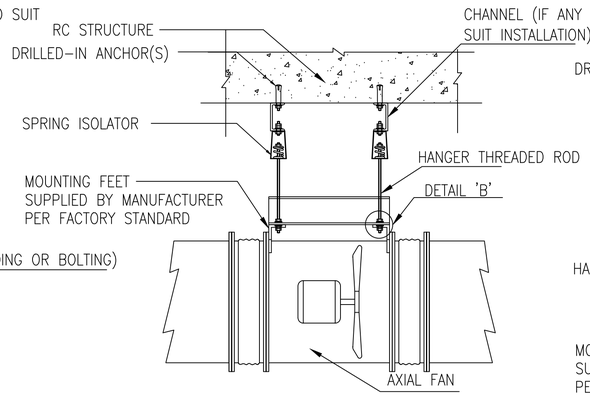


DETAIL 'B'

TYPE B

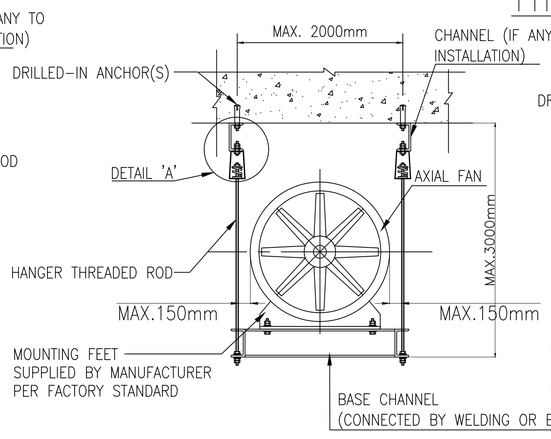


TYPICAL SECTION

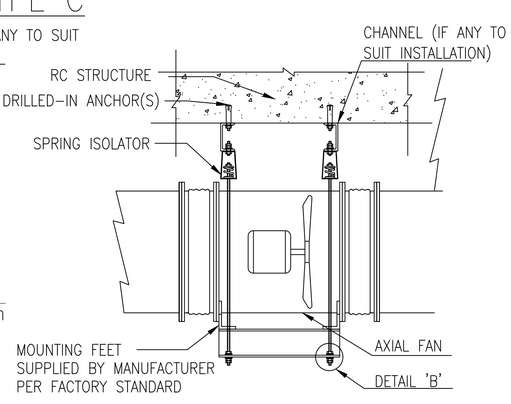


SIDE ELEVATION

TYPE C



TYPICAL SECTION



SIDE ELEVATION

AXIAL FAN HANGER SCHEDULE

	FAN SIZE	FAN WITH CHANNEL TOTAL WEIGHT	HANGER THREADED ROD NO.	APPROXIMATE LOAD PER ROD	HANGER THREADED ROD SIZE	ANCHOR SIZE	MIN. ALLOWABLE TENSILE LOAD PER ANCHOR (kN)	TOP / BASE CHANNEL	CHANNEL MIN. SIZE	SPRING ISOLATOR DIMENSION		
										MAX. WIDTH	MAX. HEIGHT	MIN. THICKNESS
TYPE B & C	UP TO 1000mm	300 – 450 kg	4	115 kg	M12	M12	3.0	76 X 38 X 6.7kg/m	76 X 38 X 6.7kg/m, LENGTH 100mm	132 mm	275 mm	3 mm
	UP TO 1100mm	450 – 600 kg	4	150 kg	M16	M12 (2 NOS.)	3.0	152 X 76 X 18kg/m	102 X 51 X 10.4kg/m, LENGTH 200mm	132 mm	275 mm	3 mm
	UP TO 1250mm	600 – 800 kg	4	200 kg	M16	M12 (2 NOS.)	3.0	152 X 76 X 18kg/m	152 X 76 X 18kg/m, LENGTH 200mm	132 mm	275 mm	3 mm

BD REF

BIM REF

FSD REF

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
SUPPORTING FRAMES FOR SUSPENDED AXIAL FAN INSIDE A BUILDING

SCALE

DRAWING NO. REV. NO.

SORUCE

90mm(W) x 40mm(H) space for COMPANY LOGO

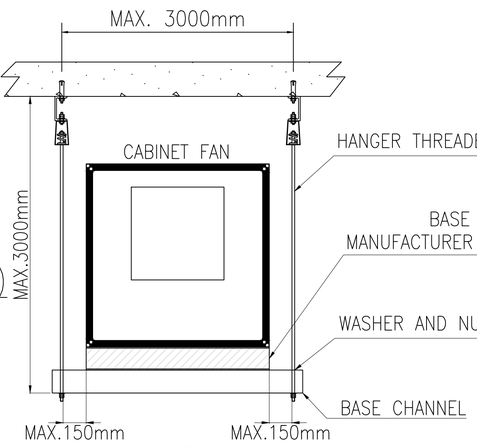
90mm(W) x 60mm(H) space for AP/RSE/RGE's signature/ and stamp chop

BD's OFFICIAL USE

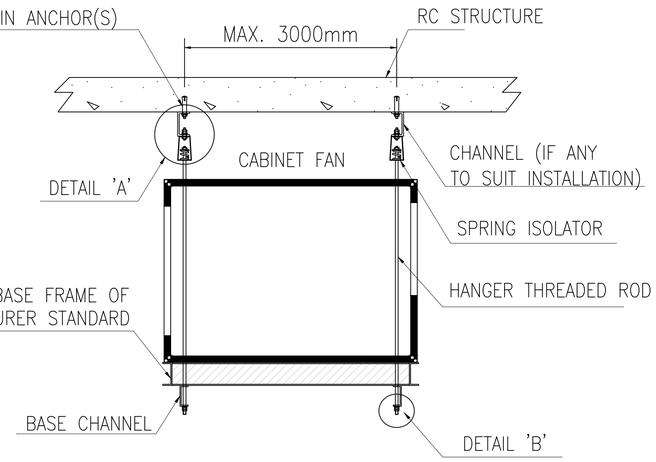
90mm(W) x 150mm(H) space for BD's approval stamp/ certification of copies of approved plans (PNAP ADM-10 APP A)

STRUCTURAL DETAILS FOR SUSPENDED CABINET FAN

TYPE A (WITHOUT INTERNAL VIBRATION ISOLATION)

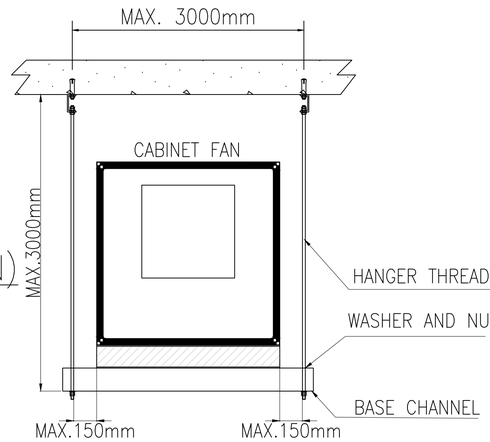


TYPICAL SECTION

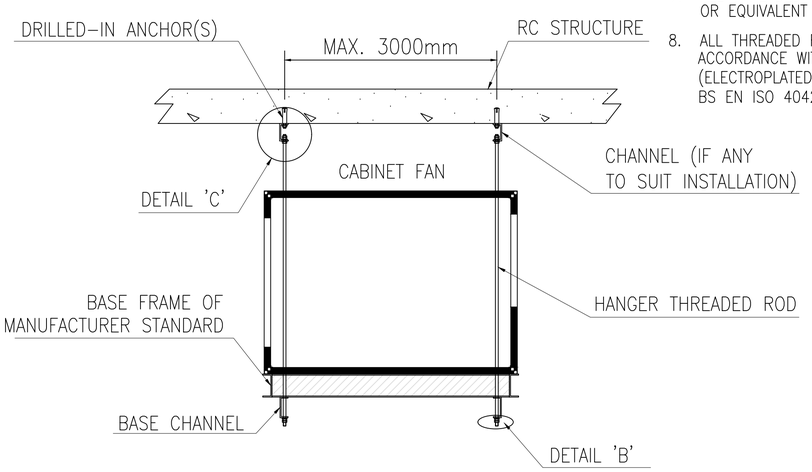


SIDE ELEVATION

TYPE B (WITH INTERNAL VIBRATION ISOLATION)



TYPICAL SECTION



SIDE ELEVATION

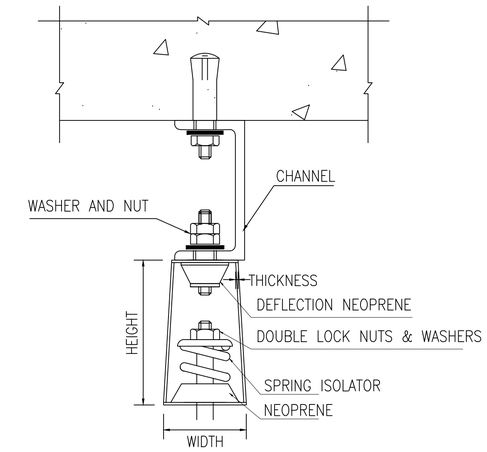
REMARK:
VIBRATION ISOLATION FOR CABINET FAN IS PROVIDED BY MANUFACTURER PER FACTORY STANDARD

CABINET FAN HANGER SCHEDULE

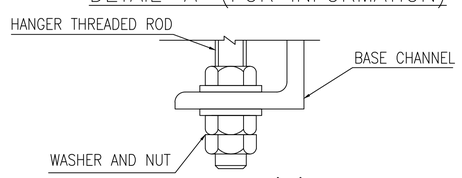
AIR FLOW	FAN WEIGHT	HANGER THREADED ROD NO.	APPROXIMATE LOAD PER ROD	HANGER THREADED ROD SIZE	ANCHOR SIZE	MIN. ALLOWABLE TENSILE LOAD PER ANCHOR (kN)	CHANNEL MIN. SIZE	BASE CHANNEL MIN. SIZE	SPRING ISOLATOR DIMENSION (FOR TYPE A ONLY)		
									MAX. WIDTH	MAX. HEIGHT	MIN. THICKNESS
1 m^3/s	200 kg	4	50 kg	M10	M10	2.5	76 X 38 X 6.7kg/m, LENGTH 100mm	76 X 38 X 6.7kg/m	132 mm	275 mm	3 mm
2 m^3/s	300 kg	4	75 kg	M12	M12	3	76 X 38 X 6.7kg/m, LENGTH 100mm	76 X 38 X 6.7kg/m	132 mm	275 mm	3 mm
4 m^3/s	350 kg	4	90 kg	M12	M12	3	76 X 38 X 6.7kg/m, LENGTH 100mm	76 X 38 X 6.7kg/m	132 mm	275 mm	3 mm
6 m^3/s	450 kg	4	115 kg	M12	M12	3	76 X 38 X 6.7kg/m, LENGTH 100mm	102 X 51 X 10.4kg/m	132 mm	275 mm	3 mm
8 m^3/s	570 kg	4	145 kg	M16	M12 (2 NOS.)	3	76 X 38 X 6.7kg/m, LENGTH 200mm	102 X 51 X 10.4kg/m	132 mm	275 mm	3 mm
10 m^3/s	700 kg	4	175 kg	M16	M12 (2 NOS.)	3	102 X 51 X 10.4kg/m, LENGTH 200mm	102 X 51 X 10.4kg/m	132 mm	275 mm	3 mm
12 m^3/s	1000 kg	4	250 kg	M16	M12 (2 NOS.)	3	102 X 51 X 10.4kg/m, LENGTH 200mm	102 X 51 X 10.4kg/m	132 mm	275 mm	3 mm

GENERAL NOTES

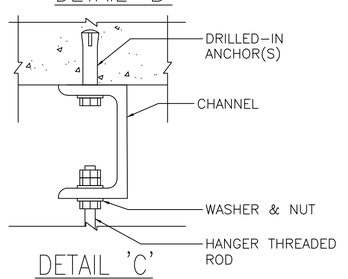
1. THE DESIGN AND CONSTRUCTION OF SUPPORTING FRAMES SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
   - BUILDING (CONSTRUCTION) REGULATION
   - CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011
2. ALL STRUCTURAL STEEL TO BE GRADE S275 COMPLYING WITH BS EN 10025:2004 OR Q235 COMPLYING WITH GB50017 CLASS 1 IN ACCORDANCE WITH CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.
3. ALL STRUCTURAL STEEL TO BE HOT-DIP GALVANIZED TO AT LEAST 85 MICRONS THICK IN ACCORDANCE WITH BS EN ISO 1461 OR EQUIVALENT.
4. REQUIREMENTS OF DRILLED-IN ANCHOR:
   a) THE MINIMUM BASE MATERIAL THICKNESS TO BE 100mm.
   b) THE MATERIAL SHOULD BE ANTI-CORROSION TYPE WITHOUT BI-METALLIC EFFECT WITH THE SUPPORTING FRAME
   c) A SAFETY FACTOR OF 3 SHOULD BE APPLIED TO THE CHARACTERISTIC TENSILE CAPACITY IN DETERMINING THE ALLOWABLE TENSILE LOAD
5. DESIGN AND INSTALLATION OF DRILLED-IN ANCHOR SHALL BE STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.
6. FOR THE DESIGN OF SUPPORTING FRAME FOR AXIAL FAN, CABINET FAN AND AIR HANDLING UNIT, NOTIONAL HORIZONTAL LOAD OF EITHER 0.5% OF FACTORED DEAD LOAD PLUS LIVE LOAD (IF APPLICABLE) OR A VALUE SPECIFIED IN THE PROPRIETARY PRODUCT CATALOGUE SHOULD BE CONSIDERED.
7. ALL THREADED RODS TO BE GRADE 4.8 TO DIN 975 AND BS EN ISO 898-1 OR EQUIVALENT STANDARD, OR STRUCTURAL STEEL COMPLYING WITH NOTE 2 ABOVE.
8. ALL THREADED RODS TO BE HOT-DIP GALVANIZED TO AT LEAST 50μm IN ACCORDANCE WITH BS EN ISO 1461/BS 7371 PART 6 OR TO BE ZINC-PLATED (ELECTROPLATED) TO AT LEAST 5μm IN ACCORDANCE WITH BS EN ISO 2081/ BS EN ISO 4042 / BS 7371 PART 3.



DETAIL 'A' (FOR INFORMATION)



DETAIL 'B'



DETAIL 'C'

BD REF

BIM REF

FSD REF

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
SUPPORTING FRAMES FOR SUSPENDED CABINET FAN INSIDE A BUILDING

SCALE

DRAWING NO. REV. NO.

SORUCE

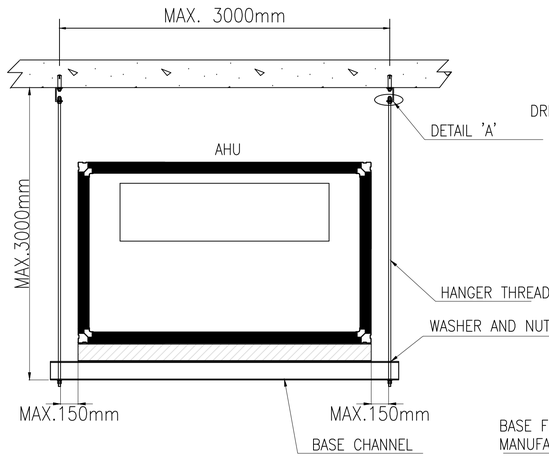
90mm(W) x 40mm(H) space for COMPANY LOGO

90mm(W) x 60mm(H) space for AP/RSE/RGE's signature/ and stamp chop

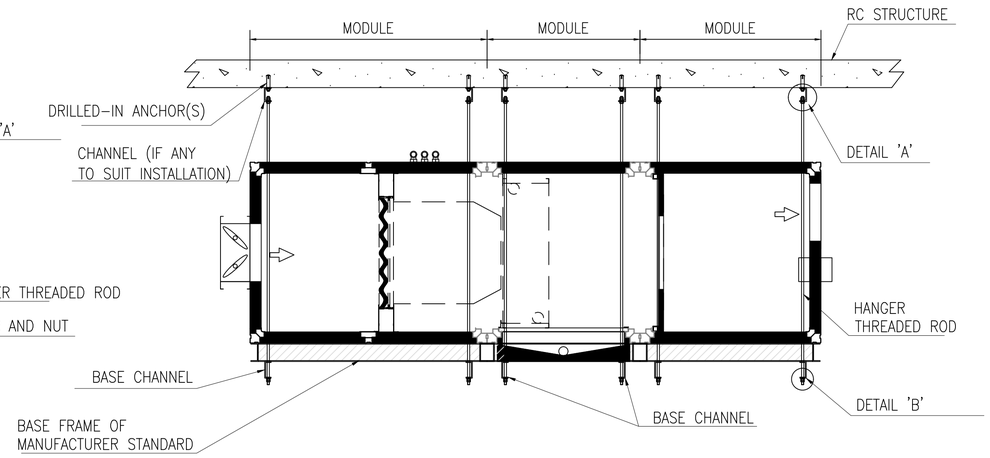
BD's OFFICIAL USE

90mm(W) x 150mm(H) space for BD's approval stamp/ certification of copies of approved plans (PNAP ADM-10 APP A)

STRUCTURAL DETAILS FOR SUSPENDED AIR HANDLING UNIT (AHU)



TYPICAL SECTION



SIDE ELEVATION

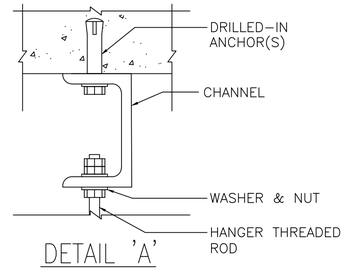
REMARK:
VIBRATION ISOLATION FOR AHU IS PROVIDED BY MANUFACTURER PER FACTORY STANDARD

GENERAL NOTES

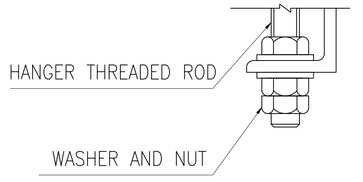
1. THE DESIGN AND CONSTRUCTION OF SUPPORTING FRAMES SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
   - BUILDING (CONSTRUCTION) REGULATION
   - CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011
2. ALL STRUCTURAL STEEL TO BE GRADE S275 COMPLYING WITH BS EN 10025:2004 OR Q235 COMPLYING WITH GB50017 CLASS 1 IN ACCORDANCE WITH CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.
3. ALL STRUCTURAL STEEL TO BE HOT-DIP GALVANIZED TO AT LEAST 85 MICRONS THICK IN ACCORDANCE WITH BS EN ISO 1461 OR EQUIVALENT.
4. REQUIREMENTS OF DRILLED-IN ANCHOR:
   a) THE MINIMUM BASE MATERIAL THICKNESS TO BE 100mm.
   b) THE MATERIAL SHOULD BE ANTI-CORROSION TYPE WITHOUT BI-METALLIC EFFECT WITH THE SUPPORTING FRAME
   c) A SAFETY FACTOR OF 3 SHOULD BE APPLIED TO THE CHARACTERISTIC TENSILE CAPACITY IN DETERMINING THE ALLOWABLE TENSILE LOAD
5. DESIGN AND INSTALLATION OF DRILLED-IN ANCHOR SHALL BE STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.
6. FOR THE DESIGN OF SUPPORTING FRAME FOR AXIAL FAN, CABINET FAN AND AIR HANDLING UNIT, NOTIONAL HORIZONTAL LOAD OF EITHER 0.5% OF FACTORED DEAD LOAD PLUS LIVE LOAD (IF APPLICABLE) OR A VALUE SPECIFIED IN THE PROPRIETARY PRODUCT CATALOGUE SHOULD BE CONSIDERED.
7. ALL THREADED RODS TO BE GRADE 4.8 TO DIN 975 AND BS EN ISO 898-1 OR EQUIVALENT STANDARD, OR STRUCTURAL STEEL COMPLYING WITH NOTE 2 ABOVE.
8. ALL THREADED RODS TO BE HOT-DIP GALVANIZED TO AT LEAST 50μm IN ACCORDANCE WITH BS EN ISO 1461/BS 7371 PART 6 OR TO BE ZINC-PLATED (ELECTROPLATED) TO AT LEAST 5μm IN ACCORDANCE WITH BS EN ISO 2081/ BS EN ISO 4042 / BS 7371 PART 3.

AHU HANGER SCHEDULE

AIR FLOW	MODULE NO.	A.H.U. WEIGHT	HANGER THREADED ROD NO.	APPROXIMATE LOAD PER ROD	THREADED ROD SIZE	ANCHOR SIZE	MIN. ALLOWABLE TENSILE LOAD PER ANCHOR (kN)	CHANNEL MIN. SIZE	BASE CHANNEL MIN. SIZE
1 m^3/s	1	400 kg	4	100 kg	M12	M12	3.0	76 X 38 X 6.7kg/m, LENGTH 100mm	76 X 38 X 6.7kg/m
2 m^3/s	1	600 kg	4	150 kg	M16	M12 (2 NOS.)	3.0	76 X 38 X 6.7kg/m, LENGTH 200mm	102 X 51 X 10.4kg/m
3 m^3/s	1	800 kg	4	200 kg	M16	M12 (2 NOS.)	3.0	76 X 38 X 6.7kg/m, LENGTH 200mm	102 X 51 X 10.4kg/m
4 m^3/s	2	1000 kg	8	125 kg	M16	M12 (2 NOS.)	3.0	76 X 38 X 6.7kg/m, LENGTH 200mm	102 X 51 X 10.4kg/m
6 m^3/s	2	1400 kg	8	175 kg	M16	M12 (2 NOS.)	3.0	76 X 38 X 6.7kg/m, LENGTH 200mm	102 X 51 X 10.4kg/m
8 m^3/s	3	1700 kg	12	140 kg	M16	M12 (2 NOS.)	3.0	76 X 38 X 6.7kg/m, LENGTH 200mm	102 X 51 X 10.4kg/m
10 m^3/s	3	2000 kg	12	165 kg	M16	M12 (2 NOS.)	3.0	102 X 51 X 10.4kg/m, LENGTH 200mm	102 X 51 X 10.4kg/m



DETAIL 'A'



DETAIL 'B'

BD REF

BIM REF

FSD REF

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
SUPPORTING FRAMES FOR SUSPENDED AIR HANDLING UNIT INSIDE A BUILDING

SCALE

DRAWING NO. REV. NO.

SORUCE

90mm(W) x 40mm(H) space for COMPANY LOGO

90mm(W) x 60mm(H) space for AP/RSE/RGE's signature/ and stamp chop

BD's OFFICIAL USE

90mm(W) x 150mm(H) space for BD's approval stamp/ certification of copies of approved plans (PNAP ADM-10 APP A)

STRUCTURAL DETAILS OF EMBED FOR CURTAIN WALL

GENERAL NOTES

1. THE DESIGN AND CONSTRUCTION OF EMBED SHALL BE IN ACCORDANCE WITH THE FOLLOWING
   - BUILDING (CONSTRUCTION) REGULATION
   - CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011
   - CODE OF PRACTICE FOR STRUCTURAL USE OF CONCRETE 2013
   - CODE OF PRACTICE FOR DEAD AND IMPOSED LOAD 2011
   - CODE OF PRACTICE ON WIND EFFECTS IN HONG KONG 2019

2. ALL STRUCTURAL STEEL TO BE GRADE S275 J0 AND COMPLY WITH BS EN 10025. ALL SECTIONS SHALL BE CLASS 1 AS SPECIFIED IN CLAUSE 3.1.1 OF THE CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.

3. ALL STRUCTURAL STEELWORKS AND CAST-IN BOLTS/DOWELS/RIBBED STEEL REINFORCING BARS(REBARS) WITH THICKNESS OR DIAMETER GREATER THAN 6mm TO BE HOT-DIP GALVANIZED IN ACCORDANCE WITH BS EN ISO 1461:2009 TO AT LEAST 85 MICRONS THICKNESS.

4. ALL WELDING SHALL BE CARRIED OUT BY QUALIFIED WELDERS IN ACCORDANCE WITH BS EN 287-1:2011 AND BS EN 288-3:1992.

5. DESIGN STRENGTH OF FILLET WELDS SHALL BE IN ACCORDANCE WITH BS EN 756:2004 AND BS EN 440:1995 AS SHOWN BELOW TABLE

GRADE OF STEEL IN BS EN STANDARDS	ELECTRODE CLASSIFICATION (EN ISO STANDARDS) (N/mm^2)	
	42	50
S275	(220)	(220)

6. ALL WELDING SHALL BE 6mm FILLET WELDS, UNLESS OTHERWISE SPECIFIED.

7. WELDING TESTS SHALL COMPLY WITH CLAUSE 14.3.6 OF THE CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.

8. REQUIREMENTS OF CAST-IN BOLTS/DOWELS/REBARS:
   (a)THE MATERIAL SHOULD BE ANTI-CORROSION TYPE WITHOUT BI-METALLIC EFFECT WITH THE SUPPORTING STRUCTURE

9. MINIMUM CONCRETE COMPRESSIVE STRENGTH OF SUPPORTING STRUCTURE TO BE 30 N/mm^2

10. ALL REACTION FORCE/BENDING MOMENT OF EMBED ARE UNDER MAXIMUM WORKING LOAD CASES

11. LAYOUT / LOCATION OF EMBED SHOULD REFER TO CURTAIN WALL LAYOUT PLAN

12. MATERIAL AND SPECIFICATION OF CAST-IN BOLTS/DOWELS/REBARS:

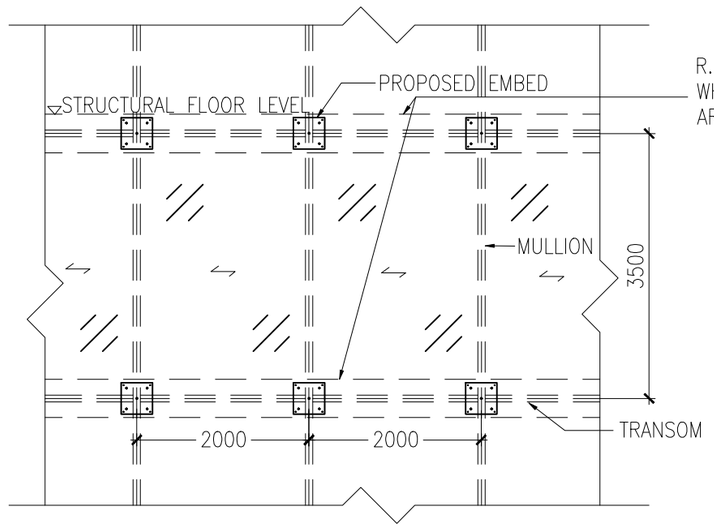
(i) EMBED TYPE A
ALL REBARS TO BE CHARACTERISTICS STRENGTH OF GRADE 500B AND COMPLY WITH CS2:2012

(ii) EMBED TYPE B
ALL CAST-IN DOWELS TO BE GRADE S275 J0 AND COMPLY WITH BS EN 10025

(iii) EMBED TYPE C
ALL CAST-IN BOLTS WITH GRADE 8.8 SHOULD COMPLY WITH BS 4190:2001 AND BS 7419:1991.

13. SIZE OF TYPICAL CURTAIN WALL UNIT TO BE 2.0m (WIDTH)x3.5m (HEIGHT)
14. WIND PRESSURE = 2.86kPa, S_θ = 0.85, S_t = 1, S_S = 1.17, C_p = 1.4
15. DESIGN WIND PRESSURE = 4.0kPa
16. MINIMUM HORIZONTAL IMPOSED LOAD ON PROTECTIVE BARRIERS AS SHOWN BELOW TABLE

CATEGORY	LINE LOAD TO BE APPLIED AT A HEIGHT OF 1.1m ABOVE THE FLOOR LEVEL (kN/m)	UNIFORMLY DISTRIBUTED LOAD TO BE APPLIED ON THE INFILL BETWEEN FLOOR AND TOP RAIL (kPa)	CONCENTRATED LOAD TO TO BE APPLIED ON ANY PART OF THE INFILL BETWEEN FLOOR AND TOP RAIL (kN)
AREAS WHERE PEOPLE MAY CONGREGATE BUT OVERCROWDING IS NOT EXPECTED	1.5	1.5	1.5



ELEVATION OF TYPICAL CURTAIN WALL UNIT
(ALL MULLIONS, TRANSOMS AND GLASS UNITS ARE UNDER SEPARATED SUBMISSION)

BD REF
BIM REF
FSD REF

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
STRUCTURAL DETAILS OF EMBED FOR CURTAIN WALL

SCALE

DRAWING NO. REV. NO.

SORUCE

90mm(W) x 40mm(H) space for COMPANY LOGO

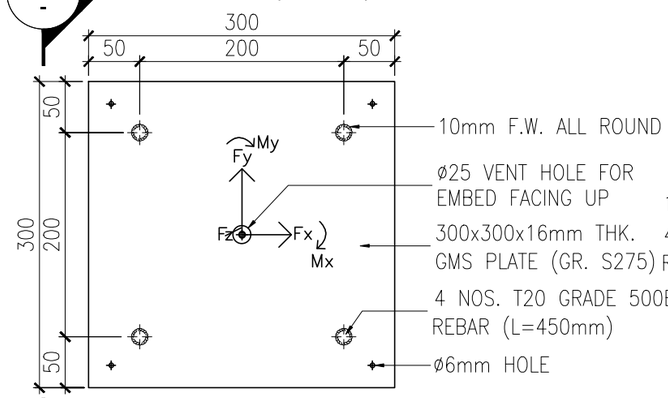
90mm(W) x 60mm(H) space for AP/RSE/RGE's signature/ and stamp chop

BD's OFFICIAL USE

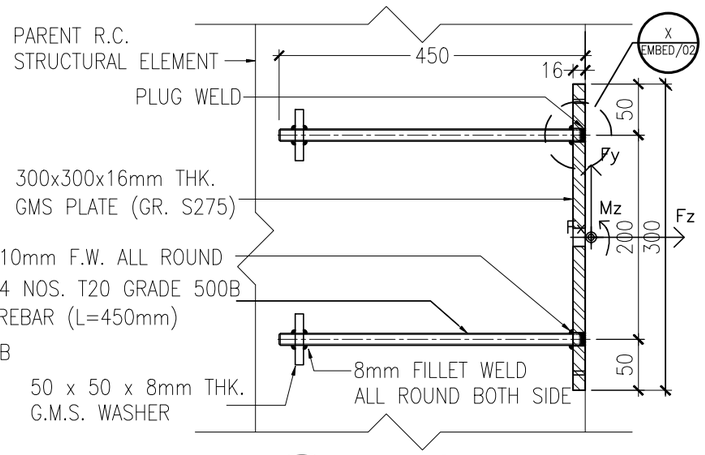
90mm(W) x 150mm(H) space for BD's approval stamp/ certification of copies of approved plans (PNAP ADM-10 APP A)

STRUCTURAL DETAILS OF EMBED FOR CURTAIN WALL

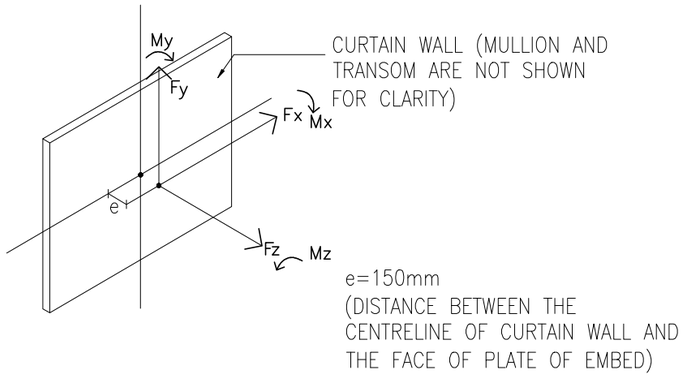
1A - EMBED TYPE A (REBARS)



1 - DETAIL OF EMBED `A'



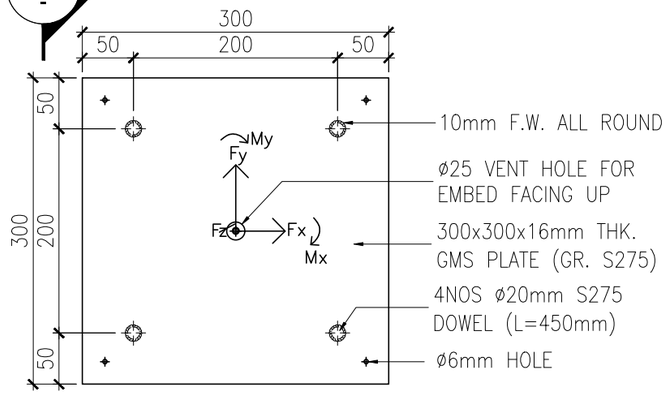
1A - DETAIL OF EMBED `A'



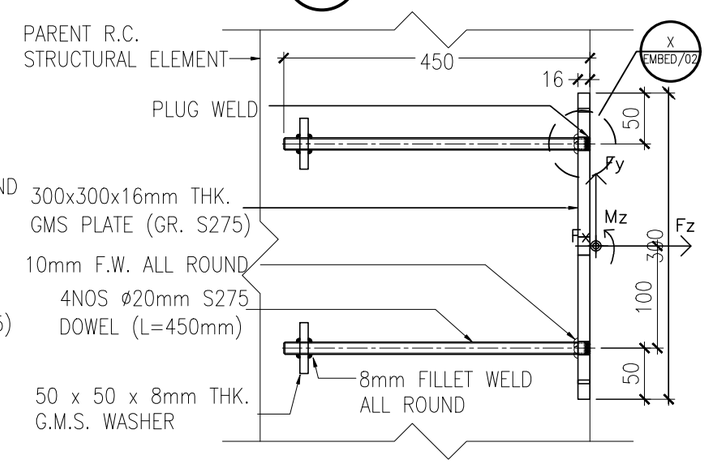
UNFACTORED LOADING ON EMBED SUMMARY TABLE (TYPE A, TYPE B & TYPE C)

		DL	WL	LL
FORCES	Fx (kN)	0	0	0
	Fy (kN)	–11.6	0	0
	Fz (kN)	0	±31.0	2.5
MOMENT	Mx (kNm)	8.0	0	0
	My (kNm)	0	0	0
	Mz (kNm)	0	0	0

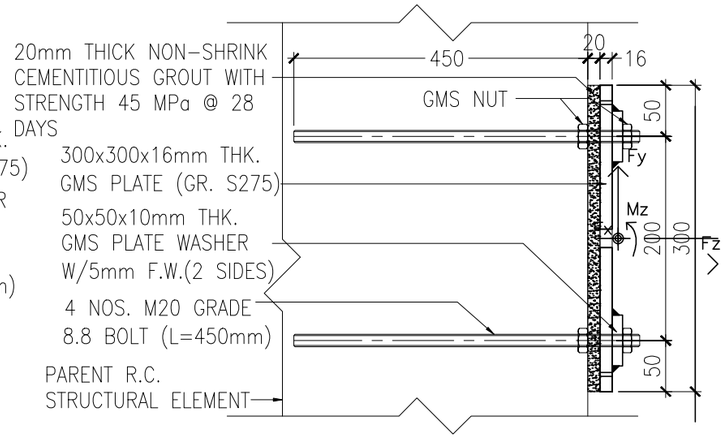
2A - EMBED TYPE B (CAST-IN DOWELS)



2 - DETAIL OF EMBED `B'

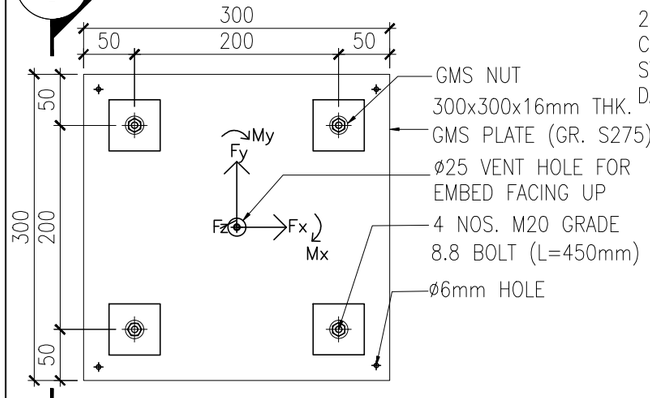


2A - DETAIL OF EMBED `B'



X - DETAIL X

3A - EMBED TYPE C (CAST-IN BOLTS)



3 - DETAIL OF EMBED `C`

3A - DETAIL OF EMBED `C'

BD REF
BIM REF
FSD REF

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
STRUCTURAL DETAILS OF EMBED FOR CURTAIN WALL

SCALE

DRAWING NO. REV. NO.

SORUCE

90mm(W) x 40mm(H) space for COMPANY LOGO

90mm(W) x 60mm(H) space for AP/RSE/RGE's signature/ and stamp chop

BD's OFFICIAL USE

90mm(W) x 150mm(H) space for BD's approval stamp/ certification of copies of approved plans (PNAP ADM–10 APP A)

Appendix C1
(PNAP ADV-33)

Checklist for Drainage Plan Submissions
(This checklist is **not** required to be submitted to the BD)

□ : information to be shown on plan
○ : information to be accompanied with the plan submission

Part A – Plans and Forms

Typical Items		Requirements	Reference
1.	Statutory Forms	◯ Form BA 5 (application for approval)	B(A)R 18A and 29(1) PNAP ADM-2 PNAP APP-55
		◯ Form BA8 & BA8A (application for concurrent approval and consent)	
		◯ Form BA16 (application for exemption/ modification)	
		◯ Form BD24 (if payment is required)	
2.	Plans	◯ Plans (2 signed and coloured sets for BA) with completed Annex C1 ◯ Additional sets of plans for referral	PNAP ADM-2 Confirmation by AP for drainage plan submission in Annex C1
3.	Fee for Drainage (A&A) plan processing	◯ Crossed cheque for payment	PNAP APP-55

Part B – Supporting Documents

		Reference
1.	◯ Documents/ catalogue in support of applied exemption/ modification in Form BA16	
2	◯ Structural details for manholes, etc, in separate structural submission (except for A&A works)	
3.	◯ Soakaway pit: percolation test report and supporting calculation for EPD's comment	B(SSFPDWL) R 90 EPD ProPECC PN5/93
4.	◯ Septic tank and sewage treatment plant: calculation and pilot test report for EPD's comment	
5.	◯ Catchment area calculation, Drainage Impact Assessment (DIA) & Sewage Impact Assessment (SIA) for DSD's comment	
6.	◯ Written consent from third party for disposal to private drains outside lot boundary	

PART C – Information on Plans

		Reference
1.	**Method of Disposal and Connection to Public Sewer**	
a.	☐ Public/ private storm drains and sewers (including nullah, culvert and streamcourse) and sizes and disposition of connecting drains obtained from DSD	
b.	☐ Foul/surface water terminal manhole located as close to site boundary as possible, provided with disconnecting trap and adequately ventilated	B(SSFPDWL) Rs 52(2) and 57
c.	☐ Trade effluent discharge, sewage treatment plants, septic tanks, soakaway pits, grease traps and petrol interceptors	EPD ProPECC PN5/93 and B(SSFPDWL) R 90
2.	**Layout of Underground Drain**	
a.	☐ Diameter, minimum fall and flow direction of drains	B(SSFPDWL) R 48, Table 29
b.	☐ No acute angle between the directions of flow of inlets and outlets in manholes	B(SSFPDWL) R 49(2)
c.	☐ Drop pipes provided in manholes for in drains with invert level more than 600mm higher than the invert level of out drains	
d.	☐ Hatch boxes provided for foul water drains/manholes which lie in water gathering ground	B(SSFPDWL) R 47A(1)(b)
e.	☐ Ducting or leakage collection system provided for waterborne buried services close to crest areas, slopes and retaining walls	PNAP APP-76
f.	☐ No manhole / BIGT in refuse rooms	
g.	☐ Covers for manholes, BIGT, grease traps and petrol interceptors etc. made of cast iron, air-tight and where in or under a building double-sealed	B(SSFPDWL) R 56(7)
h.	☐ No surface water discharges into foul water drains or vice versa	B(SSFPDWL) Rs 40(1) and 41(1)
i.	☐ Manholes or cleaning eyes provided at intervals not more than 60m	B(SSFPDWL) R 55(2)
3.	**Layout of External drainage system**	
a.	☐ Directions of fall for surface water at balconies, canopies, utility platforms, roofs, podium roofs and surface channels	
b.	☐ Min. 65mm diameter of rainwater pipes provided except where B(SSFPDWL)R33 applies	B(SSFPDWL) R 32(3)

			Reference
c	☐	For cantilevered structures exposed to weather, surface water drained away from the structure with a fall of not less than 1:75 and for inaccessible structures the distance between drain outlets not more than 5 cm	PNAP APP-68
d.	☐	Ground surface paving laid to a fall of not less than 1:80 to a gully trap or surface channels connected to surface water drains	s 33(3) of the B(C)R PNAP APP-125
e.	☐ ☐	Level difference between internal floor and adjoining external ground/roof not less than 150 mm; or Additional drainage channels, each with at least 2 drainage outlets and the external ground/roof is laid to fall at a gradient of not less than 1 in 80 away from the adjoining internal floor	s 33(2) and s 34(2) of the B(C)R PNAP APP-125
f.	☐	Ventilating pipes (i) extended to 1000mm above the roof, adjoining parapets or 2.5m above adjoining street, (ii) no escape of foul air into any building and (iii) open ends provided with suitable grating having apertures of an aggregate area not less than the sectional area of the pipe	B(SSFPDWL) R 31(1), 31(2) and 31(5); B(P)R 4(c)
g.	☐	Provision of drain outlets in verandahs next to kitchens and utility rooms	EPD ProPECC PN5/93
h.	☐	Condensate water from air-conditioning units, planters and landscaped areas, annual drains from swimming pools, sub-soil water and groundwater collection drains for basement connected to the surface water system	
i.	☐	Surface water from open transport interchange or cargo handling areas connected to surface water drains via petrol interceptors that would allow bypass during peaks	
j.	☐	Surface water channels of adequate sizes, finished off smooth with a min. fall of 1:100 and provided with suitable grilles	B(SSFPDWL) R 61
k.	☐	No drain or pipe projects over a street/ lane more than 300 mm or at a height of less than 2.5 m above the level of the ground	B(P)R 7(2)
l.	☐	Interface with permanent drainage system on site formation plans	
4.	**Layout of Internal drainage system**		
a.	☐	No water-borne pipe embedded in structural elements	PNAP APP-105
b.	☐	Anti-siphonage pipes connected with the soil/waste pipe at a point not more than 300mm from the trap outlet	B(SSFPDWL) R 30(2)(b)(ii)

		Reference
c.	☐ Drainage systems for high rise buildings separated into vertical zones	PNAP APP-93
d.	☐ Radius of the bends at the bottom of soil and waste pipes not less than 200 mm or 4 times the radius of the pipe	
e.	☐ Grease traps for waste water discharge from kitchen provided for restaurants	EPD ProPECC PN5/93
f.	☐ Drains for covered areas with vehicular access such as carparks, loading/unloading areas transport interchanges, etc. connected to the foul water system via petrol interceptors	
g.	☐ Drain outlets with grating provided in refuse storage chamber and connected via a pipe with minimum 100mm diameter to a back inlet trapped gully with airtight cover and ventilating pipe outside the storage chamber	B(RS&MRC& RC)R 11
h	☐ Floor drain of utility platform (i) connected to the rain water system and (ii) where a water point is installed for washing machine, a waste discharge pipe provided in addition	
5.	**Access for Maintenance/ Repair**	
a.	☐ Drains, manholes, sump pits and petrol interceptors located in common parts of the building in both drainage plan and GBP	PNAP APP-93
b.	☐ Pipe ducts in domestic building provided with (i) access doors of minimum 600mmW x 2000 mmH and (ii) an unobstructed working space of minimum 700 mm x700 mm in front of the pipes preferably outside the duct	
c.	☐ Pipe wells in domestic building with minimum size of 1200mm x 1500mm with access points not more than 21 storeys apart and vent openings at both the top and bottom of the well	
d.	☐ For sunken slabs to house drains in troughs, access points for inspection and maintenance and trough to be backfilled by conveniently removable materials such as sand, light weight concrete or cement sand mortar	
e.	☐ External drainage pipes if enclosed by architectural features, a minimum 120mm unobstructed vertical space in front of all pipes	
f.	☐ For domestic buildings, no pipework for a unit shall protrude into the unit under separate occupancy	
g.	☐ Sanitary fitments on the lowest floor above ground are independently connected to manhole (except for 3-storey single family house)	

			Reference
h.	☐	Water supply pipes or drains not passing through any TBE room, transformer room, switch room and emergency generator room	PNAP APP-84 for TBE room
6.	**Others**		
a.	☐	Material schedule for drains and pipes, including ventilating pipes	PNAP APP-133
b.	☐	Manhole schedule with cover levels, invert levels, depths, types of manhole and types of cover	
c.	☐	Typical details for manholes, petrol interceptors, sump pits, trap gullies, grease traps and channels, etc, standby and duty pumps for sewage or surface water sump pump system; and corresponding structural details included in structural submissions	
d.	☐	Drains and pipes in fire protected areas enclosed with adequate FRR	Part C of FS Code
e.	☐	Slots of gratings or channel covers not more than 13mm and not parallel to the direction of pedestrian flow; and any dimension of square or round holes on channel covers not more than 20mm	B(P)R 72, Schedule 3, Division 9, Clauses 32 and 33
f.	☐	Bearing capacities of imposed loads of covers or grating for drainage features in areas with (i) vehicular traffic such as carparks, EVA, loading/unloading areas and (ii) pedestrian traffic including wheeled chair or trolley users commensurate with those required for the surrounding areas	Section 3 of Code of Practice for Dead and Imposed Loads 2011
g.	☐	Extent of A&A areas and reference made to relevant drainage A&A plans previously approved	
h	☐	Routing of pipes and drains with suitable legend	

(Rev. 2/2021)

Appendix C2
(PNAP ADV-33)

Checklist for Application for Typical Modifications / Exemptions in Drainage Plan Submissions
(This checklist is **not** required to be submitted to the BD)

□ : information to be shown on plan
○ : information to be accompanied with the plan submission

	Modifications / Exemptions Frequently Applied For	**Reference**
1.	**B(SSFPDWL)R 19 – permission of the discharge from flushing cisterns of watercloset fitment to be less than 9 litres** ◯ Justification that the associated toilet bowls are compatible with the cisterns, the syphonic action is sufficient for the wastes in the toilet bowls to be cleared effectively by a single flush, and the flushing apparatus meets the requirements of the Water Authority.	B(SSFPDWL)R 19
2.	**B(SSFPDWL)R 24(2)(a) – permission of the internal diameter of a trap to a soil fitment within domestic, office, shop or industrial premises to be less than 80 mm** ◯ Justification that the fitment is of syphonic action and the internal trap diameter is to be not less than 54 mm	B(SSFPDWL)R 24(2)(a)
3.	**B(SSFPDWL)Rs 29(1), 29(2) & 50(2) – permission of cleaning access to be other than cleaning eyes and jointing of cast iron pipes to be other than lead caulking** ☐ Maintenance and cleaning method of the mechanical coupling joint ◯ Justification that the proposed jointing method is by means of proprietary socketless drainage system which allows convenient dismantling and reinstalling, and the products meet the requirements of international standards	B(SSFPDWL)Rs 29(1), 29(2) & 50(2)
4.	**B(SSFPDW&L)R 31(1) – permit vent pipes to be carried up to a lesser height in cases where the Hong Kong Airport (Control of Obstructions) Ordinance would otherwise be contravened** ☐ Location of the pipes unlikely create a nuisance to nearby occupancy	B(SSFPDW&L)R 31(1)
5.	**B(SSFPDWL)R 44(4) – permission of the protection of cast iron pipes to be other than asphaltic coating** ◯ Supporting documents for the coating	B(SSFPDWL)R 44(4)
6.	**B(SSFPDWL)R 48 – permission of less fall for drains and sewers** ◯ Substantiation that a minimum velocity of 750mm/s is achieved	B(SSFPDWL)R 48
7.	**B(SSFPDWL)R 50(3) – permission of flexible joint for underground drainage pipework in reclaimed land** ☐ Location of the flexible joints ◯ Calculations on the anticipated settlements and test report demonstrating that the flexible joint system can accommodate the anticipated settlement ◯ Specification and catalogue of the flexible joint system	B(SSFPDWL)R 50(3)

8.	**B(SSFPDWL)R 49(2) – permission of junction of branch drains to be made within a manhole to an oblique angle more than 60 degrees** ☐ Location of manhole and the oblique angle not exceeding 90 degrees ○ Restrictive site conditions	B(SSFPDWL)R 49(2)
9.	**B(SSFPDWL)R 56(3) – permission of benching in a manhole to have a gradient of less than 1:2** ☐ Benching gradient not less than 1:12 (1:6 for manhole less than 1m in depth)	B(SSFPDWL)R 56(3)

(9/2016)

BLOCK PLAN
1:500

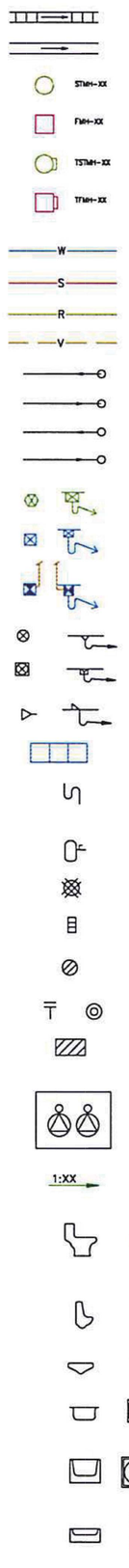
GENERAL NOTES

1. CODE OF PRACTICE FOR FIRE SAFETY IN BUILDINGS 2011 TO BE COMPLIED WITH.
2. DESIGN MANUAL BARRIER FREE ACCESS 2008 TO BE COMPLIED WITH.
3. EVERY DRAIN OR SEWER SHALL BE LAID WITH A MINIMUM FALL AS FOLLOW OR AS INDICATED ON DRAWING.
   - A. ø100mm AND BELOW AT 1 TO 40;
   - B. ø150mm AT 1 TO 70;
   - C. ø225mm AT 1 TO 100;
   - D. ø300mm AT 1 TO 150; AND
   - E. ø375mm AT 1 TO 180;

ABBREVIATIONS:

F/A	FROM ABOVE
F/B	FROM BELOW
T/A	TO ABOVE
T/B	TO BELOW
H/L	HIGH LEVEL
M/L	MIDDLE LEVEL
L/L	LOW LEVEL
U/G	UNDERGROUND
A.F.F.L.	ABOVE FINISHED FLOOR LEVEL
F.M.H.	FOUL MANHOLE
ST.M.H.	STORMWATER MANHOLE
C.L.	COVER LEVEL
I.L.	INVERT LEVEL
D.T.I.L.	DISCONNECTING TRAP INVERT LEVEL
F.D.	FLOOR DRAIN
T.A.F.D.	TOP ACCESS FLOOR DRAIN
B.D.	BATH DRAIN
S.D.	SHOWER DRAIN
T.A.S.D.	TOP ACCESS SHOWER DRAIN
V.G.	VERTICAL GRATING
R.W.O.	RAIN WATER OUTLET
C.E.	CLEANSING EYE
SP	SOIL PIPE
SWP	SOIL & WASTE PIPE
WP	WASTE PIPE
VP	VENT PIPE
CDP	CONDENSATION PIPE
RWP	RAIN WATER PIPE
C.I.	CAST IRON
S.S.	STAINLESS STEEL
G.S.	GALVANISED STEEL
D.I.	DUCTILE IRON PIPE
UPVC	UNPLASTICIZED PVC PIPE
AP	ACCESS PANEL (INDICATED AP SIZE)
GT	GREASE TRAP
CP	CATCH PIT
SP	SAND PIT

LEGEND



COVERED CHANNEL
HALF ROUND/FLAT CHANNEL
STORMWATER MANHOLE (XX = NUMBERING)
FOUL MANHOLE (XX = NUMBERING)
TERMINAL STORMWATER MANHOLE (XX = NUMBERING)
TERMINAL FOUL MANHOLE (XX = NUMBERING)
WASTE WATER PIPE
SOIL PIPE
RAIN WATER PIPE
VENT PIPE/ ANTI-SIPHONAGE PIPE
FROM BELOW
TO BELOW
FROM ABOVE
TO ABOVE
PLANTER DRAIN
OPEN TRAP GULLY
BACK INLET TRAP GULLY
FLOOR DRAIN
FLOOR DRAIN (TOP ACCESS)
VERTICAL GRATING
PETROL INTERCEPTOR
ANTI-SIPHONAGE TRAP
ANTI-SIPHONAGE BOTTLE TRAP
WIRE BALLOON
FRESH AIR INLET
RAIN WATER OUTLET
CLEANSING EYE
SUNKEN SLAB AREA
SUMP PIT
FALL GRADIENT (XX = VALUE OF GRADIENT)
WATER CLOSET (LOW LEVEL / CLOSE COUPLED CISTERN)
URINAL
BASIN
SINK
BATH TUB
SHOWER TRAY

DRAWING LIST

DRAWING NO.	REVISIONS	DRAWING TITLE
DG-01	-	BLOCK PLAN, LEGENDS, ABBREVIATION AND GENERAL NOTES FOR DRAINAGE SYSTEM
DS-01	-	SCHEMATIC LINE DIAGRAM FOR DRAINAGE SYSTEM
DL-01	-	DRAINAGE LAYOUT PLAN FOR G/F
DL-02	-	DRAINAGE LAYOUT PLAN FOR TYPICAL FLOOR
DL-03	-	DRAINAGE LAYOUT PLAN FOR ROOF FLOOR
DD-01	-	DRAINAGE INSTALLATION DETAIL 1
DD-02	-	DRAINAGE INSTALLATION DETAIL 2

MATERIAL OF DRAINAGE PIPE

TYPE OF PIPE	SIZE	MATERIAL

SUMMARY OF MODIFICATIONS OF AND/OR EXEMPTION APPROVED IN FORM BD 106, PERMIT SECTION 42

BD APPROVAL/REJECTION LETTER

	PERMIT DATE	BD 106 PERMIT NO.	EXPIRY DATE
A			
B			
C			
D			
E			

ITEM	BUILDING REGULATION	DESCRIPTION	APPROVAL CONDITION REF.

BD REF
BIM REF
FSD REF

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
BLOCK PLAN, LEGENDS, ABBREVIATIONS AND GENERAL NOTES FOR DRAINAGE SYSTEM

SCALE

DRAWING NO. | REV. NO.
- | -

SORUCE ---

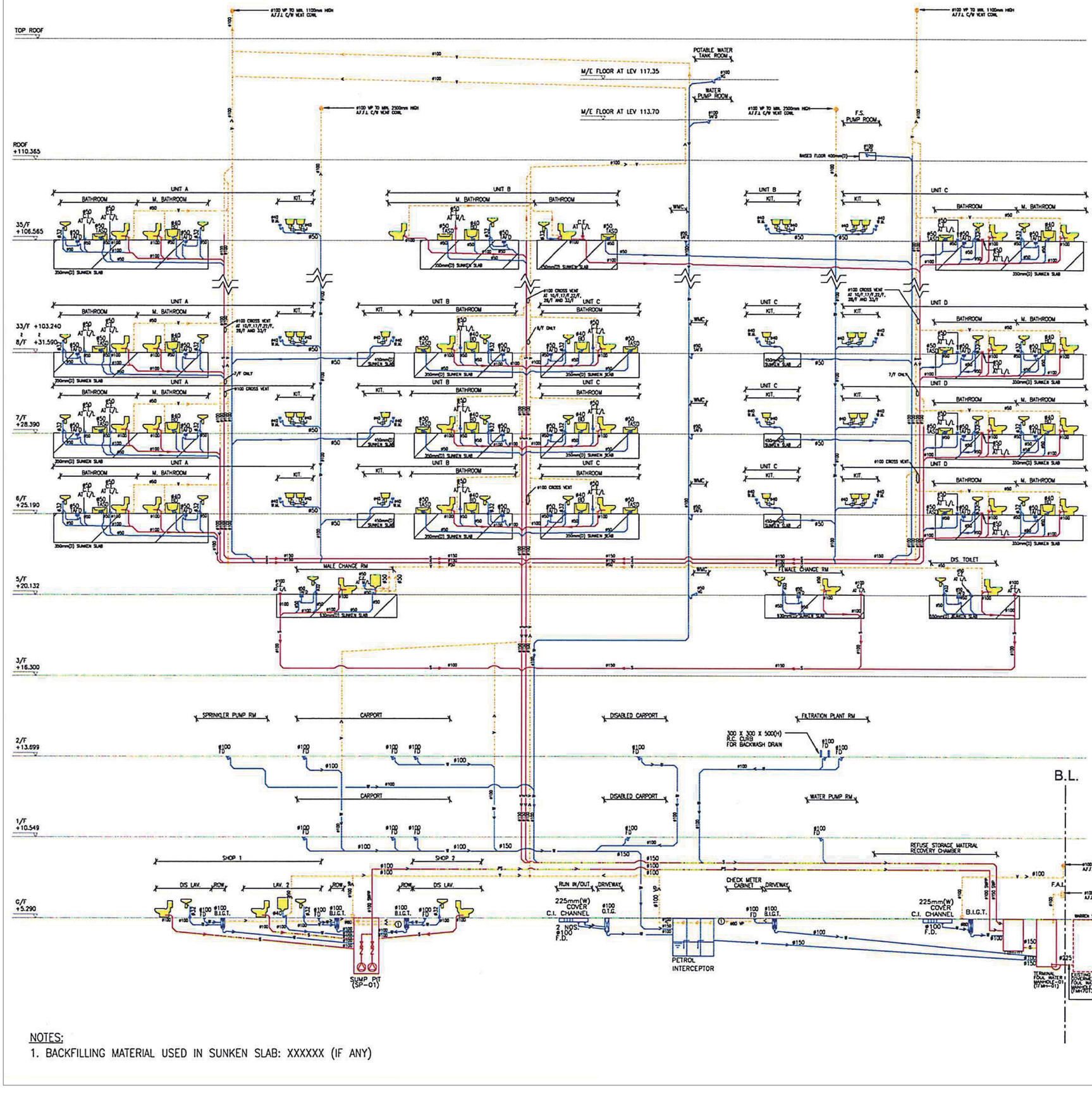
90mm (W) x 40mm (H) space for COMPANY LOGO

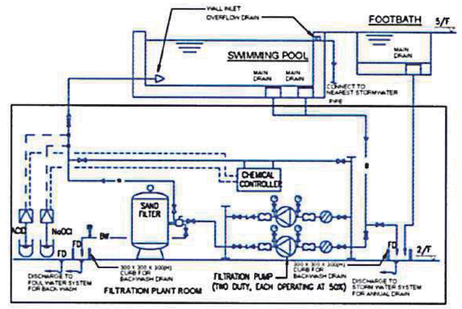
90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

BD's OFFICIAL USE

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

Appendix C3
(PNAP ADV-33)





SCHEMATIC LINE DIAGRAM FOR SWIMMING POOL
(FOR INFORMATION ONLY)

NOTES:
1. BACKFILLING MATERIAL USED IN SUNKEN SLAB: XXXXXX (IF ANY)

BD REF
BIM REF
FSD REF

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
SCHEMATIC LINE DIAGRAM FOR DRAINAGE SYSTEM

SCALE

DRAWING NO. | REV. NO.
- | -

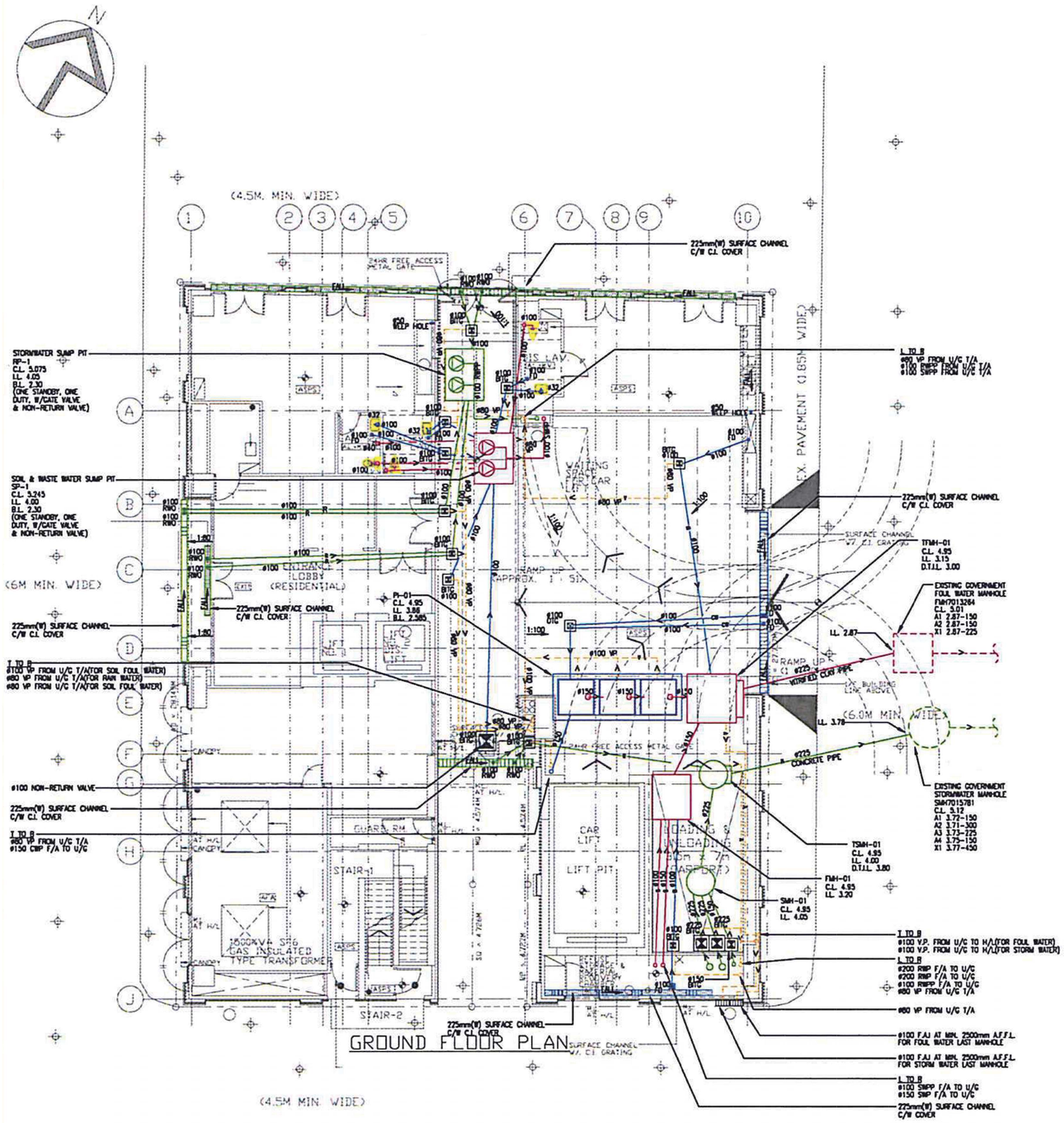
SORUCE ---

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

BD'S OFFICIAL USE

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



SCHEDULE OF FOUL WATER MANHOLE

MANHOLE NO.	PIPE DIAMETER(mm)	C.L.	I.L.	D.T.I.L.	DEPTH(mm)	TYPE
FMH-01	150	4.95	3.20	–	1750	E
TFMH-01	225	4.95	3.15	3.00	1950	T1

SCHEDULE OF STORMWATER MANHOLE

MANHOLE NO.	PIPE DIAMETER(mm)	C.L.	I.L.	D.T.I.L.	DEPTH(mm)	TYPE
SMH-01	225	4.95	4.05	–	900	C
TSMH-01	225	4.95	4.00	3.85	1100	T1

SUMP PIT SCHEDULE

SUMP PIT NO.	SUMP PIT SIZE (L X W X D)	C.L.	I.L.	B.L.	PUMP NO.	PUMP DUTY (each)	
						FLOW (l/s)	HEAD (m)
RP-01	2000 X 1500 X 2775	5.075	4.05	2.30	STSP-01, 02	9	15
SP-01	2000 X 1500 X 2945	5.245	4.00	2.30	SSP-01-01, 02	5	15

SCHEDULE OF PETROL INTERCEPTOR

PETROL INTERCEPTOR NO.	C.L.	I.L.	B.L.	DEPTH(mm)
PI-01	4.95	3.86	2.585	2365

BD REF

BIM REF

FSD REF

REV.	DATE	AMENDMENT

PROJECT

SAMPLE

DRAWING TITLE

DRAINAGE LAYOUT PLAN FOR G/F

SCALE

DRAWING NO. | REV. NO.

-

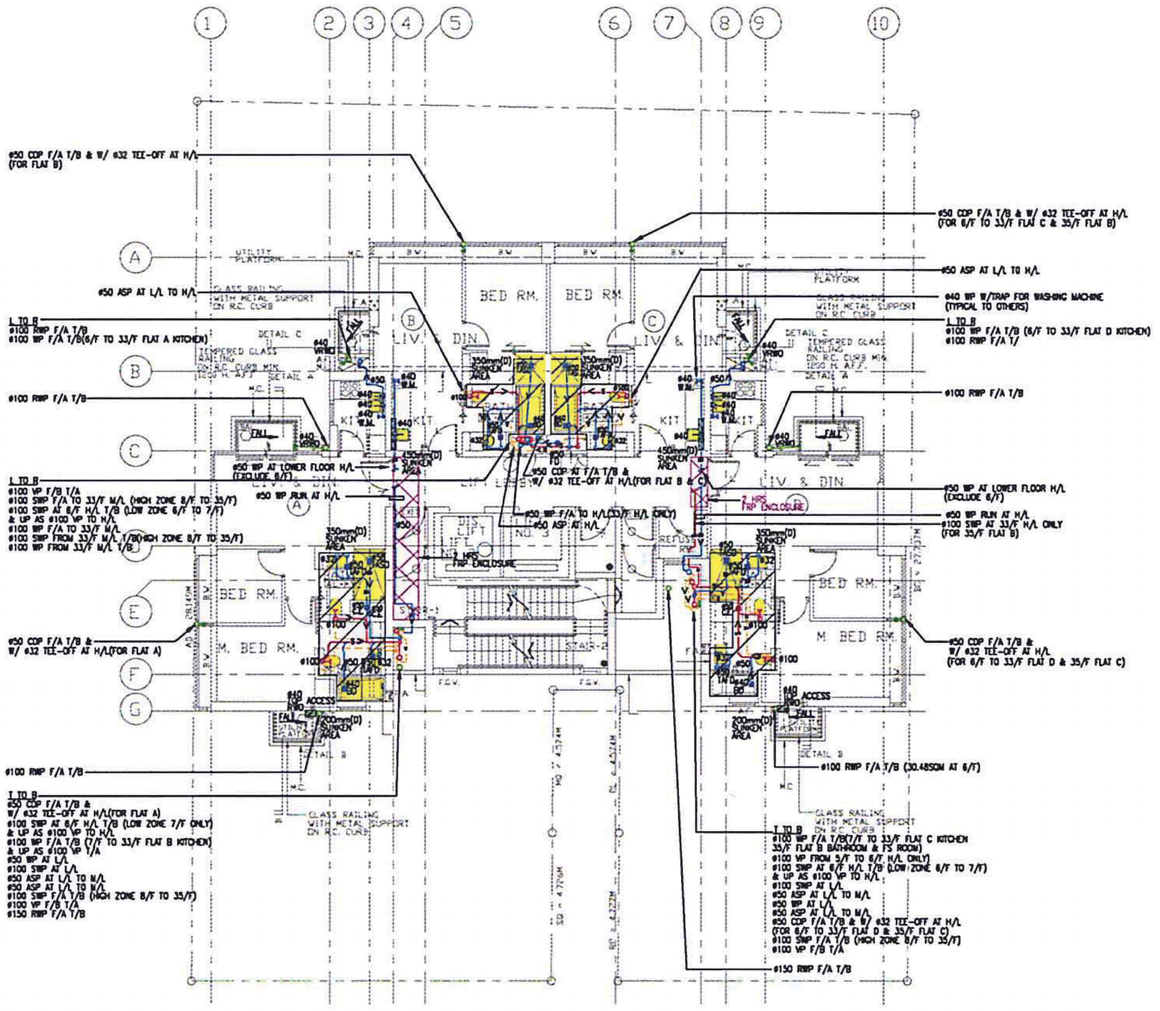
SORUCE ---

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

BD'S OFFICIAL USE

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



6TH TO 33TH FLOOR PLAN (TYPICAL)
(EXCLUDING 13/F, 14/F AND 24/F)

NOTES:
1. BACKFILLING MATERIAL USED IN SUNKEN SLAB: XXXXXX (IF ANY)

BD REF	
BIM REF	
FSD REF	

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
DRAINAGE LAYOUT PLAN FOR TYPICAL FLOOR

SCALE

DRAWING NO. | REV. NO.
- | -

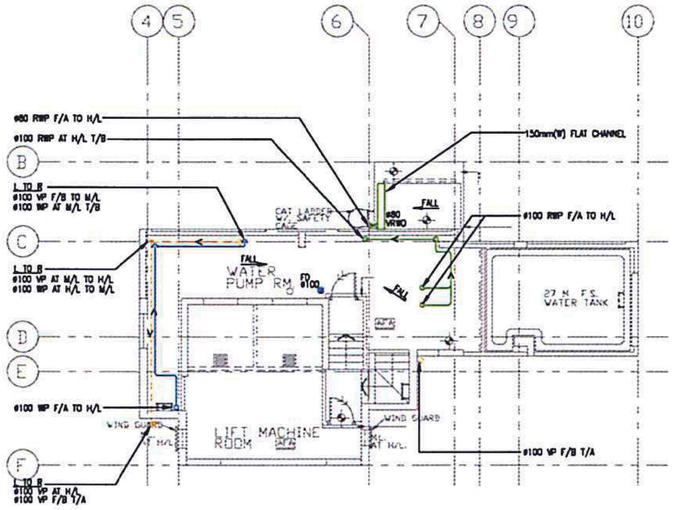
SORUCE ---

90mm (W) x 40mm (H) space for COMPANY LOGO

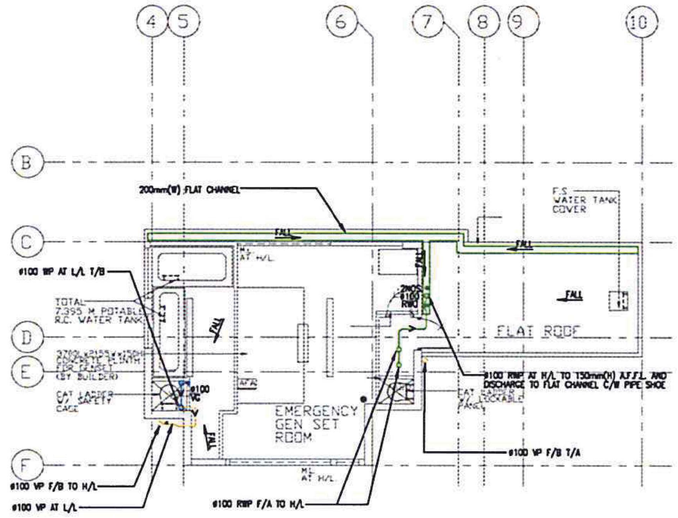
90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

BD'S OFFICIAL USE

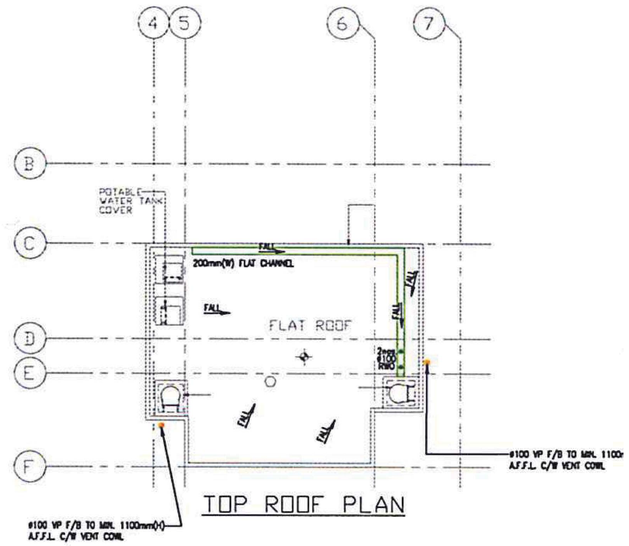
90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



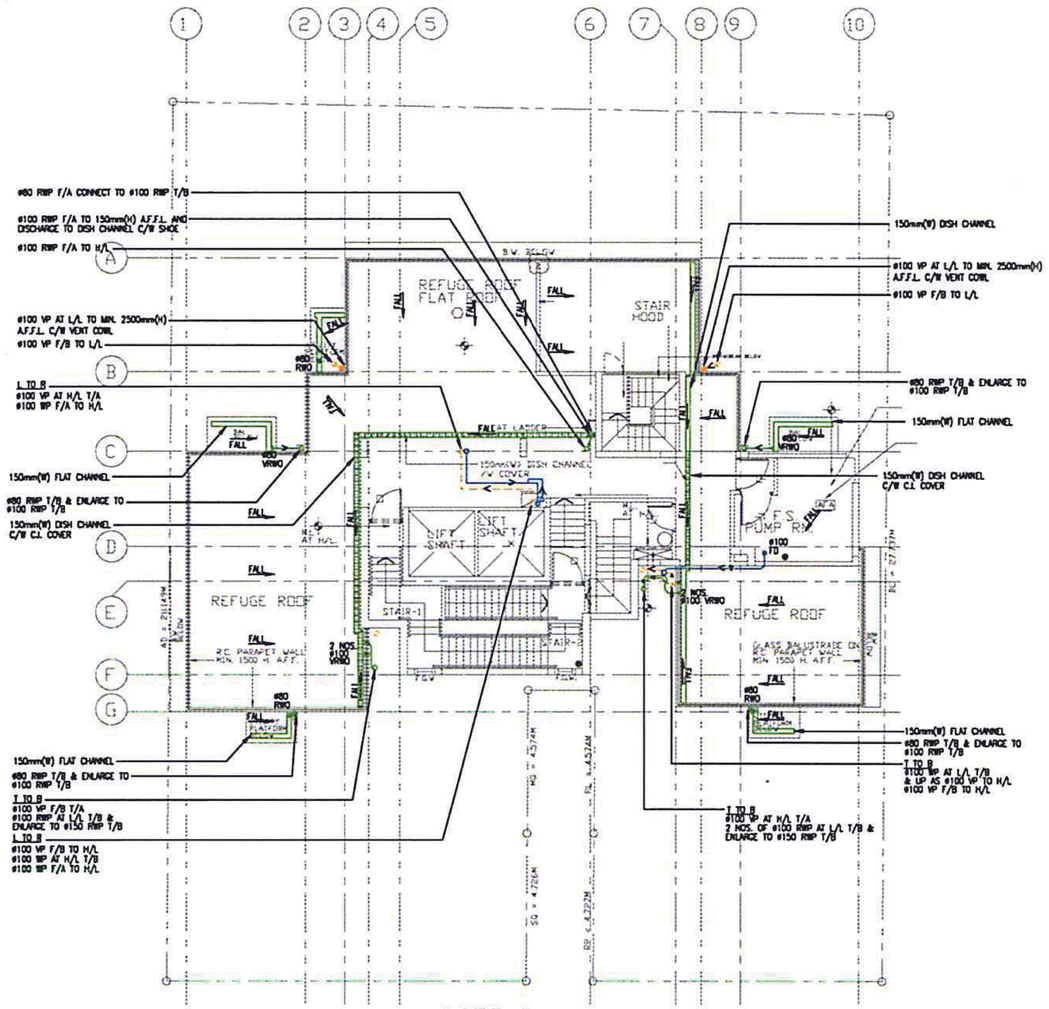
M/E FLOOR PLAN AT LEV. 113.700



M/E & FLOOR PLAN AT LEV. 117.350



TOP ROOF PLAN



ROOF PLAN

BD REF
BIM REF
FSD REF

REV.	DATE	AMENDMENT

PROJECT

SAMPLE

DRAWING TITLE

DRAINAGE LAYOUT PLAN FOR ROOF FLOOR

SCALE

DRAWING NO. | REV. NO.

- | -

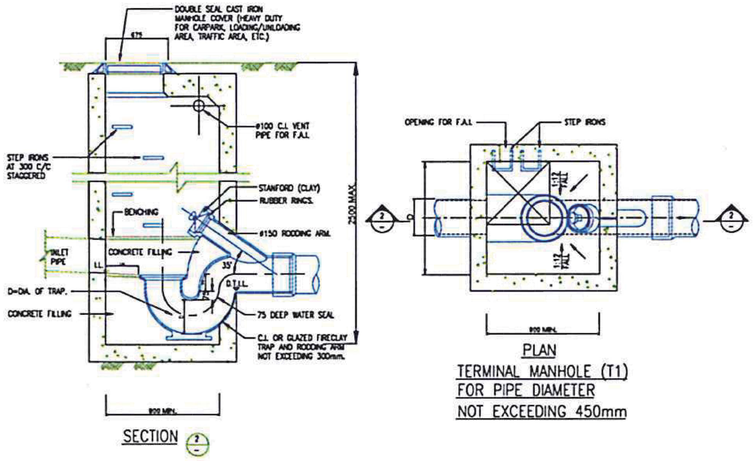
SORUCE ---

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

BD's OFFICIAL USE

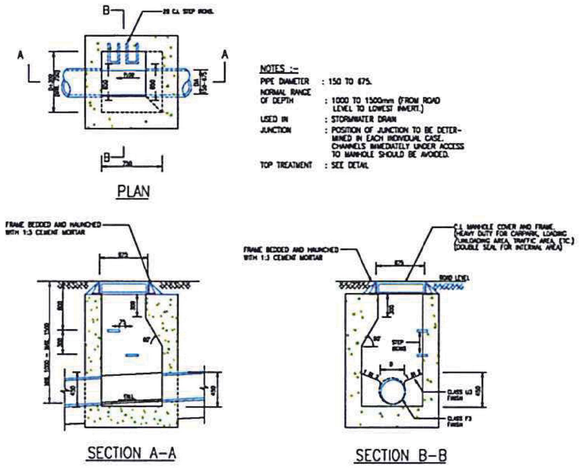
90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



TERMINAL MANHOLE (T1)
FOR PIPE DIAMETER
NOT EXCEEDING 450mm

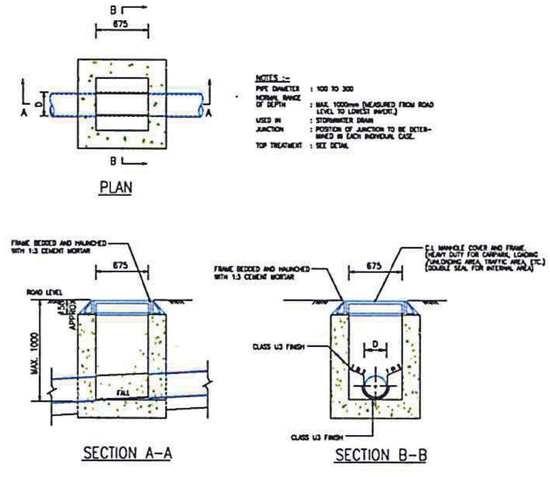
TERMINAL MANHOLE (TYPE T1)

(PHYSICAL DIMENSION OF TERMINAL MANHOLE PLEASE REFER TO DSD DETAIL DRAWINGS)
(REINFORCEMENT DETAIL PLEASE REFER TO STRUCTURAL PLAN)



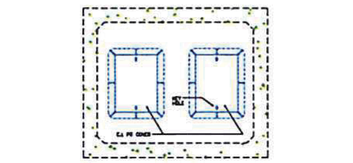
MANHOLE TYPE D

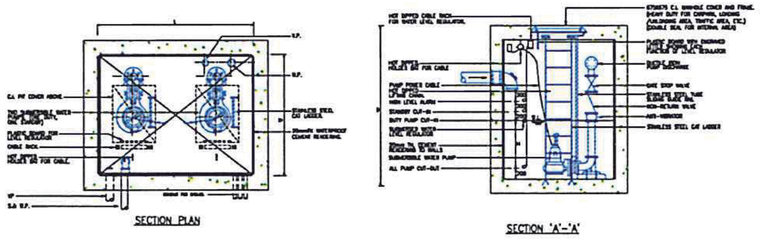
(REINFORCEMENT DETAIL PLEASE REFER TO STRUCTURAL PLAN)



MANHOLE TYPE C

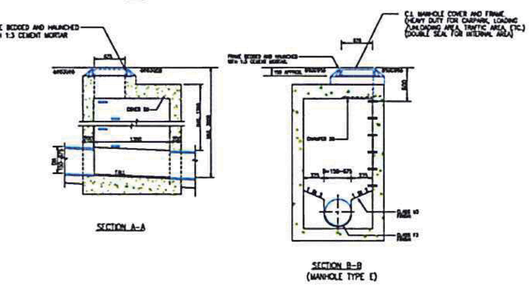
(REINFORCEMENT DETAIL PLEASE REFER TO STRUCTURAL PLAN)





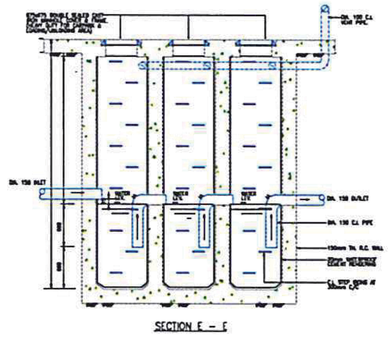
TYPICAL DETAIL OF FOUL SUMP PIT

(REINFORCEMENT DETAIL PLEASE REFER TO STRUCTURAL PLAN)



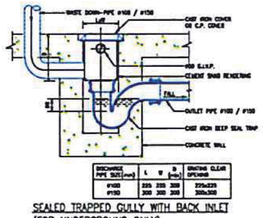
MANHOLE TYPE E

(REINFORCEMENT DETAIL PLEASE REFER TO STRUCTURAL PLAN)

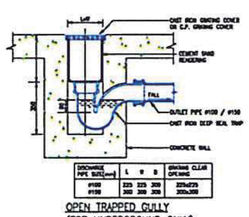


DETAIL OF PETROL INTERCEPTOR

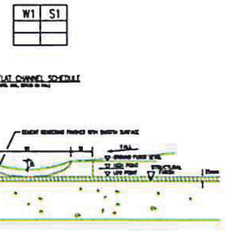
(REINFORCEMENT DETAIL PLEASE REFER TO STRUCTURAL PLAN)



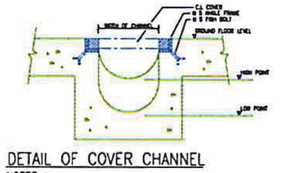
SEALED TRAPPED GULLY WITH BACK INLET
(FOR UNDERGROUND ONLY)



OPEN TRAPPED GULLY
(FOR UNDERGROUND ONLY)



DETAIL OF FLAT CHANNEL (DISHED CHANNEL)



DETAIL OF COVER CHANNEL

NOTES :

1. ALL SURFACE CHANNELS SHALL BE FINISHED SMOOTH WITH 1 : 2 CEMENT AND SAND RENDERING
2. GRADIENT OF CHANNEL SHALL BE NOT LESS THAN 1 IN 100
3. DEPTH OF LOW POINT DEPEND ON THE LENGTH OF CHANNELS

BD REF
BIM REF
FSD REF

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
DRAINAGE INSTALLATION DETAIL 1

SCALE

DRAWING NO. REV. NO.
-

SORUCE ---

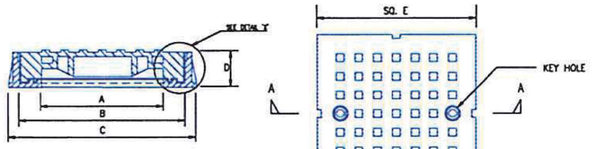
90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

BD'S OFFICIAL USE

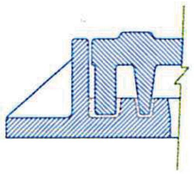
90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

(Rev. 2/2021)

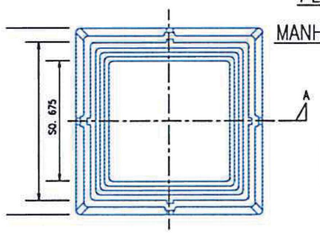


SECTION A – A

PLAN



DETAIL X

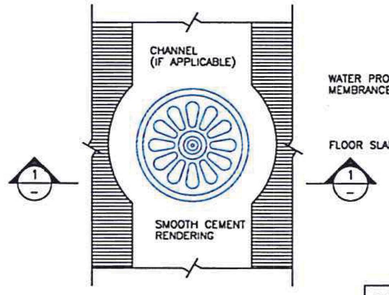


MANHOLE COVER

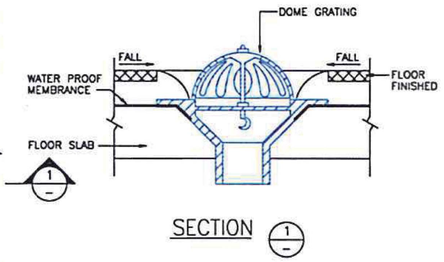
DIMENSION LETTER		A	B	C	D	E
DIMENSIONS	CLASS D400	675	835	950	150	829
	CLASS C250	675	835	950	100	829

PLAN OF FRAME

DETAIL OF CAST IRON MANHOLE COVER AND FRAME (DOUBLE SEAL) (N. T. S.)



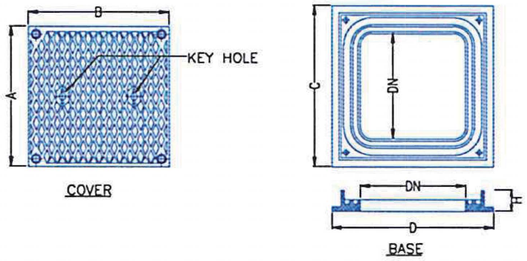
PLAN–DOME GRATING



SECTION 1

CAST IRON ROUND FLAT & DOME GRATINGS FOR FLAT ROOF DRAIN

DIAMETER OF RAINWATER PIPE	DIAMETER OF GRATING
65	100
80	150
100	225
150	300



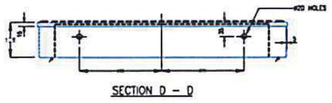
COVER

BASE

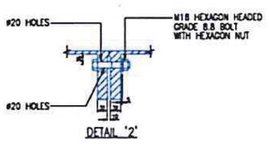
DN	A	B	C	D	H
200X200	275	275	320	320	45
225X225	300	300	345	345	45
300X300	375	375	420	420	45
375X375	450	450	495	495	45

DETAIL OF CAST IORN DOUBLE SEAL SQUARED COVER OF BITG

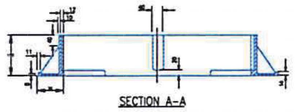
(N. T. S.)



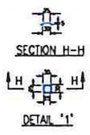
SECTION D – D



DETAIL '2'

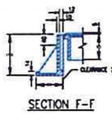


SECTION A-A

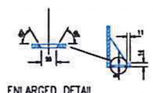


DETAIL '1'

SECTION H–H



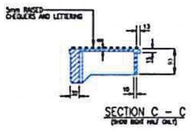
SECTION F–F



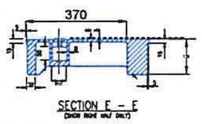
ENLARGED DETAIL

SECTION B–B

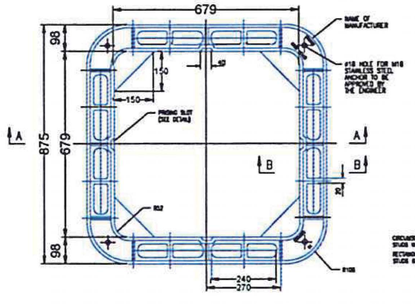
PRISING SLOT DETAIL



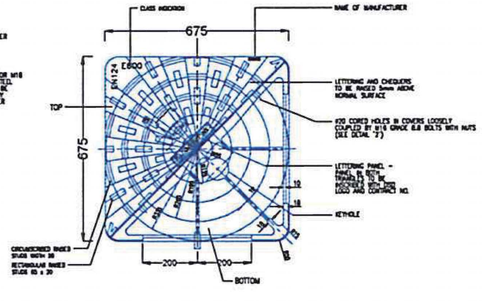
SECTION C – C



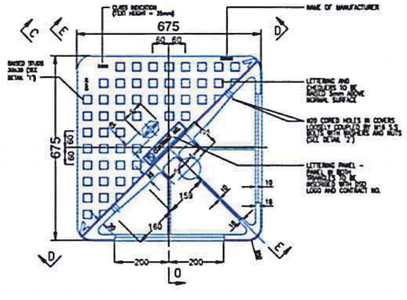
SECTION E – E



PLAN OF FRAME



PLAN OF STORM WATER 675X675 MANHOLE COVER



PLAN OF SEWER 675x675 MANHOLE COVER

REV.	DATE	AMENDMENT

PROJECT
SAMPLE

DRAWING TITLE
DRAINAGE INSTALLATION DETAIL 2

SCALE

DRAWING NO. | REV. NO.
- | -

SORUCE ---

90mm (W) x 40mm (H) space for COMPANY LOGO

90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

BD'S OFFICIAL USE

90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)

BD REF
BIM REF
FSD REF