

Candidate Number :

Seat Number :

HKIA/ARB Professional Assessment 2019

Paper 7 Building Design

21 November 2019
9:00 am – 3:00 pm (6 hours)

Kowloonbay International Trade & Exhibition Centre (KITEC)
Kowloon Bay

ONE COMPULSORY QUESTION

100 Marks

General Notes:

| | |
|--------------|--|
| Format | Examination paper, both A3 plain and A3 tracing, are provided. Use as appropriate. |
| Presentation | Black ink line drawings are preferred. You may use colour for clarity. Do NOT use RED. |

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| Attachment 1 | LOCATION PLAN | (1:1000) |
| Attachment 2 | SITE PLAN | (1:200) |

1 PROBLEM STATEMENT

Hub for Co-work and Gallery

You, as the Architect, are commissioned by a developer to propose a HUB for co-work and public gallery facility. This development is part of their macro revitalization plan in an old neighbourhood in Hong Kong. One of their corporate initiatives is to promote start-up companies by providing serviced working space at low rent. It is also aimed at offering flexible event space to generate synergy among the creative individuals, groups and the communities.

Your task is to create a sensible solution for the hub to be shared among different users.

Please prepare a schematic design for presentation to the Client's representatives. It should satisfy generally all functional and statutory requirements. It should also show an integrated solution that incorporates preliminary provisions and requirements for building structure, building services, utilities, etc.

2 SITE DESCRIPTION

Context

The Site is a hypothetical site in an urban area. It is served by public Road A, Road B and Road C, all of them are more than 6m wide. The site is sloping with a general level difference of 5m between Roads A and C.

Please see Location Plan (Attachment 1) and Site Plan (Attachment 2).

Vehicular Access

Vehicular access shall be between points X and Y through Z.

Environmental Factor

Traffic noise from all roads is considered insignificant.

3 DESIGN BRIEF

3.1 Development Requirements

| | |
|--|---|
| Site Area | 2,400 m ² (approximate) |
| Zoning | CDA |
| Permissible GFA under lease | unrestricted |
| Permissible Plot Ratio and Site Coverage | Requirements under the Buildings Ordinance shall be complied with. |
| Building Height | Not higher than +60mPD (main roof) |
| Site Vehicular Access | Vehicular Access is required. Vehicular access shall be between points X and Y through Z. |
| Carpark | 3 nos. of private car parking spaces shall be provided for staff only. One of them should be fit for persons with disability |
| Loading and Unloading | 1 no. of loading bay (3.5m x 7.5m x 3.5mH) shall be provided. |
| Refuse Collection | Parking for refuse collection vehicles is not required. |
| Barrier Free Access Lift(s) | Statutory requirements shall be complied with. Passenger lift(s) shall be provided as appropriate (shaft size minimum 2400mm X 2600mm) 1 no. of service lift shall be provided (shaft size minimum 2600mm x 2800mm) |

3.2 Design Requirements

The **HUB** is to cater for young start-up companies to share working space and conference facilities. Please demonstrate a design that allow different setting of work space ranging from individual work stations to a group of 10 people offices. Spatial planning should also encourage interaction among users groups and allow strong connection to the outdoor communal garden. Some of the areas shall be open to the public but at the same time security of co-work and supporting facilities should be considered.

3.3 Accommodation Schedule

| | Gross Floor Area | Remarks |
|--|--|----------------------|
| <u>Main Entrance</u> | | |
| Registration Reception | as appropriate | • 1 no. |
| Administration office | 50 m ² | • 1 no. |
| General Storage | 100 m ² | • 1 no. |
| <u>Co-Work and Supporting Facilities</u> | | |
| Co-work Space (fitting 400 users with different grouping layout) | total area 4,000 m ² | |
| Common Conference Room | 50 m ² 20 m ² | • 2 nos. • 4 nos. |
| Gym Club | 150 m ² | • 1 no. |
| Lavatories / Changing Rooms | Total 100 m ² | • 2 nos. |
| <u>Facilities Sharing with Public</u> | | |
| Gallery (at least 8m clear span in one direction and 8m clear height headroom) | 200 m ² | • 1 no. |
| Convenience Store | 100 m ² | • 1 no. |
| Café and Kitchen | 100 m ² + 50 m ² | • 1 no. |
| Lavatories | 15 m ² | • 2 nos. |

3.3 Accommodation Schedule (cont'd)

| | Area / Size | Remarks |
|--|-------------------------|--|
| <u>Building Services</u> | | |
| Electrical Provisions | | |
| Transformer Room (Tx Rm) | 8m x 6m | • 1 no. (preferably on ground or on 1/F with separate staircase) |
| High Voltage Switch Room (HV Switch Rm) | 6m x 5m | • 1 no. (preferably adjacent to Tx Rm) |
| Low Voltage Switch Room (LV Switch Rm) | 6m x 5m | • 1 no. (preferably adjacent to or on top of HV switch room) |
| Electrical Room / Extra Low-Voltage Room (EL / ELV Rm) | 6 m ² | • 1 no. on <u>each</u> floor |
| Electrical Duct Room | 2 m ² | • 1 no. on <u>each</u> floor |
| Emergency Generator Room (GenSet Rm) | 8m x 5m | • 1 no. (preferably on roof) |
| HVAC Provisions | | |
| Cooling Tower | 10m x 6m | • 1 no. (preferably on roof) |
| Chiller Plant Room | 10m x 6m | • 1 no. |
| AHU Room | 30 m ² | • 1 no. on <u>each</u> floor |
| Other Provisions | | |
| Fire Services Control Room (FS Control Rm) | 2m x 3m | • 1 no. accessible from main street |
| Pipe Duct | 2 m ² | • 1 no. of <u>each</u> floor |
| Pump Rooms and Tanks | total 80 m ² | • 1 no. or to be split into 2-3 locations |
| Lift Machine Room | 40 m ² | • 1 no. (preferably on roof) |

3.3 Accommodation Schedule (cont'd)

| | Area / Size | Remarks |
|--|--------------------|---|
| <u>Outdoor Open Space / Soft landscape area</u> | | |
| Communal Garden | 100 m ² | <ul style="list-style-type: none">• 1 no. |
| Soft landscape area | 30% of site area | <ul style="list-style-type: none">• On grade or combination of on grade and at roof |
| <u>Parking Space</u> | | |
| Private Car | 2.5m x 5m | <ul style="list-style-type: none">• 2 nos. |
| | 3.5m x 5m | <ul style="list-style-type: none">• 1 no. for disabled |
| Loading and Unloading | 3.5m x 7.5m | <ul style="list-style-type: none">• 1 no. |

4 SUBMISSION REQUIREMENTS

| | |
|---|--|
| Site Plan (1:200) | Show site development including access point(s) for both pedestrian and vehicular traffic |
| Plan of Ground floor (1:200) | <ul style="list-style-type: none">• All required spaces according to Accommodation Schedule, with annotation• Major structural elements• Overall and critical dimensions• Appropriate annotation• Site boundary, adjacent streets and structures• Means of Access for Firefighting & Rescue |
| Plan of First floor Plan(s) of other floor(s) (1:200) | <ul style="list-style-type: none">• All required spaces according to Accommodation Schedule, with annotation• Major structural elements• Overall and critical dimensions• Appropriate annotation |
| Section (A minimum of ONE at 1:200) | <ul style="list-style-type: none">• Floor to floor and other critical dimension• Appropriate annotation• Relationship between elements of construction <i>(E.g. Interfaces and connections of building structure, building envelope, finishes, building services, and etc.)</i> |
| 3-dimensional Illustration | Not compulsory |
| Calculations | The design is assumed to be in compliance with the relevant Buildings Ordinance and Regulations. No calculation is required. |

END OF PAPER



