

For discussion
on 16 December 2020

PWSC(2020-21)26

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT

Universities

The Chinese University of Hong Kong

56EF – Centralised General Research Laboratory Complex (Block 2)

The University of Hong Kong

56EG – Redevelopment of No. 2 University Drive (Building 1)

64EG – Information Technology Building at University Drive

Members are invited to recommend to the Finance Committee the upgrading of **56EF**, **56EG** and **64EG** to Category A at estimated costs of \$1,416.1 million, \$599.9 million and \$486.9 million in money-of-the-day prices respectively.

PROBLEM

The Chinese University of Hong Kong (CUHK) and the University of Hong Kong (HKU) need additional space and up-to-date facilities to meet the teaching and research needs and to support the increased number of students and researchers.

/PROPOSAL

PROPOSAL

2. The Secretary-General, University Grants Committee, on the advice of the Director of Architectural Services as UGC's Technical Adviser and with the support from the Secretary for Education, proposes to upgrade the following projects to Category A –

CUHK

- (a) **56EF** – To construct a research laboratory building at the northern side of the campus in Area 39, Tai Po at an estimated cost of \$1,416.1 million in money-of-the-day (MOD) prices.

HKU

- (b) **56EG** – To demolish an existing five-storey staff quarters building and construct a research laboratory building at University Drive on the main campus at an estimated cost of \$599.9 million in MOD prices.
- (c) **64EG** – To construct the Information Technology Building at University Drive on the main campus at an estimated cost of \$486.9 million in MOD prices.

PROJECT SCOPE AND NATURE

3. Details of **56EF**, **56EG**, and **64EG** are at **Enclosures 1, 2 and 3** respectively.

Education Bureau
December 2020

**The Chinese University of Hong Kong
56EF - Centralised General Research Laboratory Complex (Block 2)**

PROJECT SCOPE AND NATURE

The scope of the works involves mainly the construction of a nine-storey (excluding a basement floor) research laboratory building which will provide approximately 12 000 square meters (m²) in net operational floor area (NOFA)¹. The Faculty of Science of The Chinese University of Hong Kong (CUHK) will be the major user of the proposed building. Upon completion of the project, the building will provide the following new facilities –

- (a) laboratories of about 10 400 m² in NOFA;
- (b) offices of about 1 100 m² in NOFA; and
- (c) common and supporting facilities of about 500 m² in NOFA, including a lecture hall, storage area and cafeteria etc.

2. A site plan, an artist's impression, floor plans and sectional drawings of the project are at **Annexes 1 to 4** respectively. CUHK plans to commence the proposed works upon obtaining funding approval from the Finance Committee (FC) for completion in around four years. To meet the works programme, CUHK invited tender for the proposed works in March 2020. Tender will only be awarded after obtaining FC's funding approval.

/JUSTIFICATION

¹ NOFA is the floor area actually allocated to the users of a building for carrying out the intended activities. Unlike the construction floor area which takes into account all areas within the building structure envelop, NOFA does not include areas for such facilities (if any) as toilets, bathrooms and shower rooms, lift lobbies, stair halls, public or shared corridors, stairwells, escalators and lift shafts, pipe or services ducts, barriers-free access facilities, gender mainstreaming facilities, refuse chutes and refuse rooms, balconies, verandas, open decks and flat roofs, parking spaces, loading and unloading areas and mechanical plant rooms, etc.

JUSTIFICATION

3. In recent years, the School of Life Sciences of the Faculty of Science of CUHK has significantly expanded its research in taking advantage of biotechnology to address challenges posed by climate changes and to develop novel ways to treat human diseases. In addition, CUHK has launched the Biomedical Sciences Programme in 2016 to contribute to the nurturing of researchers and physician-scientists with a broad-based and strong foundation in biomedical sciences.

4. With the aforesaid expansion in academic and research activities, the demand for space and infrastructure to support research in life sciences and biomedical sciences in CUHK has outgrown the capacity of its current campus facilities. The proposed new building will mainly comprise laboratory spaces with state-of-the-art facilities for research activities in the fields of life sciences and biomedical sciences, especially in the strategic research areas of Environment and Sustainability and Translational Biomedicine.

5. Specifically, the following laboratories are planned to be provided for and established in the new laboratory building –

- (a) State Key Laboratory of Agrobiotechnology for research in climate-smart agriculture;
- (b) specialised laboratories for high-precision instruments such as electron microscopes, mass spectrometers, X-ray diffractometers;
- (c) green house for plant biotechnology researches;
- (d) research facilities for animal models of human diseases;
- (e) computational and data center for bioinformatics research; and
- (f) herbarium to provide a platform for supporting research and education in STEM (Science, Technology, Engineering and Mathematics).

6. Upon completion of the proposed Centralised General Laboratory Complex (Block 2), the School of Life Sciences will be relocated to Area 39, Tai Po as part of CUHK's long-term strategy to develop the northern part of its campus into a cluster of research hub for life/biomedical sciences. As the proposed laboratory building will be located next to the School of Biomedical Sciences in the existing Centralised General Research Laboratory Complex (Block 1), collaboration in Translational Biomedicine researches between the two schools will be enhanced in the future. The Complex's close proximity to the Hong Kong Science Park will also promote synergy in downstream technology development.

FINANCIAL IMPLICATIONS

7. We estimate the capital cost of the project to be \$1,416.1 million in money-of-the-day (MOD) prices, broken down as follows –

	\$ million (in MOD prices)
(a) Site development	15.7
(b) Foundation ²	224.6
(c) Building ³	369.4
(d) Building services ⁴	406.9
(e) Drainage	8.5
(f) External works ⁵	58.2
	/(g)

² Foundation works cover construction of site formation, piles and all related works including excavation and lateral support, tests and monitoring.

³ Building works cover construction of substructure of a basement and superstructure of the building (including all related works of fitting out for the laboratories).

⁴ Building services works cover electrical installations, ventilation and air-conditioning installations, fire services installations, lift installations and other miscellaneous installations of laboratory gases and security system.

⁵ The estimated cost include the works of link bridge to adjoining Laboratory Block 1.

	\$ million (in MOD prices)
(g) Soft landscaping	5.8
(h) Additional energy conservation, green and recycled features	23.8
(i) Furniture and equipment ⁶	166.8
(j) Consultants' fees for	10.7
(i) contract administration	9.6
(ii) management of resident site staff (RSS)	1.1
(k) Remuneration of RSS	12.3
(l) Contingencies	113.4
Total	1,416.1

8. CUHK will engage consultants to undertake contract administration and site supervision of the project. A detailed breakdown of the estimate for consultants' fees and RSS costs by man-months is at **Annex 5**.

9. The construction floor area (CFA) of this project is approximately 23 987 m². The estimated construction unit cost, represented by the building and building services costs, is \$32,363 per m² of CFA in MOD prices. The Director of Architectural Services (D Arch S) considers that, taking into account the site constraint, the relative percentage of laboratory space and special laboratory provision, the estimated construction unit cost is reasonable as compared with similar projects for University Grants Committee (UGC)-funded universities.

/10.

⁶ Furniture & Equipment includes general furniture and equipment, laboratory furniture and equipment, IT system and audio-visual facilities.

10. Subject to approval, CUHK plans to phase the expenditure as follows –

Year	\$ million (in MOD prices)
2021 – 2022	190.5
2022 – 2023	273.7
2023 – 2024	442.3
2024 – 2025	365.1
2025 – 2026	112.3
2026 – 2027	32.2
	1,416.1

11. We have derived the MOD estimates on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction output for the period 2021 to 2027. CUHK will award the works on a lump-sum contract because CUHK can clearly define the scope of works in advance. The contract will provide for price adjustment.

12. The project will be funded by the \$16-billion provision set aside for UGC-funded universities to enhance or refurbish campus facilities as announced in the 2019-20 Budget.

13. The project has no impact on tuition fees. The additional recurrent costs associated with this project will be absorbed by CUHK. The proposal has no additional recurrent financial implication for the Government.

PUBLIC CONSULTATION

14. As the proposed project is located on the northern campus of CUHK and there are no residential developments in its immediate vicinity, it is unlikely that the project will affect other public residents in the area. CUHK briefed its staff and students on the project at various committee meetings and no adverse

/comment

comment was received. CUHK also briefed the Chairman of Environment, Housing and Works Committee of Tai Po District Council and nearby village representatives in April 2019 and Tai Po District Councillors in March 2020 on the proposed development. No adverse comment was received.

15. We consulted the Legislative Council Panel on Education on 6 November 2020. Members supported submitting the funding proposal to the Public Works Subcommittee for consideration.

ENVIRONMENTAL IMPLICATIONS

16. This is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). The project will not cause long-term environmental impact. CUHK has included in the project estimates the cost to implement suitable mitigation measures to control short-term environmental impacts.

17. During construction, CUHK will control noise, dust and site run-off nuisances to within established standards and guidelines through the implementation of mitigation measures in the relevant contract. These include the use of silencers, mufflers, acoustic linings or shields for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel-washing facilities.

18. At the planning and design stages, CUHK has considered measures (e.g. adjusting the building layout and foundation system to cope with the topography) to reduce the generation of construction waste where possible. In addition, CUHK will require the contractor to reuse inert construction waste (e.g. excavated soil) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste at public fill reception facilities⁷. CUHK will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimise the generation of construction waste.

/19.

⁷ Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Disposal of inert construction waste at public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

19. At the construction stage, CUHK will require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. CUHK will ensure that the day-to-day operations on site will comply with the approved plan. CUHK will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. CUHK will control the disposal of inert construction waste and non-inert construction waste to public fill reception facilities and landfills respectively through a trip-ticket system.

20. CUHK estimates that the project will generate in total about 24 920 tonnes of construction waste. Of these, CUHK will reuse about 5 339 tonnes (21.4%) of inert construction waste on site and deliver 16 018 tonnes (64.3%) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, CUHK will dispose of the remaining 3 563 tonnes (14.3%) of non-inert construction waste at landfills. The total cost for disposal of construction waste to public fill reception facilities and landfill sites is estimated to be \$1.85 million for this project (based on a unit charge rate of \$71 per tonne for disposal at public fill reception facilities and \$200 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES

21. This project will adopt various forms of energy efficient features and renewable energy technologies, in particular –

- (a) variable speed drive for chillers;
- (b) demand control of supply air;
- (c) heat pump for space heating and dehumidification;
- (d) building energy management system; and
- (e) photovoltaic system.

22. For greening features, this project will provide green roof and landscape / greening provisions for better building environmental performance. The external wall will also be partially screened by vertical greening.

23. For recycled features, this project will adopt rainwater harvesting system for landscape irrigation.

24. The total estimated additional cost for adoption of the above features is around \$23.8 million (including \$6.5 million for energy efficient features), which has been included in the cost estimate of the project. The energy efficient features will achieve 5.5% energy savings in the annual energy consumption with a payback period of about eight years.

HERITAGE IMPLICATIONS

25. The project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites / buildings, sites of archaeological interest and government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

26. The project does not require any land acquisition.

BACKGROUND INFORMATION

27. Under existing procedures, UGC-funded universities submit capital works proposals to UGC annually. UGC examines all these proposals carefully, with the professional advice provided by D Arch S who acts as UGC's Technical Adviser, and refers those supported proposals to the Government for consideration of bidding of funds under established mechanism.

28. We upgraded **56EF** to Category B in September 2010. CUHK engaged consultants in April 2012 to carry out site investigation and to prepare preliminary design, detailed design and tender documents at a total cost of about \$16.93 million. The services and works by the consultants are funded under block allocation **Subhead 8100EX** "Alterations, additions, repairs and improvements to the campuses of the UGC-funded institutions". The consultants have completed site investigation, preliminary design and detailed design of the project.

29. Of the 119 numbers of trees within the project boundary, 57 numbers of trees will be preserved. The proposed works will involve removal of 62 numbers of trees, all are to be felled. All trees to be removed are not important trees⁸. In compensation, CUHK will incorporate planting proposals as part of the project, including estimated quantities of 86 numbers of trees.

30. CUHK estimates that the proposed works will create about 390 jobs (350 for labourers and another 40 for professional / technical staff) providing a total employment of 10 700 man-months.

⁸ “Important trees” refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery of heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunk diameter equal or exceeding 1.0 metre (measured at 1.3 metres above ground level) or with height/canopy spread equal or exceeding 25 metres.

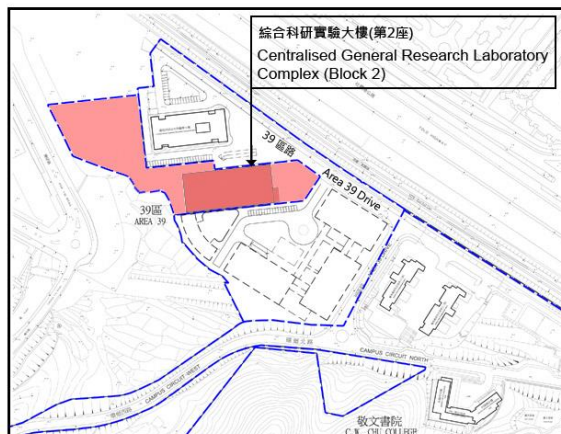
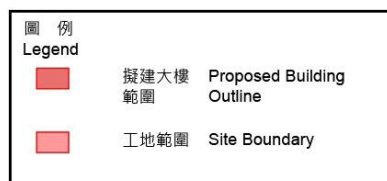
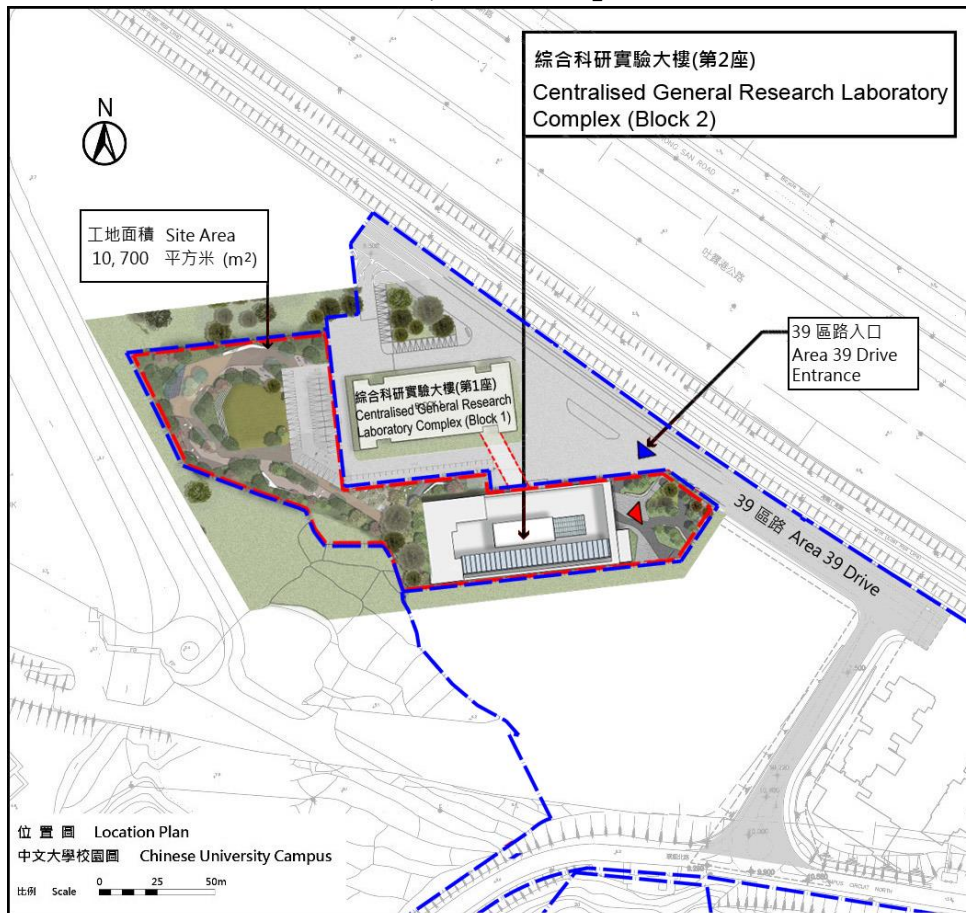
香港中文大學

56EF – 綜合科研實驗大樓(第2座)

The Chinese University of Hong Kong

56EF - Centralised General Research Laboratory Complex (Block 2)

工地平面圖 Site plan



香港中文大學

56EF – 綜合科研實驗大樓(第2座)

The Chinese University of Hong Kong

56EF - Centralised General Research Laboratory Complex (Block 2)



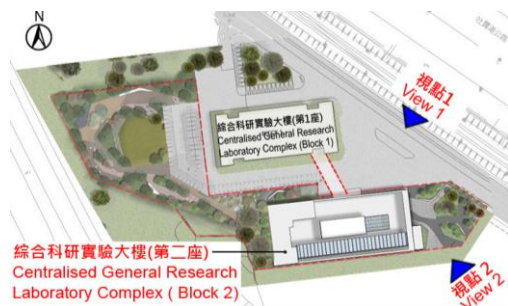
從東北面望向大樓的構思圖

View of the building from northeast (Artist's impression)



從東南面望向大樓的構思圖

View of the building from southeast (Artist's impression)



Key Plan 索引圖

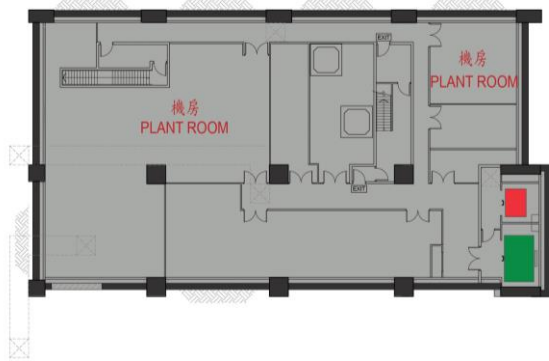
香港中文大學

56EF – 綜合科研實驗大樓(第2座)

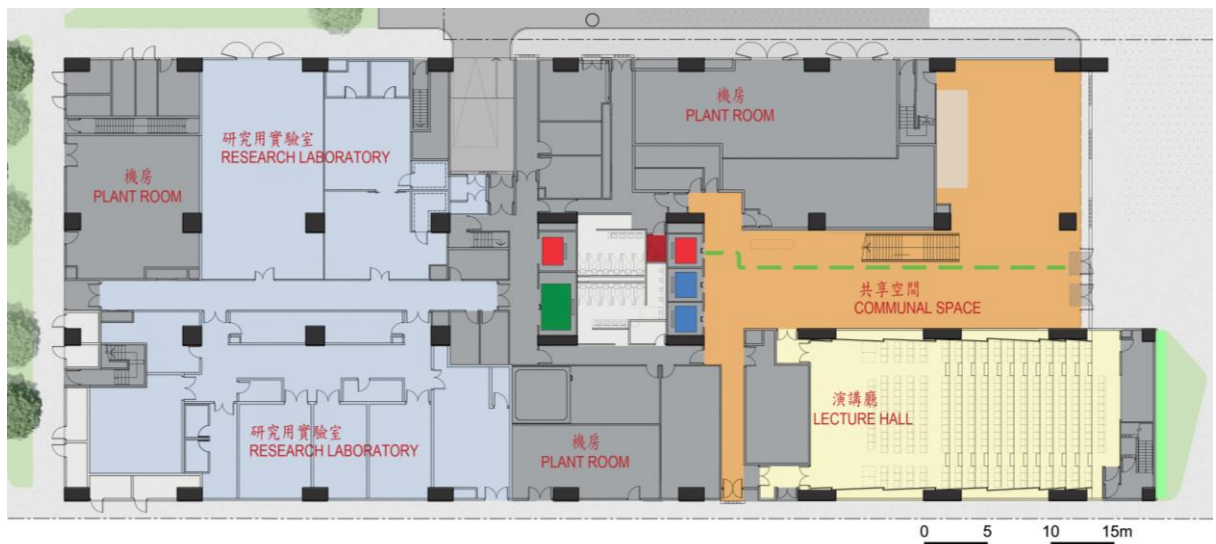
The Chinese University of Hong Kong

56EF - Centralised General Research Laboratory Complex (Block 2)

樓層平面圖 Floor plan













地庫平面圖
Basement Plan



地下平面圖
Ground Floor Plan

LEGEND:

 RESEARCH LABORATORY 研究用實驗室	 ACCESSIBLE LIFT 暢通易達升降機
 OFFICE 教職員辦公室	 PASSENGER LIFT 客用升降機
 CIRCULATION 通道	 SERVICE LIFT 送貨升降機
 PLANT ROOM 機房	 VERTICAL GREEN 直綠化垂
 ACCESSIBLE TOILET 暢通易達洗手間	 BARRIER FREE ACCESS 無障礙通道

香港中文大學

56EF – 綜合科研實驗大樓(第 2 座)

The Chinese University of Hong Kong

56EF - Centralised General Research Laboratory Complex (Block 2)

樓層平面圖 Floor plan



一樓平面圖











First Floor Plan



二樓平面圖

First Floor Plan

LEGEND:

 RESEARCH LABORATORY 研究用實驗室	 ACCESSIBLE LIFT 暢通易達升降機
 OFFICE 教職員辦公室	 PASSENGER LIFT 客用升降機
 CIRCULATION 通道	 SERVICE LIFT 送貨升降機
 PLANT ROOM 機房	 VERTICAL GREEN 直綠化垂
 ACCESSIBLE TOILET 暢通易達洗手間	 BARRIER FREE ACCESS 無障礙通道

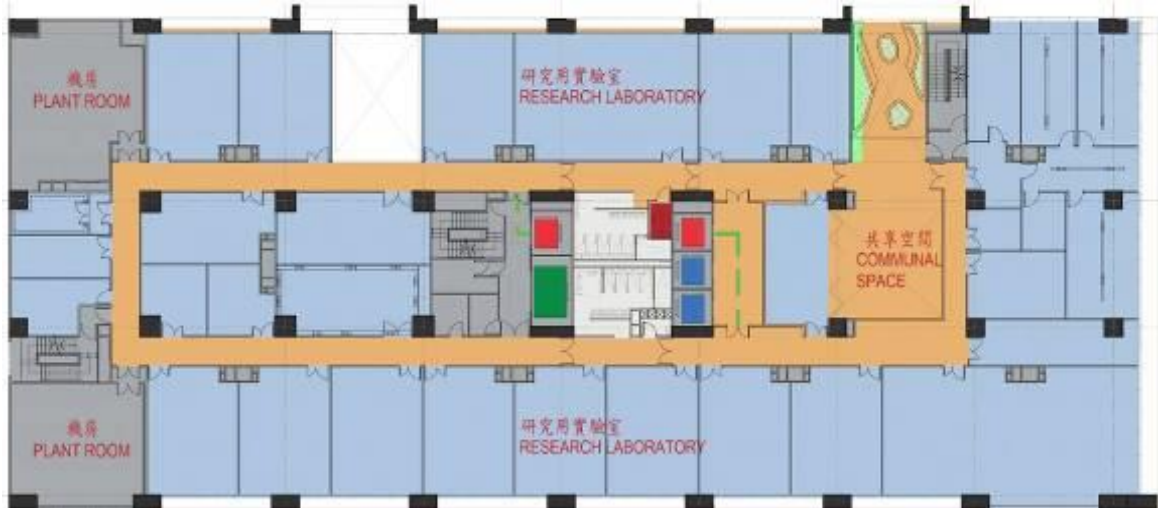
香港中文大學

56EF – 綜合科研實驗大樓(第 2 座)

The Chinese University of Hong Kong

56EF - Centralised General Research Laboratory Complex (Block 2)

樓層平面圖 Floor plan



三樓平面圖











Third Floor Plan



四樓平面圖

Fourth Floor Plan

LEGEND:

 RESEARCH LABORATORY 研究用實驗室	 ACCESSIBLE LIFT 暢通易達升降機
 OFFICE 教職員辦公室	 PASSENGER LIFT 客用升降機
 CIRCULATION 通道	 SERVICE LIFT 送貨升降機
 PLANT ROOM 機房	 VERTICAL GREEN 直綠化垂
 ACCESSIBLE TOILET 暢通易達洗手間	 BARRIER FREE ACCESS 無障礙通道

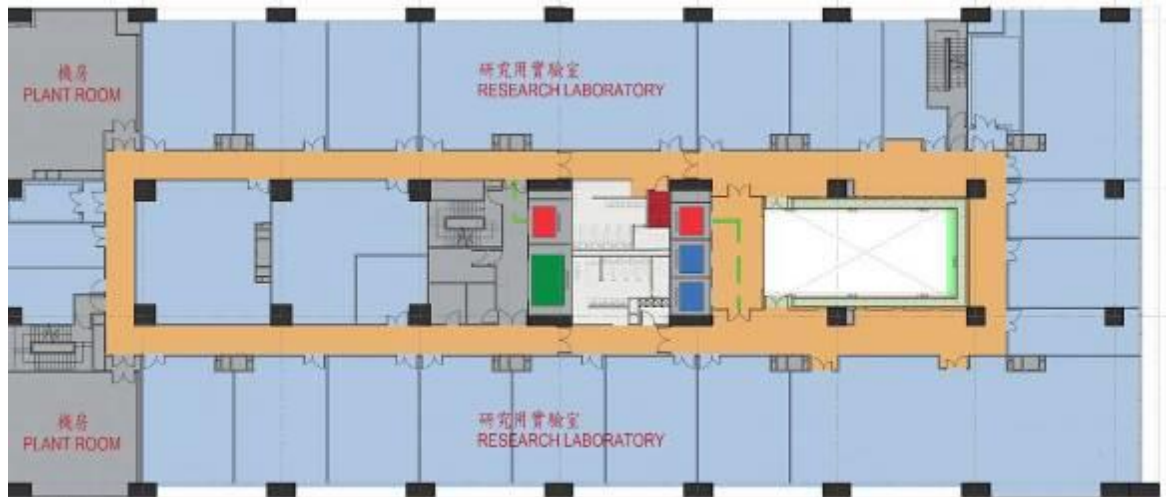
香港中文大學

56EF – 綜合科研實驗大樓(第 2 座)

The Chinese University of Hong Kong

56EF - Centralised General Research Laboratory Complex (Block 2)

樓層平面圖 Floor plan



五至七樓平面圖











Fifth to Seventh Floor Plan



天台平面圖

Roof Plan

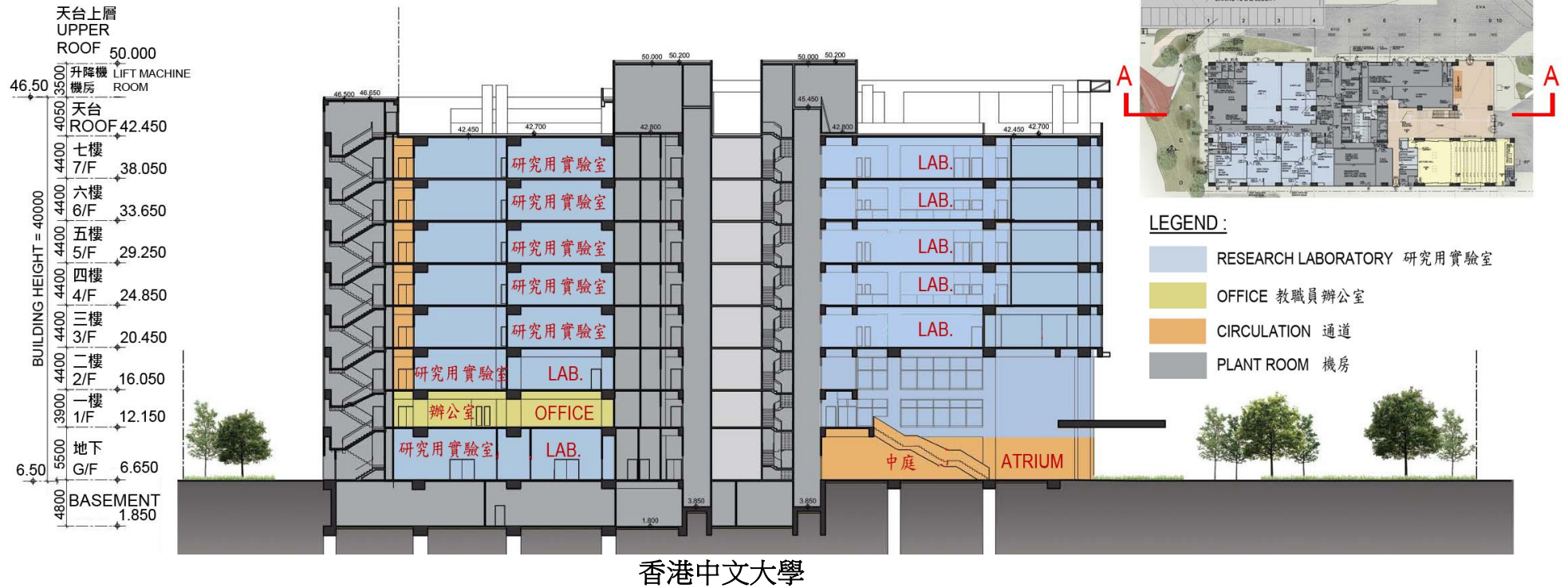
LEGEND:

 RESEARCH LABORATORY 研究用實驗室	 ACCESSIBLE LIFT 暢通易達升降機
 OFFICE 教職員辦公室	 PASSENGER LIFT 客用升降機
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56EF – 綜合科研實驗大樓(第 2 座)

The Chinese University of Hong Kong
56EF - Centralised General Research Laboratory Complex (Block 2)

Sectional Drawing A-A
截面圖 A-A

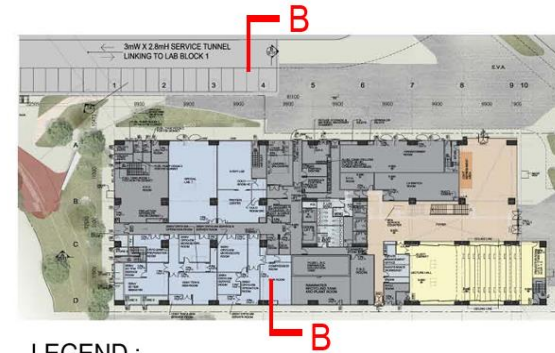
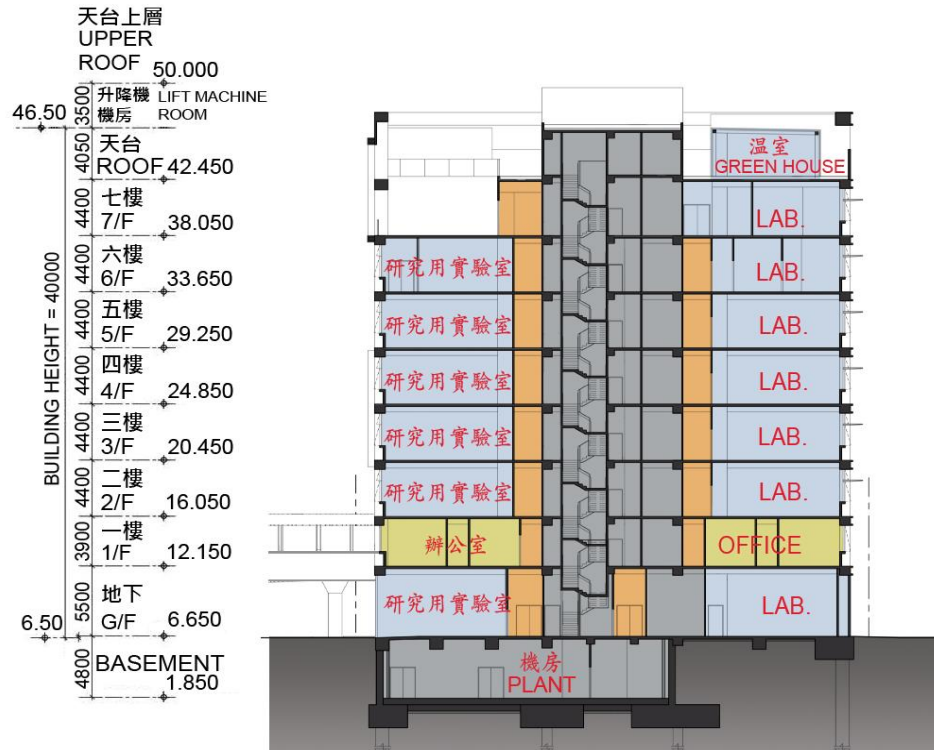


香港中文大學

56EF – 綜合科研實驗大樓(第 2 座)

The Chinese University of Hong Kong
56EF - Centralised General Research Laboratory Complex (Block 2)

Sectional Drawing B-B
截面圖 B-B



LEGEND :

- RESEARCH LABORATORY 研究用實驗室
- OFFICE 教職員辦公室
- CIRCULATION 通道
- PLANT ROOM 機房

The Chinese University of Hong Kong
56EF - Centralised General Research Laboratory Complex (Block 2)

Breakdown of estimates for consultants' fees and resident site staff costs
(in September 2020 prices)

		Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a) Consultants' fees for contract administration (Note 2)	Professional	-	-	-	8.3
	Technical	-	-	-	-
				Sub-total	8.3#
(b) Resident site staff (RSS) costs (Note 3)	Professional	-	-	-	-
	Technical	242	14	1.6	11.7
				Sub-total	11.7
Comprising –					
(i) Consultants' fees for management of RSS				1.0#	
(ii) Remuneration of RSS				10.7#	
				Total	20.0

*MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 applied to the average MPS salary point to estimate the cost of RSS employed direct by consultants (as at now, MPS salary point 14 = \$30,235 per month).
2. The consultants' fees for contract administration is calculated in accordance with the existing consultancy agreements. The construction phase of the assignment will only be executed subject to Finance Committee's approval to upgrade **56EF** to Category A.
3. The consultants' staff cost for site supervision is based on the estimates prepared by CUHK. We will only know the actual man-months and actual costs for site supervision after completion of the construction works.

Remarks

The figures in this Annex are shown in constant prices to correlate with the MPS salary point of the same year. The figures marked with # are shown in money-of-the-day prices in paragraph 7 of Enclosure 1.

The University of Hong Kong
56EG - Redevelopment of No. 2 University Drive (Building 1)

PROJECT SCOPE AND NATURE

The scope of the works involves the demolition of an existing five-storey staff quarters building and construction of a nine-storey research laboratory building on University Drive on the campus of the University of Hong Kong (HKU). The new building will provide approximately 7 100 square meters (m²) in net operational floor area (NOFA)¹, and the Faculty of Science and the Faculty of Engineering of HKU will be the major users of the proposed new building.

2. Upon completion of the project, the building will provide the following new facilities –

- (a) laboratories of about 4 200 m² in NOFA;
- (b) classrooms of about 1 800 m² in NOFA;
- (c) offices of about 1 000 m² in NOFA; and
- (d) study space of about 100 m² in NOFA.

3. A site plan, an artist's impression, floor plans and sectional drawings of the project are at **Annexes 1 to 4** respectively. HKU plans to commence the proposed works upon obtaining funding approval from the Finance Committee (FC) for target completion in around four years. To meet the works programme, HKU invited tender for proposed works in February 2020. Tender will only be awarded after obtaining FC's funding approval.

/JUSTIFICATION

¹ NOFA is the floor area actually allocated to the users of a building for carrying out the intended activities. Unlike the construction floor area which takes into account all areas within the building structure envelop, NOFA does not include areas for such facilities (if any) as toilets, bathrooms and shower rooms, lift lobbies, stair halls, public or shared corridors, stairwells, escalators and lift shafts, pipe or services ducts, barriers-free access facilities, gender mainstreaming facilities, refuse chutes and refuse rooms, balconies, verandas, open decks and flat roofs, parking spaces, loading and unloading areas and mechanical plant rooms, etc.

JUSTIFICATION

4. In support of the Government's policy of driving innovation and technology development in Hong Kong, HKU has been pursuing its long-term strategy to develop the eastern side of the campus into a science and engineering hub so as to provide additional space for academic and research activities. The research infrastructure will not only be used by researchers in the fields of STEM (Science, Technology, Engineering and Mathematics) but also support interdisciplinary research across a wide spectrum of subject areas. HKU therefore proposes to build a research laboratory building mainly for the development of science and engineering fields.

5. The new research laboratory building will be dedicated to the theme of molecular and macromolecular technology. It is anticipated that around 20 teams will conduct research in the new building, whereas the interior of the building will adopt an open plan design with shared space for study lounge with a view to facilitating interaction and collaboration. The manpower to be trained in these new facilities will fuel Hong Kong's endeavours in innovation and technology in various sectors, including energy and sustainability, the environment, healthcare, business, finance and education.

6. Specifically, the following laboratories are planned to be provided for and established in the new research laboratory building –

- (a) Core Analytical and Instrumental Facilities - The new research building will house a number of advanced analytical laboratories, including Mass spectrometry suite, Nuclear Magnetic Resonance suite and Microscopy suite, for supporting teaching and research in materials science related disciplines; and
- (b) Molecular and Macromolecular Technology Laboratories - The primary wet laboratories will provide a safe and quality environment for students to receive hands-on laboratory training in advanced molecular science, biomolecular and biomedical engineering as well as soft robotics disciplines.

/FINANCIAL

FINANCIAL IMPLICATIONS

7. We estimate the capital cost of the project to be \$599.9 million in money-of-the-day (MOD) prices, broken down as follows –

	\$ million (in MOD prices)
(a) Site formation	17.7
(b) Foundation ²	126.9
(c) Building ³	159.2
(d) Building services ⁴	164.2
(e) Drainage	2.7
(f) External works	2.2
(g) Soft landscaping	1.1
(h) Additional energy conservation measures	13.0
(i) Furniture, fixtures & equipment	40.9
(j) Consultants' fees	9.8
(i) contract administration	8.9
(ii) management of resident site staff (RSS)	0.9
(k) Remuneration of RSS	13.5

/(1)

² Foundation works cover construction of piles and all related works including tests and monitoring and sub-structure works below the lowest ground slab.

³ Building works cover construction of superstructure of the building.

⁴ Building services works cover electrical installations, ventilation and air-conditioning installations, fire services installations, lift and escalator installations and other miscellaneous installations.

	\$ million (in MOD prices)
(l) Contingencies	48.7
Total	<u>599.9</u>

8. HKU will engage consultants to undertake contract administration and site supervision for the project. A detailed breakdown of the estimates for consultant's fees and RSS costs by man-months is at **Annex 5**.

9. The construction floor area (CFA) of this project is approximately 14 118m². The estimated construction unit cost, represented by the building and the building services costs, is \$22,907 per m² of CFA in MOD prices. The Director of Architectural Services (D Arch S) considers the estimated construction unit cost reasonable as compared with similar projects for University Grants Committee (UGC)-funded universities.

10. Subject to approval, HKU plans to phase the expenditure as follows –

Year	\$ million (in MOD prices)
2021 – 2022	85.2
2022 – 2023	135.0
2023 – 2024	195.7
2024 – 2025	128.1
2025 – 2026	27.3
2026 – 2027	28.6
	<u>599.9</u>

11. We have derived the MOD estimates on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction output for the period 2021 to 2027. HKU will award the works on a lump-sum contract because HKU can clearly define the scope of works in advance. The contract will provide for price adjustments.

12. The project has no impact on tuition fees. The additional recurrent costs associated with this project will be absorbed by HKU. The proposal has no additional recurrent financial implication for the Government.

PUBLIC CONSULTATION

13. As the proposed project is located within HKU's campus, there are no other residential developments in its immediate vicinity apart from the student residential hostels and guesthouses of HKU.

14. HKU consulted the Culture, Leisure & Social Affairs Committee of the Central and Western District Council (C&WDC) in April 2019 and the Cultural, Education, Healthcare, Leisure & Social Affairs Committee of the C&WDC in May 2020 on the project proposal. Members had no objection to the proposed development of the research laboratory building. HKU also briefed and consulted its staff and students on the project at various committee meetings and no adverse comment was received.

15. We consulted the Legislative Council Panel on Education on 6 November 2020. Members supported submitting the funding proposal to the Public Works Subcommittee for consideration.

ENVIRONMENTAL IMPLICATIONS

16. This is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). The project will not cause long-term environmental impact. HKU has included in the project estimates the cost to implement suitable mitigation measures to control short-term environmental impacts.

/17.

17. During construction, HKU will control noise, dust and site run-off nuisances to within established standards and guidelines through the implementation of mitigation measures in the relevant contract. These include the use of silenced plants or quality powered mechanical equipment, mobile noise barriers, frequent cleaning and watering of the site, and the provision of wheel-washing facilities.

18. At the planning and design stages, HKU has considered measures (e.g. using metal site hoardings and signboards which can be recycled or reused in other projects) to reduce the generation of construction waste where possible. In addition, HKU will require the contractor to reuse inert construction waste (e.g. use of excavated materials for filling within the site) on site or in other suitable construction sites as far as possible, in order to minimize the disposal of inert construction waste at public fill reception facilities⁵. HKU will encourage the contractor to maximise the use of recycled / recyclable inert construction waste, and use of non-timber formwork to further reduce the generation of construction waste.

19. At the construction stage, HKU will require the contractor to submit for approval a plan setting out the waste management measures which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. HKU will ensure that the day-to-day operations on site comply with the approved plan. HKU will require the contractor whenever practicable to separate the inert portion from non-inert construction waste on site for disposal in appropriate facilities. HKU will control the disposal of inert construction waste and non-inert construction waste in public fill reception facilities and landfills respectively through a trip-ticket system.

20. HKU estimates that the project will generate in total about 9 000 tonnes of construction waste for structural element construction work and excavated soil. Of these, HKU will reuse about 1 800 tonnes (20%) of inert construction waste on site, deliver 1 350 tonnes (15%) of non-inert construction waste to landfills and deliver the remaining 5 850 tonnes (65%) of inert construction waste to public fill reception facilities. The total cost for disposal of

/construction

⁵ Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Disposal of inert construction waste at public fill reception facilities requires a license issued by the Director of Civil Engineering and Development.

construction waste to public fill reception facilities and landfill sites is estimated to be \$0.68 million for this project (based on a unit charge rate of \$71 per tonne for disposal at public fill reception facilities and \$200 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES

21. This project will adopt various forms of energy efficient features and renewable energy technologies, in particular –

- (a) variable speed drive for chillers;
- (b) demand control of supply air;
- (c) heat pump for space heating / dehumidification;
- (d) building energy management system; and
- (e) photovoltaic system.

22. For greening features, this project will provide greening provisions for better building environmental performance.

23. For recycled features, this project will adopt rainwater harvesting system for landscape irrigation.

24. The total estimated additional cost for adoption of the above features is around \$13.0 million (including \$3.9 million for energy efficient features), which has been included in the cost estimate of this project. The energy efficiency features will achieve 5.5% energy savings in the annual energy consumption with a payback period of about eight years.

HERITAGE IMPLICATIONS

25. The project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites / buildings, sites of archaeological interest and government historic sites identified by the Antiquities and Monuments Office.

/LAND

LAND ACQUISITION

26. The project does not require any land acquisition.

BACKGROUND INFORMATION

27. Under existing procedures, UGC-funded universities submit capital works proposals to UGC annually. UGC examines all these proposals carefully, with the professional advice provided by D Arch S who acts as UGC's Technical Adviser, and refers those supported proposals to the Government for consideration of bidding of funds under established mechanism.

28. We upgraded **56EG** to Category B in October 2008. HKU engaged consultants in December 2010 to carry out topographical survey, site investigation and to prepare preliminary design, detailed design and tender documents at a total estimated fee of about \$19.37 million. The services and works by the consultants are funded under block allocation **Subhead 8100EX** "Alterations, additions, repairs and improvements to the campuses of the UGC-funded institutions". The consultants have completed site investigation, preliminary design and detailed design of the project.

29. Of the 83 numbers of trees within the site boundary, 67 numbers of trees will be preserved. The proposed works will involve removal of 16 numbers of trees, all are to be felled. All trees to be removed are not important trees⁶. In compensation, HKU will incorporate tree planting proposal as part of the project, including estimated quantities of 16 numbers of trees.

/30.

⁶ "Important trees" refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

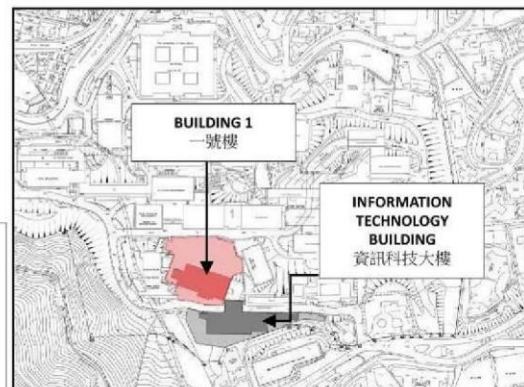
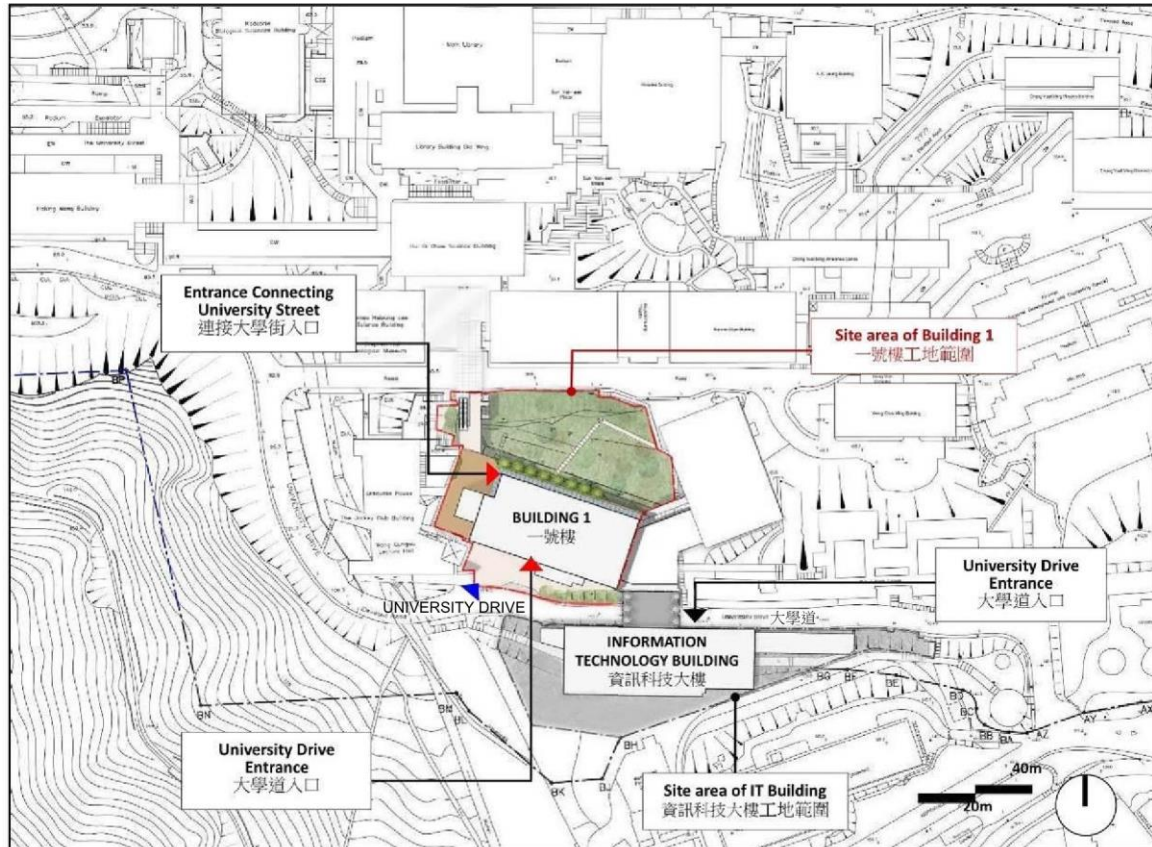
- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery of heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunk diameter equal or exceeding 1.0 metre (measured at 1.3 metres above ground level) or with height/canopy spread equal or exceeding 25 metres.

30. HKU estimates that the proposed works will create about 230 jobs (210 for labourers and another 20 for professional / technical staff) providing a total employment of 4 600 man-months.

香港大學
56EG – 大學道 2 號重建工程 (一號樓)

The University of Hong Kong
56EG – Redevelopment of No. 2 University Drive (Building 1)

Site Plan 工地平面圖



香港大學
56EG – 大學道 2 號重建工程 (一號樓)

The University of Hong Kong
56EG – Redevelopment of No. 2 University Drive (Building 1)



從西北面望向大樓的構思圖

View of the building from northwest (Artist's impression)



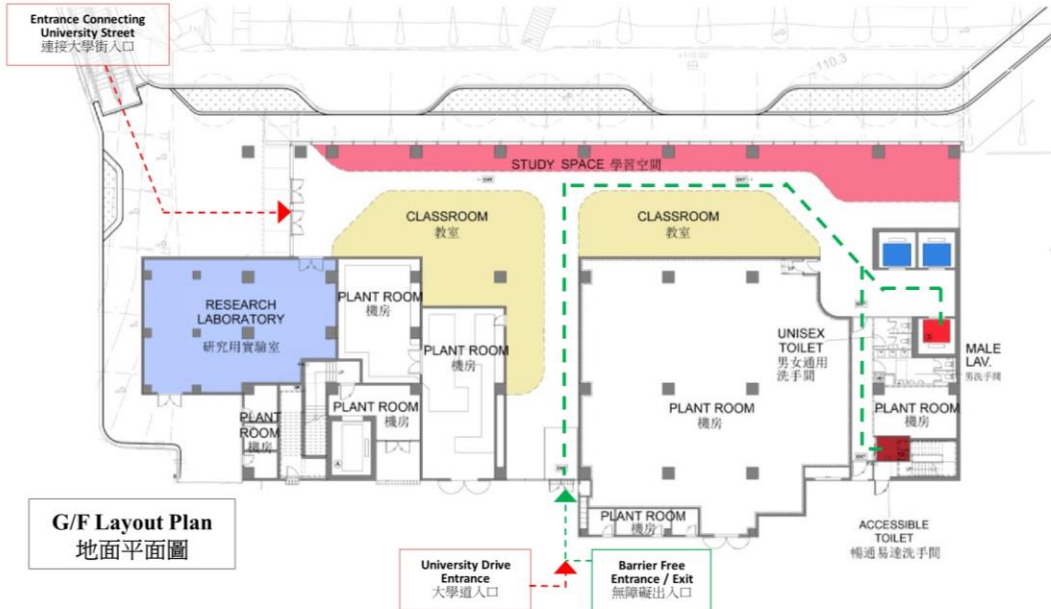
從西南面望向大樓的構思圖

View of the building from southwest (Artist's impression)

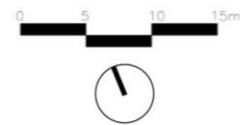
香港大學
56EG – 大學道 2 號重建工程 (一號樓)

The University of Hong Kong
56EG – Redevelopment of No. 2 University Drive (Building 1)

樓層平面圖 Floor Plan



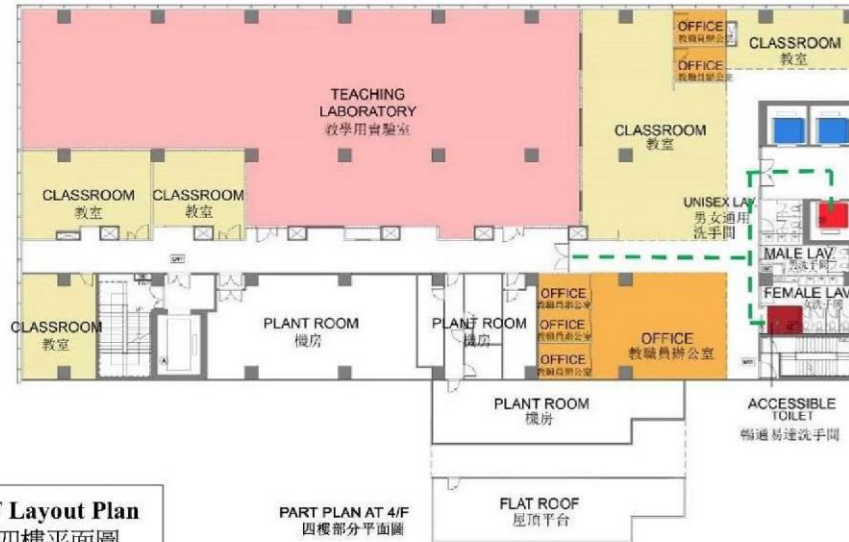
- LEGEND:**
- | | |
|---|--|
| CLASSROOM 教室 | OFFICE 教職員辦公室 |
| STUDY SPACE 學習空間 | ACCESSIBLE TOILET 暢通易達洗手間 |
| TEACHING LABORATORY 教學用實驗室 | ACCESSIBLE LIFT 暢通易達升降機 |
| OPEN LABORATORY 開放式實驗室 | PASSENGER LIFT 客用升降機 |
| RESEARCH LABORATORY 研究用實驗室 | BARRIER FREE ACCESS 無障礙通道 |



香港大學
56EG – 大學道 2 號重建工程 (一號樓)

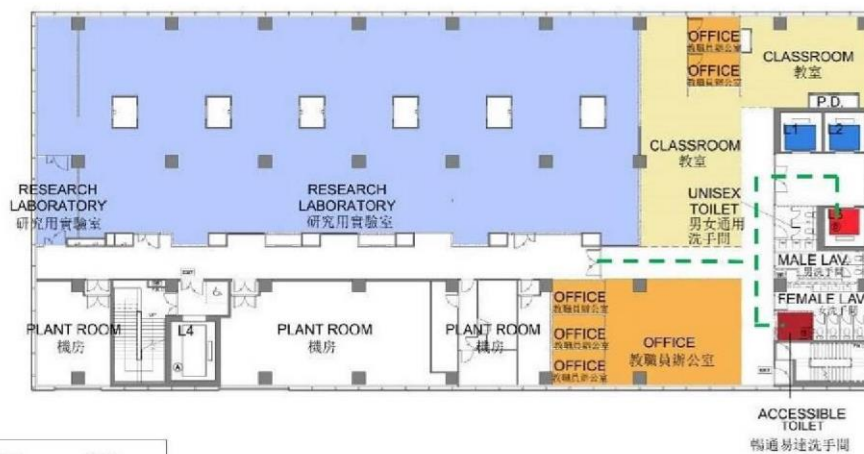
The University of Hong Kong
56EG – Redevelopment of No. 2 University Drive (Building 1)

樓層平面圖 Floor Plan



2/F to 4/F Layout Plan
二樓至四樓平面圖

PART PLAN AT 4/F
四樓部分平面圖



5/F to 8/F Layout Plan
五樓至八樓平面圖

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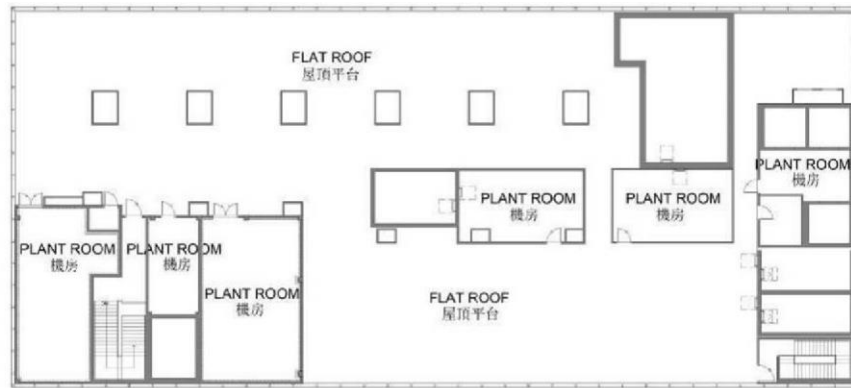
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| CLASSROOM 教室 | OFFICE 教職員辦公室 |
| STUDY SPACE 學習空間 | ACCESSIBLE TOILET 暢通易達洗手間 |
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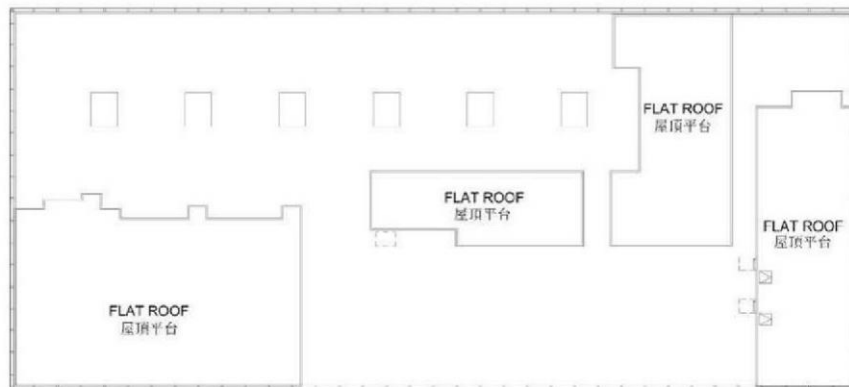
香港大學
56EG – 大學道 2 號重建工程 (一號樓)

The University of Hong Kong
56EG – Redevelopment of No. 2 University Drive (Building 1)

樓層平面圖 Floor Plan



R/F Layout Plan
屋頂平面圖



Upper R/F Layout Plan
上層屋頂平面圖



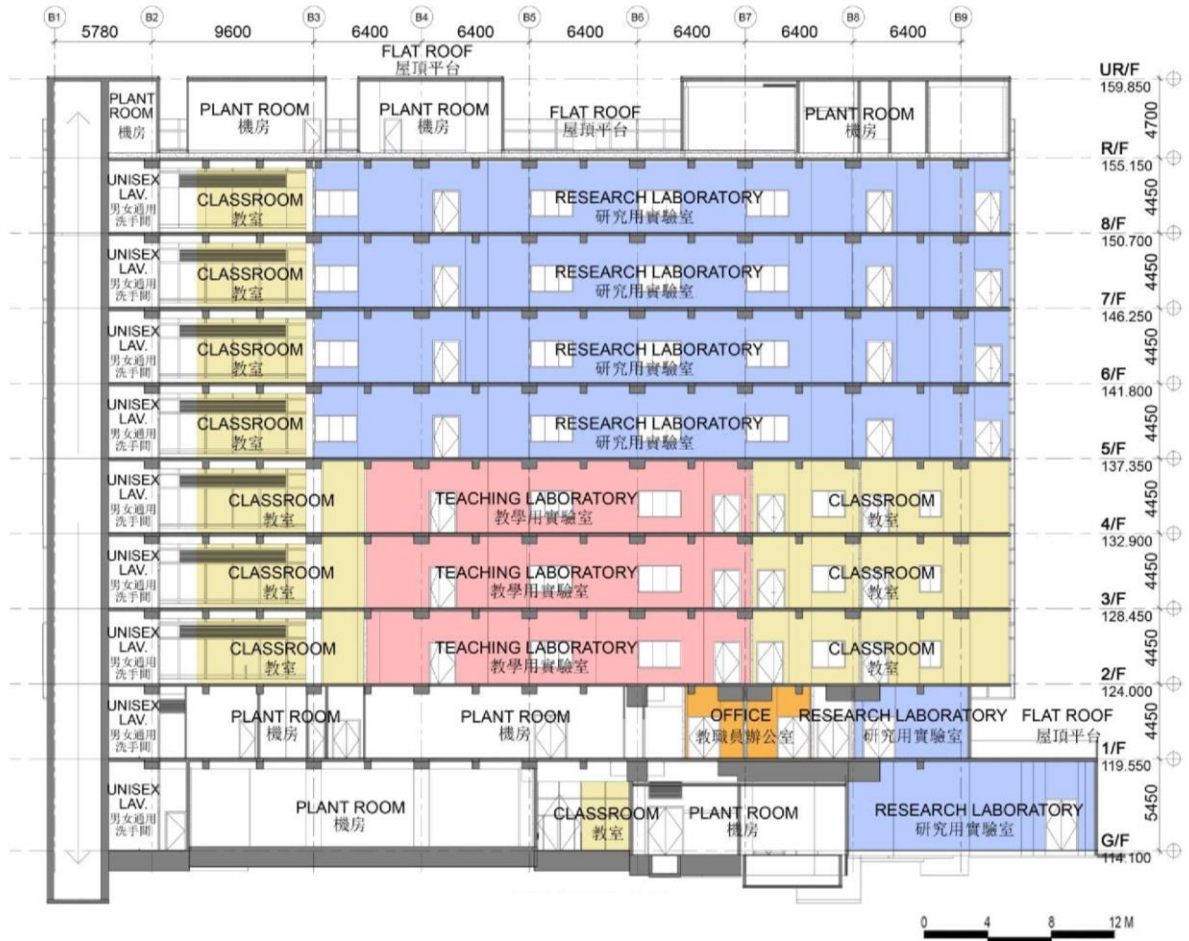
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|  CLASSROOM 教室 |  OFFICE 教職員辦公室 |
|  STUDY SPACE 學習空間 |  ACCESSIBLE TOILET 暢通易達洗手間 |
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









香港大學
56EG – 大學道 2 號重建工程 (一號樓)

The University of Hong Kong
56EG – Redevelopment of No. 2 University Drive (Building 1)

Sectional Drawing A-A
截面圖 A-A



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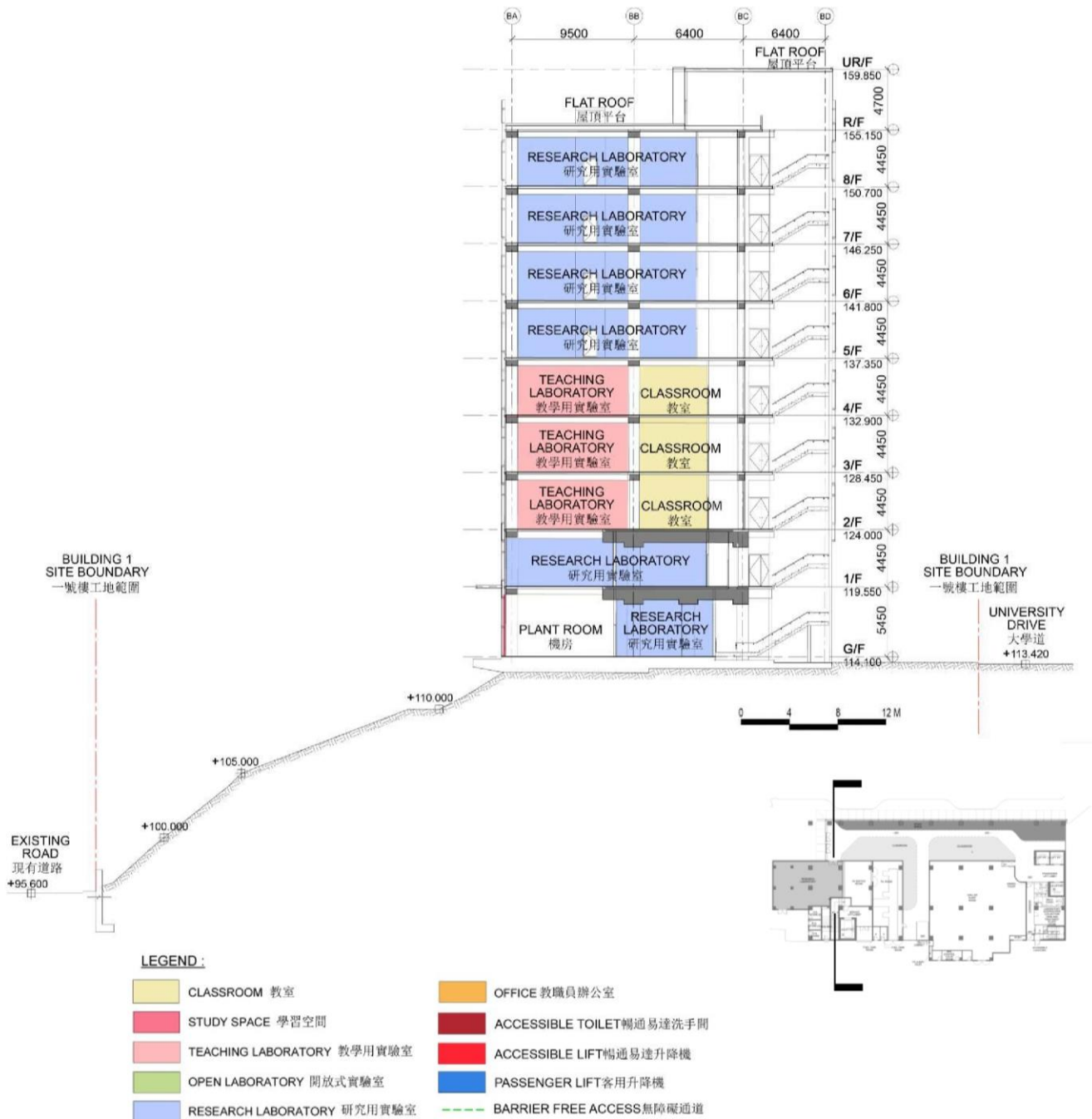
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|--|---|
|  CLASSROOM 教室 |  OFFICE 教職員辦公室 |
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香港大學
56EG – 大學道 2 號重建工程 (一號樓)

The University of Hong Kong
56EG – Redevelopment of No. 2 University Drive (Building 1)

Sectional Drawing B-B
截面圖 B-B



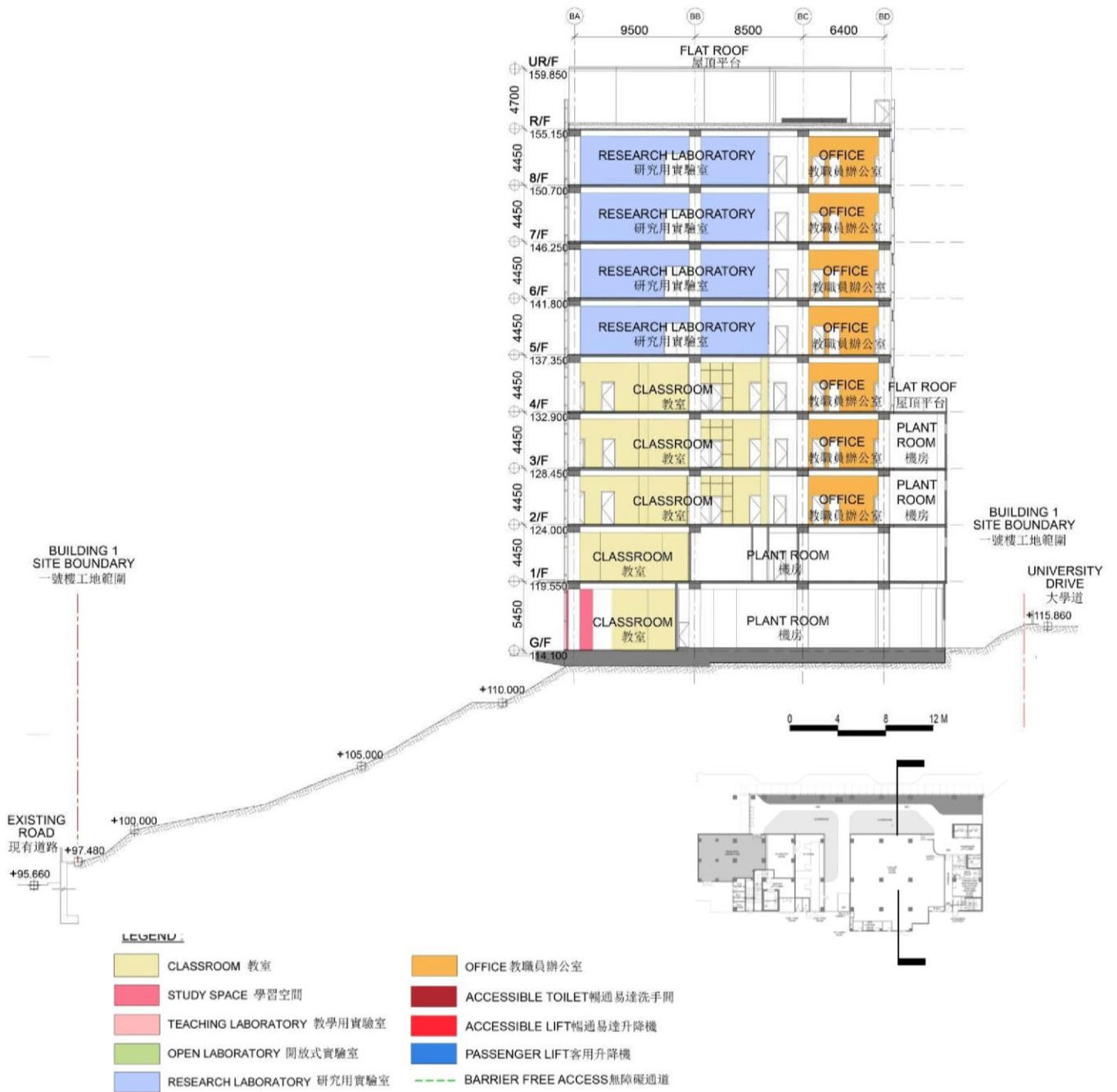
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| CLASSROOM 教室 | OFFICE 教職員辦公室 |
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香港大學
56EG – 大學道 2 號重建工程 (一號樓)

The University of Hong Kong
56EG – Redevelopment of No. 2 University Drive (Building 1)

Sectional Drawing C-C
截面圖 C-C



The University of Hong Kong
56EG – Redevelopment of No. 2 University Drive (Building 1)

**Breakdown of the estimates for consultants' fee and resident site staff costs
(in September 2020 prices)**

		Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fees (\$ million)
(a) Consultants' fees for contract administration ^(Note 2)	Professional	-	-	-	7.8
	Technical	-	-	-	-
				Sub-total	7.8#
(b) Resident site staff (RSS) cost ^(Note 3)	Professional	-	-	-	-
	Technical	261	14	1.6	12.6
				Sub-total	12.6
Comprising –					
(i) Consultants' fees for management of RSS				0.8#	
(ii) Remuneration of RSS				11.8#	
				Total	20.4

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS salary point to estimate the costs of RSS to be employed by the consultant (as at now, MPS salary point 14 = \$30,235 per month.)
2. The consultants' fees for contract administration are calculated in accordance with the existing consultancy agreements. The construction phase of the assignment will only be executed subject to Finance Committee's funding approval to upgrade **56EG** to Category A.
3. The consultants' staff cost for site supervision is based on the estimates prepared by HKU. We will only know the actual man-months and actual costs for site supervision after completion of the construction works.

Remarks

The figures in this Annex are shown in constant prices to correlate with the MPS salary point of the same year. The figures marked with # are shown in money-of-the-day prices in paragraph 7 of Enclosure 2.

**The University of Hong Kong
64EG - Information Technology Building at University Drive**

PROJECT SCOPE AND NATURE

The scope of the works involves the construction of an eight-storey information technology (IT) building on University Drive on the campus of the University of Hong Kong (HKU), adjacent to the proposed new research laboratory building (i.e. **56EG**). The new IT building will provide approximately 5 300 square meters (m²) in net operational floor area (NOFA)¹. The Information Technology Services and Technology Transfer Office of HKU will be the major users of the proposed new building.

2. Upon completion of the project, the building will provide the following new facilities –

- (a) IT laboratories of about 1 500 m² in NOFA;
- (b) data centre of about 1 100 m² in NOFA;
- (c) offices of about 350 m² in NOFA;
- (d) classrooms of about 250 m² in NOFA; and
- (e) common and supporting facilities of about 2 100 m² in NOFA.

3. A site plan, an artist's impression, floor plans and sectional drawings of the project are at **Annexes 1 to 4** respectively. HKU plans to commence the proposed works upon obtaining funding approval from the Finance Committee (FC) for target completion in around three years. To meet the works programme, HKU invited tender for proposed works in February 2020. Tender will only be awarded after obtaining FC's funding approval.

/JUSTIFICATION

¹ NOFA is the floor area actually allocated to the users of a building for carrying out the intended activities. Unlike the construction floor area which takes into account all areas within the building structure envelop, NOFA does not include areas for such facilities (if any) as toilets, bathrooms and shower rooms, lift lobbies, stair halls, public or shared corridors, stairwells, escalators and lift shafts, pipe or services ducts, barriers-free access facilities, gender mainstreaming facilities, refuse chutes and refuse rooms, balconies, verandas, open decks and flat roofs, parking spaces, loading and unloading areas and mechanical plant rooms, etc.

JUSTIFICATION

4. In support of the Government's policy of driving innovation and technology development in Hong Kong, HKU has been pursuing its long-term strategy to develop the eastern side of the campus into a science and engineering hub so as to provide additional space for academic and research activities. The research infrastructure will not only be used by researchers in the fields of STEM (Science, Technology, Engineering and Mathematics), but also support interdisciplinary research across a wide spectrum of subject areas. HKU therefore proposes to build a IT building for housing a data centre as well as teaching and learning facilities.

5. In addition to supporting research in IT, HKU plans to take the opportunity to re-organise its IT facilities which are currently scattered and dispersed in various locations on its campus. HKU has advised that there are substantial constraints in renovating its current data centres to meet its upcoming operational needs owing to the lack of space and limitation in the power supply of the existing premises. The new IT building will thus include a new data centre that will serve as a central hub of IT operations and equipment, with around 150 computer racks and related facilities to enhance the provision of IT service to members of the university community in the long run. Teaching and learning facilities will also be provided in the proposed building to equip students with the capability in harnessing IT to enhance their learning experience.

6. The interior of the new IT Building will adopt an open plan design to support interactive learning, innovation and entrepreneurship. For example, there will be co-working areas to encourage students and alumni to collaborate in early stage start-up IT projects, as well as shared space to facilitate meaningful exchanges among young innovators, entrepreneurs and pioneers.

FINANCIAL IMPLICATIONS

7. We estimate the capital cost of the project to be \$486.9 million in money-of-the-day (MOD) prices, broken down as follows –

/(a)

		\$ million (in MOD prices)
(a)	Site formation	41.0
(b)	Foundation	28.2
(c)	Building ²	119.7
(d)	Building services ³	152.1
(e)	Drainage	0.6
(f)	External works	3.8
(g)	Soft landscaping	0.4
(h)	Additional energy conservation measures	14.9
(i)	Furniture, fixtures & equipment	65.3
(j)	Consultants' fees	10.3
	(i) contract administration	9.6
	(ii) management of resident site staff (RSS)	0.7
(k)	Remuneration of RSS	11.6
(l)	Contingencies	39.0
	Total	486.9

/8.

² Building works cover construction of superstructure of the building.

³ Building services works cover electrical installations, ventilation and air-conditioning installations, fire services installations, lift and escalator installations and other miscellaneous installations.

8. HKU will engage consultants to undertake contract administration and site supervision for the project. A detailed breakdown of the estimate for consultant's fees and RSS costs by man-months is at **Annex 5**.

9. The construction floor area (CFA) of this project is approximately 9 672 m². The estimated construction unit cost, represented by the building and the building services costs, is \$28,102 per m² of CFA in MOD prices. The Director of Architectural Services (D Arch S) considers the estimated construction unit cost reasonable as compared with similar projects for the University Grants Committee (UGC)-funded universities.

10. Subject to approval, HKU plans to phase the expenditure as follows –

Year	\$ million (in MOD prices)
2021 – 2022	74.2
2022 – 2023	201.4
2023 – 2024	133.9
2024 – 2025	31.8
2025 – 2026	22.6
2026 – 2027	23.0
	<hr style="width: 100%; border: 0.5px solid black;"/> 486.9 <hr style="width: 100%; border: 0.5px solid black;"/>

11. We have derived the MOD estimates on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction output for the period 2021 to 2027. HKU will award the works on a lump-sum contract because HKU can clearly define the scope of works in advance. The contract will provide for price adjustments.

12. This project will be funded by the \$16-billion provision set aside for UGC-funded universities to enhance or refurbish campus facilities as announced in the 2019-20 Budget.

13. The project has no impact on tuition fees. The additional recurrent costs associated with this project will be absorbed by HKU. The proposal has no additional recurrent financial implication for the Government.

PUBLIC CONSULTATION

14. As the proposed project is located within HKU's campus, there are no other residential developments in its immediate vicinity apart from the student residential hostels and guesthouses of HKU.

15. HKU consulted the Cultural, Education, Healthcare, Leisure & Social Affairs Committee of the Central and Western District Council in May 2020 on the project proposal. Members had no objection to the proposed development of IT building. HKU also briefed and consulted its staff and students on the project at various committee meetings and no adverse comment was received.

16. We consulted the Legislative Council Panel on Education on 6 November 2020. Members supported submitting the funding proposal to the Public Works Subcommittee for consideration.

ENVIRONMENTAL IMPLICATIONS

17. This is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). The project will not cause long-term environmental impact. HKU has included in the project estimates the cost to implement suitable mitigation measures to control short-term environmental impacts.

18. During construction, HKU will control noise, dust and site run-off nuisances to within established standards and guidelines through the implementation of mitigation measures in the relevant contract. These include the use of silenced plants or quality powered mechanical equipment, mobile noise barriers, frequent cleaning and watering of the site, and the provision of wheel-washing facilities.

/19.

19. At the planning and design stages, HKU has considered measures (e.g. using metal site hoardings and signboards which can be recycled or reused in other projects) to reduce the generation of construction waste where possible. In addition, HKU will require the contractor to reuse inert construction waste (e.g. use of excavated materials for filling within the site) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste at public fill reception facilities⁴. HKU will encourage the contractor to maximise the use of recycled / recyclable inert construction waste, and use of non-timber formwork to further reduce the generation of construction waste.

20. At the construction stage, HKU will require the contractor to submit for approval a plan setting out the waste management measures which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. HKU will ensure that the day-to-day operations on site comply with the approved plan. HKU will require the contractor whenever practicable to separate the inert portion from non-inert construction waste on site for disposal in appropriate facilities. HKU will control the disposal of inert construction waste and non-inert construction waste in public fill reception facilities and landfills respectively through a trip-ticket system.

21. HKU estimates that the project will generate in total about 9 850 tonnes of construction waste for structural element construction work and excavated soil. Of these, HKU will reuse about 1 970 tonnes (20%) of inert construction waste on site, deliver 1 400 tonnes (14.2%) of non-inert construction waste to landfills and deliver the remaining 6 480 tonnes (65.8%) of inert construction waste to public fill reception facilities. The total cost for disposal of construction waste to public fill reception facilities and landfill sites is estimated to be \$0.74 million for this project (based on a unit charge rate of \$71 per tonne for disposal at public fill reception facilities and \$200 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

/ENERGY

⁴ Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Disposal of inert construction waste at public fill reception facilities requires a license issued by the Director of Civil Engineering and Development.

ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES

22. This project will adopt various forms of energy efficient features and renewable energy technologies, in particular –

- (a) variable speed drive for chillers;
- (b) demand control of supply air;
- (c) heat pump for space heating / dehumidification;
- (d) building energy management system; and
- (e) photovoltaic system.

23. For greening features, this project will provide landscape on part of the roof for environmental and amenity benefits.

24. For recycled features, this project will adopt rainwater harvesting system for landscape irrigation.

25. The total estimated additional cost for adoption of the above features is around \$14.9 million (including \$6.9 million for energy efficient features), which has been included in the cost estimates of this project. The energy efficiency features will achieve 5.5% energy savings in the annual energy consumption with a payback period of about eight years.

HERITAGE IMPLICATIONS

26. The project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites / buildings, sites of archaeological interest and government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

27. The project does not require any land acquisition.

/BACKGROUND

BACKGROUND INFORMATION

28. Under existing procedures, UGC-funded universities submit capital works proposals to UGC annually. UGC examines all these proposals carefully, with the professional advice provided by D Arch S who acts as UGC's Technical Adviser, and refers those supported proposals to the Government for consideration of bidding of funds under established mechanism.

29. We upgraded **64EG** to Category B in October 2017. HKU engaged consultants in June 2019 to carry out topographical survey, site investigation and to prepare preliminary design, detailed design and tender documents at a total estimated fee of about \$23.47 million. The services and works by the consultants are funded under block allocation **Subhead 8100EX** "Alterations, additions, repairs and improvements to the campuses of the UGC-funded institutions". The consultants have completed site investigation, preliminary design and detailed design of the project.

30. Of the 124 trees within the site boundary, 49 numbers of trees will be preserved. The proposed works will involve removal of 75 numbers of trees, all are to be felled. All trees to be removed are not important trees⁵ In compensation, HKU will incorporate tree planting proposals as part of the project, including estimated quantities of 42 numbers of trees and 56 numbers of whips trees.

31. HKU estimates that the proposed works will create about 230 jobs (210 for labourers and another 20 for professional / technical staff) providing a total employment of 3 700 man-months.

/32.

⁵ "Important trees" refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

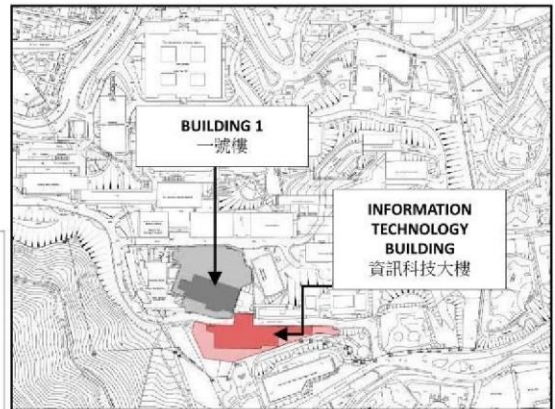
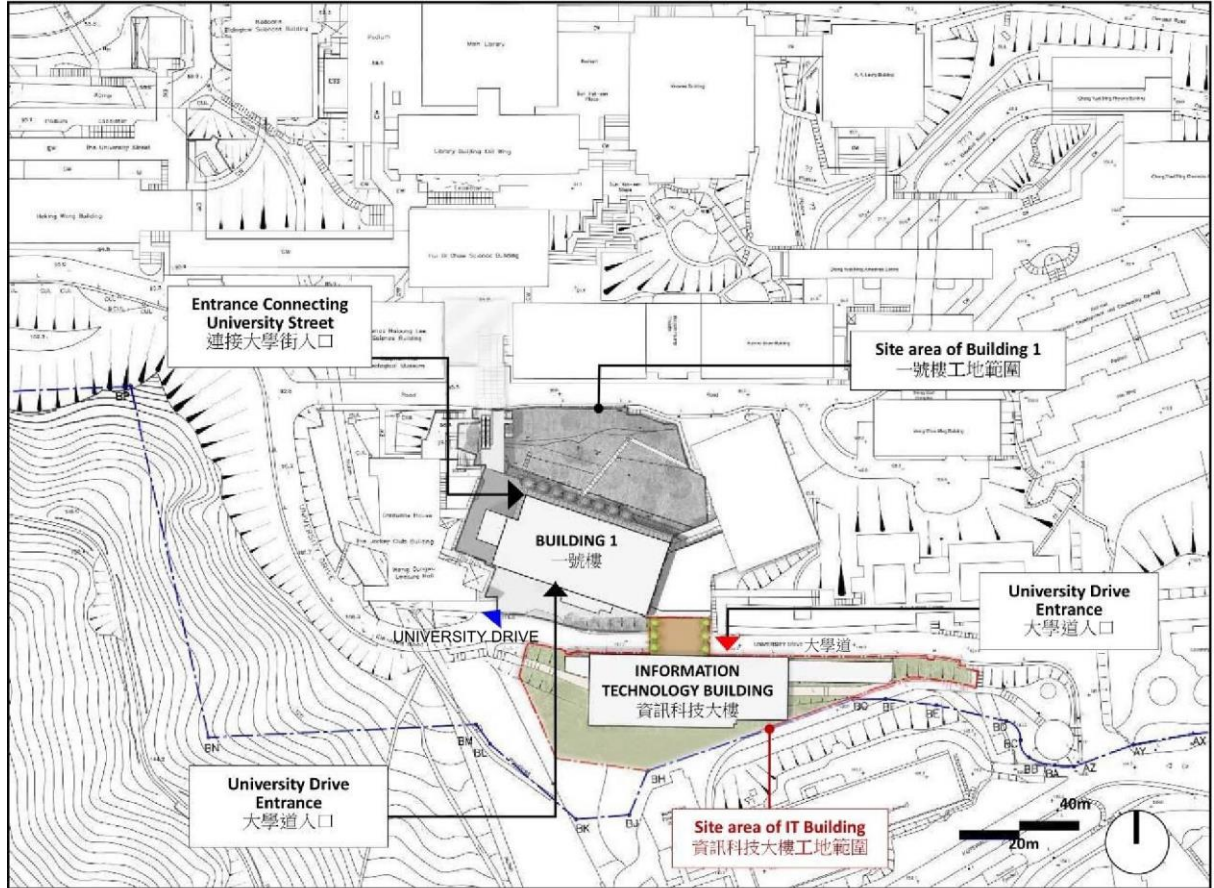
- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery of heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunk diameter equal or exceeding 1.0 metre (measured at 1.3 metres above ground level) or with height/canopy spread equal or exceeding 25 metres.

32. We briefed the Panel on Education on 6 November 2020. The project estimate then was \$561.8 million. As mentioned in paragraph 3 above, HKU invited tenders for the proposed works. Based on the returned tender prices, we have now updated the project estimates. We consider that the latest estimate, which is 13.3% lower than our earlier estimate as stated in Panel paper (LC Paper No. CB(4)72/20-21(02)) has reflected the prevailing market situation and should be adequate to deliver the proposed works with the same project scope.

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工地平面圖 Site plan



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從東北面望向大樓的構思圖
View of the building from northeast (Artist's impression)

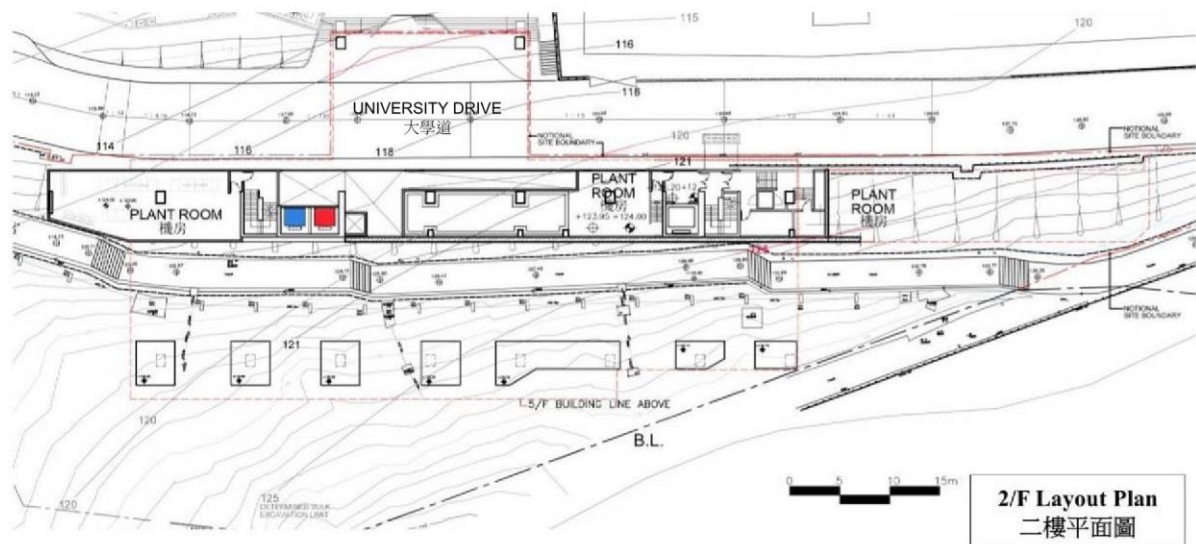
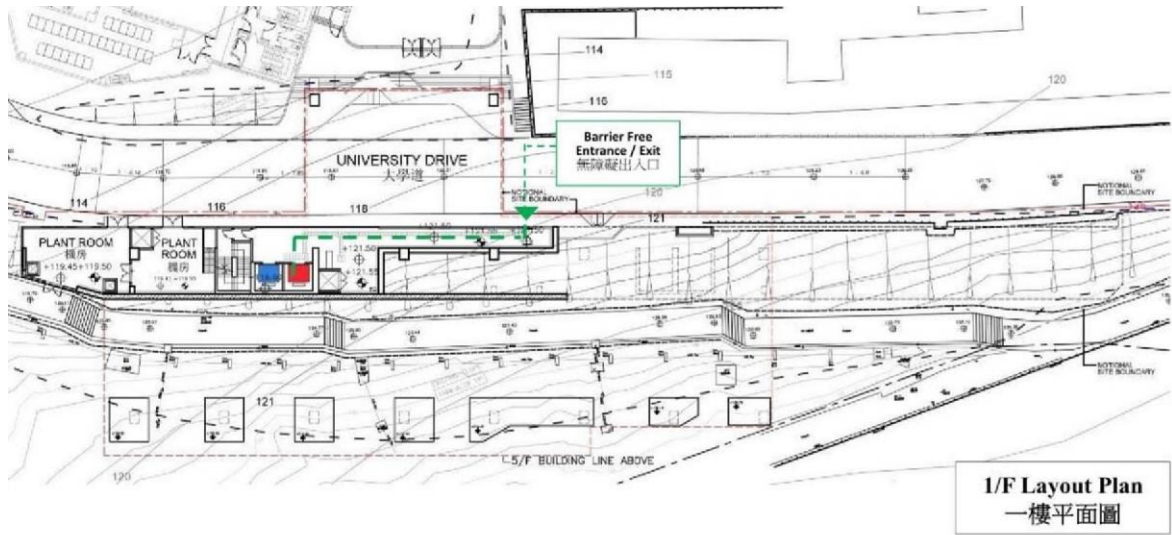


從西南面望向大樓的構思圖
View of the building from southwest (Artist's impression)










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樓層平面圖 Floor Plan



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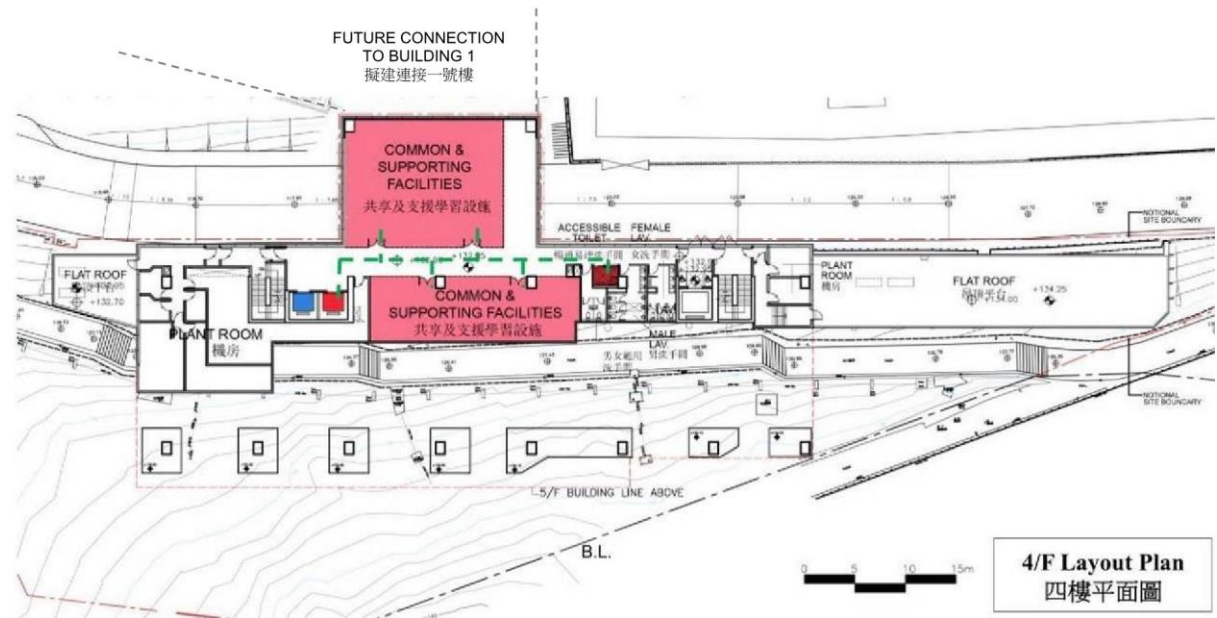
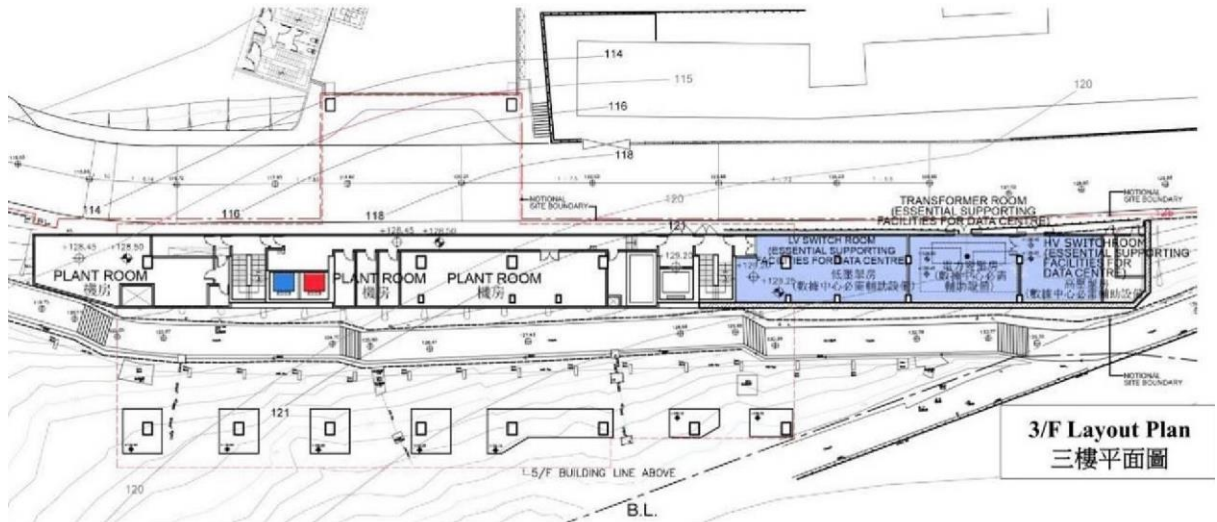
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樓層平面圖 Floor Plan



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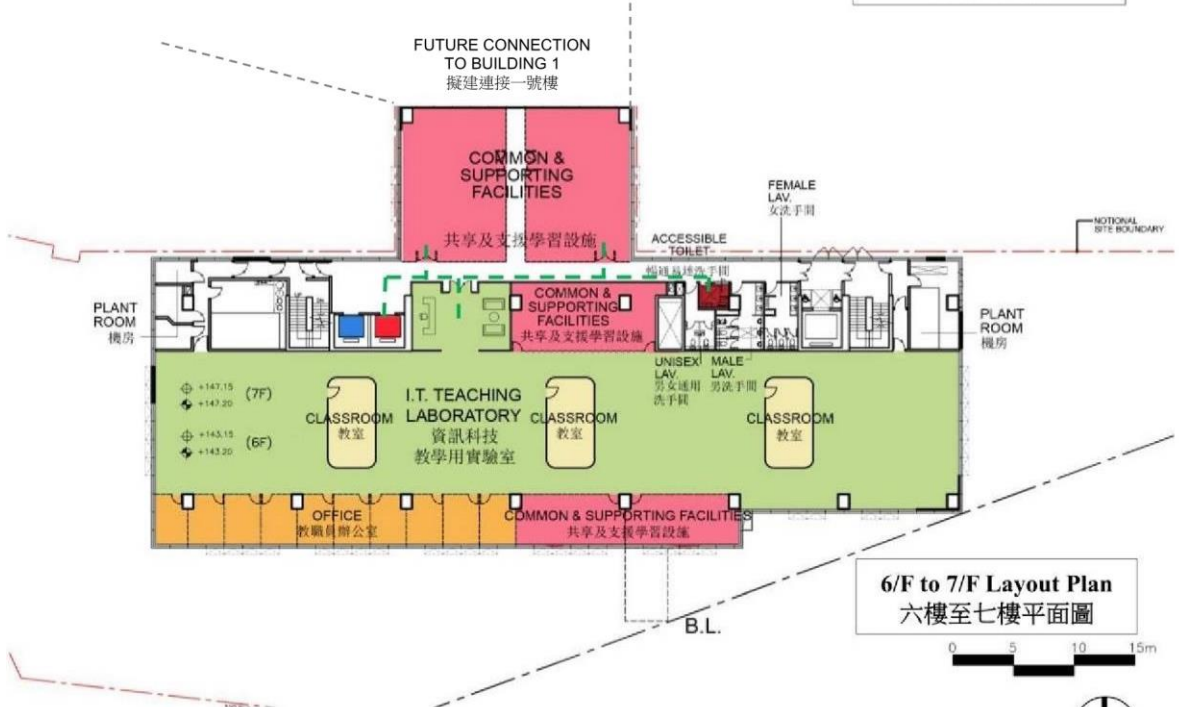
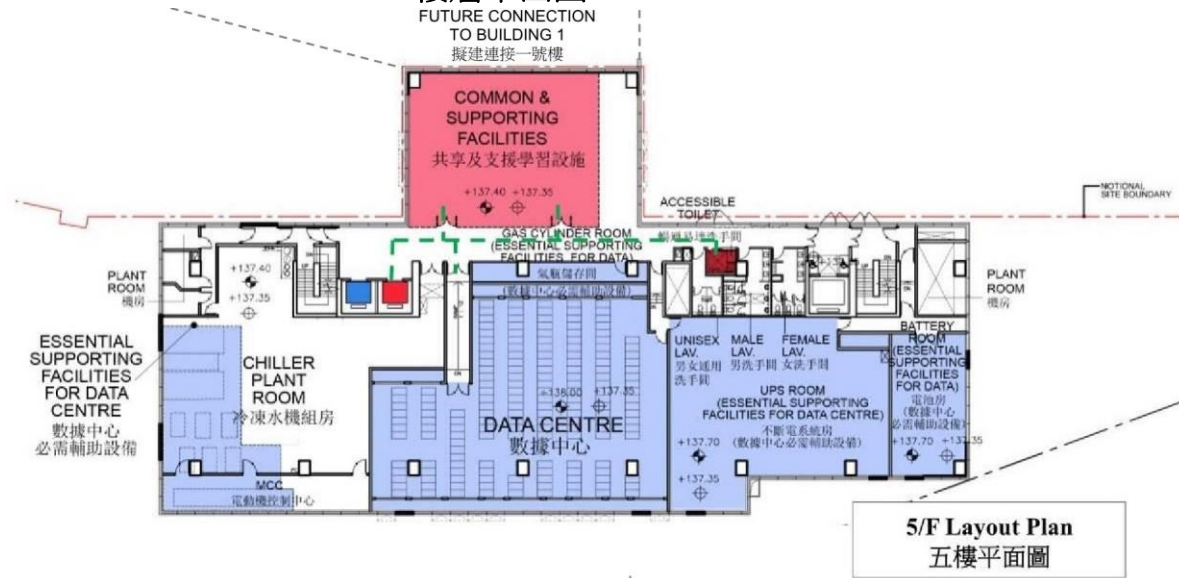
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樓層平面圖 Floor Plan



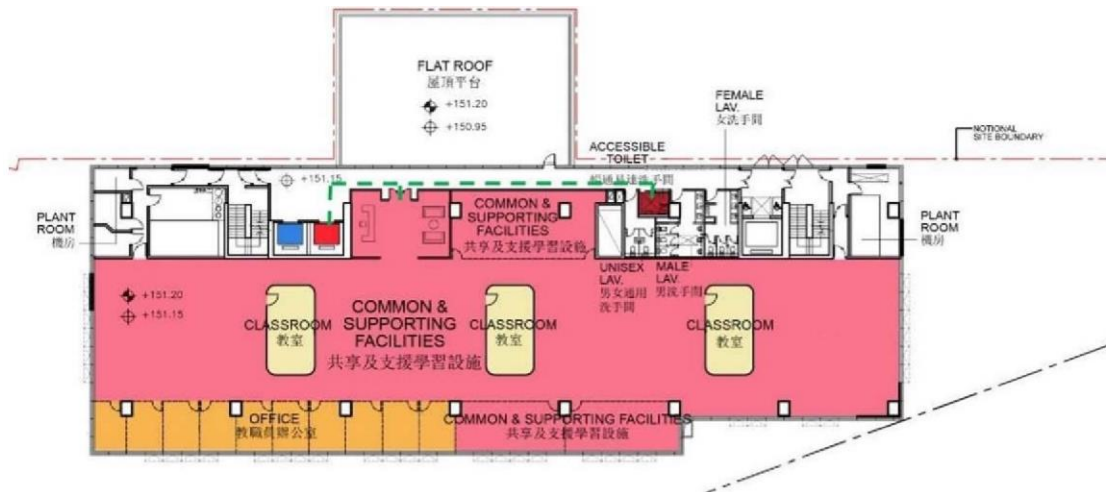
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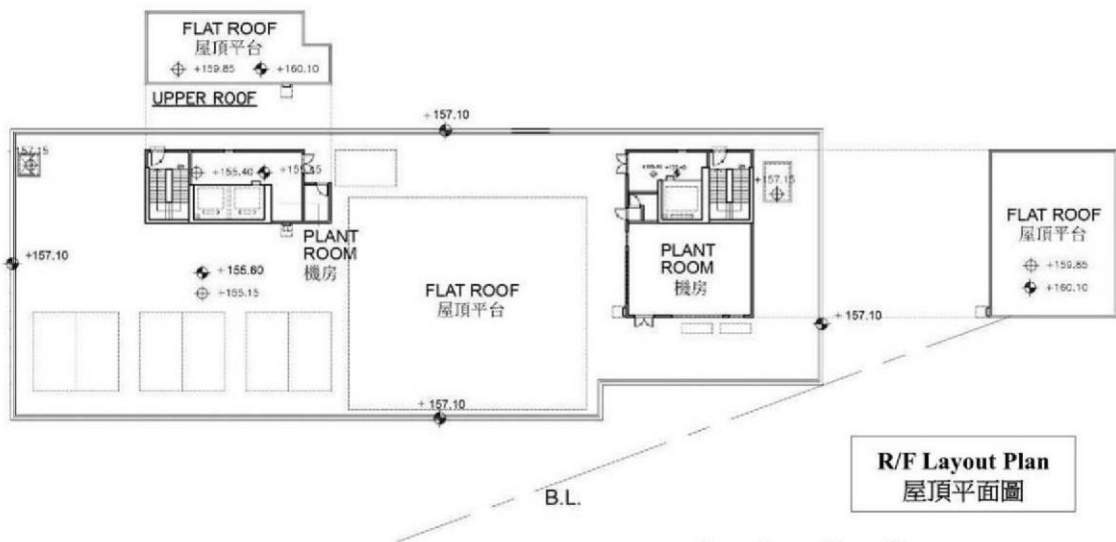
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樓層平面圖 Floor Plan











8/F Layout Plan
八樓平面圖



R/F Layout Plan
屋頂平面圖

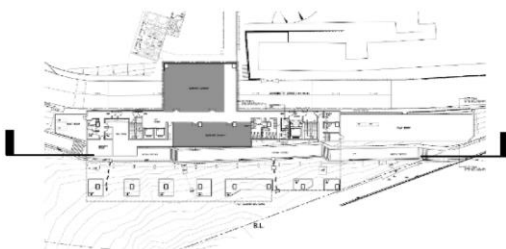
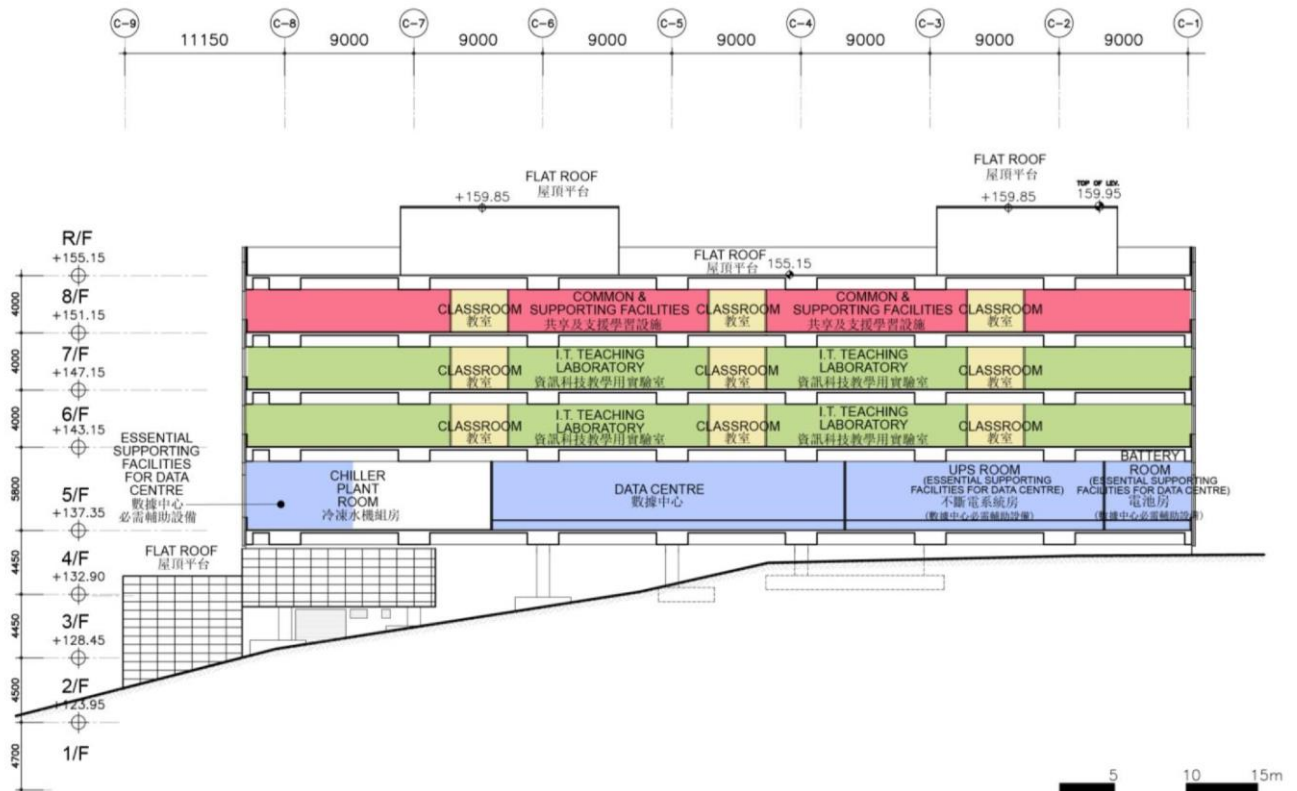
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




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Sectional Drawing A-A
截面圖 A-A



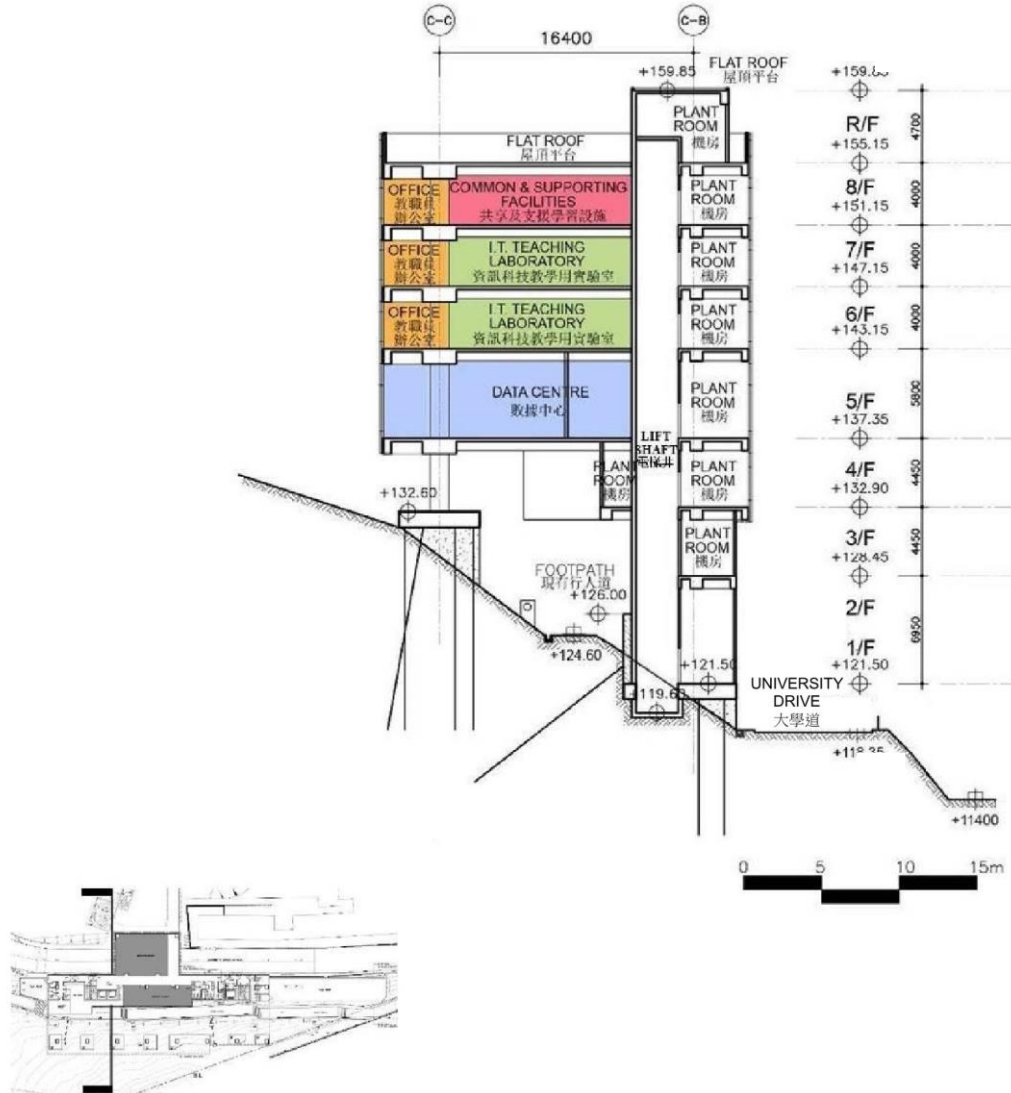
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Sectional Drawing B-B
截面圖 B-B



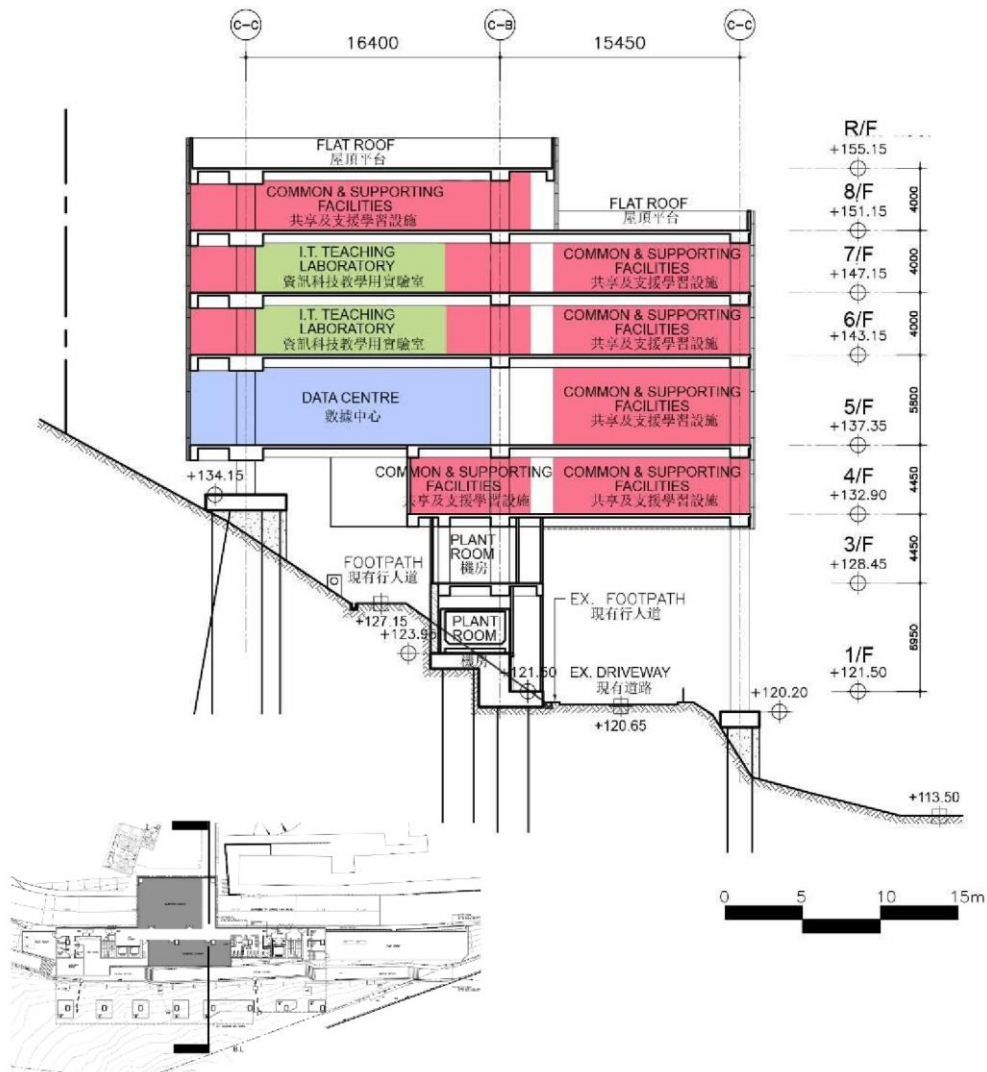
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Sectional Drawing C-C
截面圖 C-C



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**Breakdown of the estimates for consultants' fee and resident site staff costs
(in September 2020 prices)**

		Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fees (\$ million)
(a) Consultants' fees for contract administration ^(Note 2)	Professional	-	-	-	8.6
	Technical	-	-	-	-
	Sub-total				8.6#
(b) Resident site staff (RSS) cost ^(Note 3)	Professional	-	-	-	-
	Technical	224	14	1.6	10.8
	Sub-total				10.8
Comprising –					
(i) Consultants' fees for management of RSS				0.6#	
(ii) Remuneration of RSS				10.2#	
	Total				19.4

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS salary point to estimate the costs of RSS to be employed by the consultant (as at now, MPS salary point 14 = \$30,235 per month.)
2. The consultants' fees for contract administration are calculated in accordance with the existing consultancy agreements. The construction phase of the assignment will only be executed subject to Finance Committee's funding approval to upgrade 64EG to Category A.
3. The consultants' staff cost for site supervision is based on the estimates prepared by HKU. We will only know the actual man-months and actual costs for site supervision after completion of the construction works.

Remarks

The figures in this Annex are shown in constant prices to correlate with the MPS salary point of the same year. The figures marked with # are shown in money-of-the-day prices in paragraph 7 of Enclosure 3.