ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 - BUILDINGS

Public Safety – Fire services

174BF - Construction of fire station-cum-ambulance depot with departmental quarters and facilities in Area 72, Tseung Kwan O

Members are invited to recommend to the Finance Committee the upgrading of **174BF** to Category A at an estimated cost of \$655.0 million in money-of-the-day prices.

PROBLEM

There is a continuous increase in the demand for fire and emergency ambulance services in Tseung Kwan O (TKO) town centre and Tiu Keng Leng new town areas (TKLNTAs) as a result of the rapid development and population growth in the areas. Furthermore, it is anticipated that there will be increasing demand for departmental quarters (DQs) for married rank and file (R&F) members in the Fire Services Department (FSD), alongside the existing shortfall. Separately, the existing arrangement of various FSD facilities (e.g. the store of the Community Emergency Preparedness Division (CEPD), the parking spaces for the Fire Safety Education Bus (FSEB) and the Emergency Preparedness Education Bus (EPEB) and the office of the Fire Service Installations Task Force (FSITF)) being situated in different locations is not desirable from operation perspective.

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Security, proposes to upgrade **174BF** to Category A at an estimated cost of \$655.0 million in money-of-the-day (MOD) prices for the construction of

(the Project).

PROJECT SCOPE AND NATURE

3. The Project site occupies an area of about 3 015 square metres (m^2) . A 17-storey building with a rooftop will be constructed under the Project. The proposed scope of the Project includes –

- (i) construction of FSAD with a 5-bay appliance room;
- (ii) reprovisioning of the CEPD store;
- (iii) reprovisioning of the office of FSITF;
- (iv) provision of outdoor covered parking spaces for FSD operational vehicles (including FSEB and EPEB) and outdoor parking spaces for DQs (including 21 car parking spaces and 2 motorcycle parking spaces); and
- (v) provision of 132 H-grade DQ units 1 and related facilities².

4. A location and site plan, layout plans, a sectional drawing, an artist's impression and a barrier-free access plan for the Project are at **Enclosures 1 to 12** respectively.

5. We plan to commence the proposed works upon obtaining funding approval from the Finance Committee for target completion in around three years.

/JUSTIFICATION

¹ Government quarters are graded as appropriate having regard to their size, location, view, environment, facilities and amenities. The floor area of each of the proposed H-grade DQ units is about 50 m².

² The facilities include a building management office and a multi-function room of about 18m² which will primarily serve as a meeting room for the residents' association.

JUSTIFICATION

A five-bay appliance room FSAD

6. In recent years, a substantial number of buildings, including residential development projects, government institutions, as well as community and commercial facilities, have been built in TKO town centre and TKLNTAs. It is anticipated that the demand for fire and emergency ambulance services in these areas will increase continuously as a result of the population growth.

7. Under the fire risk categorisation³ adopted by FSD, TKO town centre and TKLNTAs are classified as "congested built-up area" for which FSD pledges to meet 92.5% of all building fire calls within a graded response time $(GRT)^4$ of six minutes (including a travelling time of four minutes)⁵. At present, fire services for these areas are covered by the Po Lam Fire Station (FStn) and the Tai Chik Sha FSAD, which are quite far away from the areas (about four kilometres). For such distances, fire appliances will generally take about eight minutes to reach these areas, falling short of FSD's performance pledge. Therefore, there is a need to construct a FStn to ensure adequate fire services coverage for the abovementioned areas.

8. As regards emergency ambulance services, TKO town centre and TKLNTAs are at present served by ambulances deployed at the Po Lam Ambulance Depot and the Tai Chik Sha FSAD. With the development and population growth in the abovementioned areas, it is anticipated that the demand for emergency ambulance services in the areas will increase continuously. FSD considers it necessary to set up a new ambulance depot to meet the ever-growing demand for emergency ambulance services in these two areas.

9. Based on the above various factors, it is necessary to construct a FSAD in Area 72 of TKO. The proposed FSAD will have a five-bay appliance room for accommodating fire appliances and ambulances.

/DQs

³ It refers to a system adopted in assessing the level of fire risk for a particular area. Assessment criteria include residential density, intensity of development, building height index and total gross floor area utilisation.

⁴ It refers to the time interval between the time of receipt of a building fire call and the arrival of fire appliances at scenes.

⁵ 92.5% is FSD's average target for the overall fire calls at "congested built-up area" in Hong Kong.

DQs

10. FSD has all along followed the Government's established policy to provide DQs for eligible disciplined services staff, so as to attract, retain and motivate staff. As at 1 May 2021, FSD had a total of 5 722 R&F staff eligible for DQs, but there were only 3 909 DQ units available for allocation. The shortage of units reached 1 813 with a shortfall rate of about 32%. Amongst others, the shortage of H-grade DQ units is more prominent. The shortage has been on the rise comparing with the shortfall of 1 542 units and shortfall rate of 29% in 2012. The current waiting time for R&F staff DQs is about 6 years on average.

11. To provide high quality emergency services to members of the public, the Government relies on a professional fire services and ambulance workforce. Some new FStns and FSADs will commence service in the coming years, such as the airside/landside FStns of the Third Runway System of the airport and the FSAD at the Lok Ma Chau Loop. FSD needs to recruit additional staff (including R&F staff) to meet the manpower demand. It is anticipated that this will increase the demand for DQ units, driving up the shortfall rate of DQ units. To alleviate the overall shortage of DQ units⁶, we propose to provide 132 H-grade DQ units at the above construction project of FSAD in Area 72 of TKO⁷. This is also in line with the Government's policy objective of making optimal use of land resources.

Reprovisioning of FSD Facilities

12. Besides, FSD proposes to reprovision the following facilities at the proposed FSAD to optimise site utilisation, –

- (i) CEPD store;
- (ii) the office of FSITF; and
- (iii) parking spaces for FSEB and EPEB.

/13.

⁶ Apart from FSD, there is still shortage of DQs for married R&F staff in the Immigration Department, Correctional Services Department, the Customs and Excise Department and the Government Flying Service. As at 1 May 2021, there were a total of about 6 800 R&F staff in these four disciplined services eligible for DQs and there were only about 5 400 DQ units available for allocation with shortfall rate of about 21%.

⁷ Taking into account the shortfall rates of each department and related factors, some of the DQ units of this project will be allocated to R&F staff of the Immigration Department and officer grade staff of the Government Flying Service with pay scale similar to R&F staff of other disciplined services.

CEPD store⁸ was originally set up in the Kwun Tong FStn and was 13. moved out in 2016 to make way for the accommodation of the Building Fire Safety Task Force Office. Since 2016, CEPD store has been split into two stores tentatively at the Penny's Bay FStn and the Fire and Ambulance Services Academy This arrangement is indeed undesirable from the perspective of respectively. CEPD's operation, for example the logistics operation of conducting relevant promotion and education activities. In view of this, FSD considers it necessary to combine the two stores into one. Furthermore, FSD proposes to co-locate the parking spaces for FSEB and EPEB⁹ with the abovementioned store at the proposed FSAD site, so as to better coordinate with CEPD's operation of and demand for community emergency preparedness projects and courses. In respect of FSITF, its office is currently accommodated in a leased commercial premise. FSD suggests relocating the office and the parking spaces for its operational vehicles to the proposed FSAD site in order to optimise site utilisation.

14. The above reprovisioning proposal can achieve the dual objectives of making optimal use of the relevant site and meeting FSD's operational needs.

15. The Project site of about 3 015 m² in Area 72 of TKO falls within "Government, Institution or Community" zone on the Draft TKO Outline Zoning Plan (OZP) No. S/TKO/27. According to OZP, the maximum building height of the site is 40 metres (m). With a view to increasing the supply of DQ units, at the meeting of the Rural and New Town Planning Committee of the Town Planning Board (TPB) on 4 September 2020, the Committee approved with condition¹⁰ the application for the proposed flat use and the proposed relaxation of building height restriction from 40 m to 55.6 m.

FINANCIAL IMPLICATIONS

16. We estimate the cost of the Project to be \$655.0 million in MOD prices, broken down as follows –

/(a)

⁸ It stores the materials for the relevant projects, courses and public education plans formulated and conducted by CEPD (including a series of educational pamphlets, display boards, items necessary for conducting public education activities such as firefighting tunic, simulated fire hose and fire extinguisher, promotional items of the "Anyone" series, etc.).

⁹ They are now parked at the Fire and Ambulance Services Academy.

¹⁰ The condition is "the provision of fire services installations and water suppliers for firefighting to the satisfaction of the Director of Fire Services or of the TPB".

			illion D prices)
(a)	Site works		5.2
(b)	Foundation		41.1
(c)	Building ¹¹		341.6
(d)	Building services ¹²		112.5
(e)	Drainage		7.5
(f)	External works		18.3
(g)	Additional energy conservation, green and recycled features		10.0
(h)	Furniture and equipment ¹³		15.6
(i)	 Consultants' fees for (i) contract administration (ii) management of resident site staff (RSS) 	24.5 1.9	26.4
(j)	Remuneration of RSS		17.3
(k)	Contingencies		59.5
	Total		655.0

/17.

¹¹ Building works comprise construction of substructure and superstructure of the building.

¹² Building services works cover electrical installation, ventilations and air-conditioning installations, fire services installations, lift installation and other miscellaneous installations.

¹³ The estimated cost is based on an indicative list of furniture and equipment required.

17. We propose to engage consultants to undertake contract administration and site supervision for the Project. A detailed breakdown of the estimate for consultants' fees and RSS costs by man-months is at **Enclosure 13**. The estimated construction unit cost, represented by the building and building services costs, is \$28,335 per m² of construction floor area in MOD prices. We consider this unit cost comparable to that of similar projects built by the Government.

18. Subject to funding approval, we plan to phase the expenditure as follows:

Year	\$ million (in MOD prices)
2021 - 22	4.2
2022 - 23	56.0
2023 - 24	172.8
2024 - 25	278.2
2025 - 26	63.5
2026 - 27	54.5
2027 - 28	25.8
	655.0

19. We have derived the MOD estimates on the basis of the Government's latest set of assumptions on the trend rate of change in the prices of public sector buildings and construction outputs for the period from 2021 to 2028. We will deliver the proposed works through a lump-sum contract as the scope of the works can be clearly defined in advance. The contract will provide for price adjustment.

20. We estimate the annual recurrent expenditure arising from this project to be \$87.2 million.

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PUBLIC CONSULTATION

21. FSD consulted the Sai Kung District Council (SKDC) on the Project on 7 July 2020. SKDC had no objection to the Project in principle.

22. We consulted the Legislative Council Panel on Security (the Panel) on 4 May 2021. Members of the Panel had no objection for this Project to be submitted to the Public Works Subcommittee.

ENVIRONMENTAL IMPLICATIONS

23. The Project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). A Preliminary Environmental Review (PER) has been completed, the findings of which were agreed by the Director of Environmental Protection that the project would have no long-term adverse environmental impact with implementation of mitigation measures, such as installation of acoustic windows to protect DQs from traffic noise impact and acoustic design of noise sources in the FSAD to comply with noise standards. We have included in the project estimate the cost to implement the mitigation measures recommended in the PER.

24. At the planning and design stages, we have considered measures to reduce the generation of construction waste wherever possible (e.g. using metal site hoardings and signboards so that these materials can be recycled or reused in other projects). In addition, we 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 facilities (PFRFs)¹⁴. We will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.

25. At the construction stage, we will require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation measures to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate

/facilities

¹⁴ PFRFs are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Disposal of inert construction waste at PFRFs requires a licence issued by the Director of Civil Engineering and Development.

facilities. We will control the disposal of inert construction waste and non-inert construction waste at PFRFs and landfills respectively through a trip-ticket system.

26. The Government will draw up provisions in the relevant works project contract requiring the contractor to control noise, dust and site run-off nuisances during construction to within established standards and guidelines through the implementation of mitigation measures. These measures include the use of silencers, mufflers and temporary acoustic lining or shields for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel-washing facilities to minimise dust generation.

27. We estimate that the Project will generate in total about 12 200 tonnes of construction waste. Of these, we will reuse about 900 tonnes (7.4%) of inert construction waste on site and deliver 9 800 tonnes (80.3%) of inert construction waste to PFRFs for subsequent reuse. We will dispose of the remaining 1 500 tonnes (12.3%) of non-inert construction waste at landfills. The total cost for disposal of construction waste at PFRFs and landfill sites is estimated to be about \$1 million for this Project (based on a unit charge rate of \$71 per tonne for disposal at PFRFs and \$200 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

HERITAGE IMPLICATIONS

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

LAND ACQUISITION

29. The Project does not require any land acquisition.

ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES

30. This Project will adopt various forms of energy-efficient features and renewable energy technologies, in particular variable refrigerant volume air conditioning system, lift power regeneration and photovoltaic system.

/31.

31. For greening features, we will provide green roof, vertical greening as well as planting areas for environmental and amenity benefits. For recycled features, we will adopt rainwater harvesting system for landscape irrigation purpose with a view to conserving water.

32. The total estimated additional cost for adoption of the above features is \$10 million (including \$0.4 million for energy efficient features), which has been included in the cost estimate of this project. The energy efficient features will achieve 5.5% energy savings in the annual energy consumption with a payback period of about eight years.

BACKGROUND INFORMATION

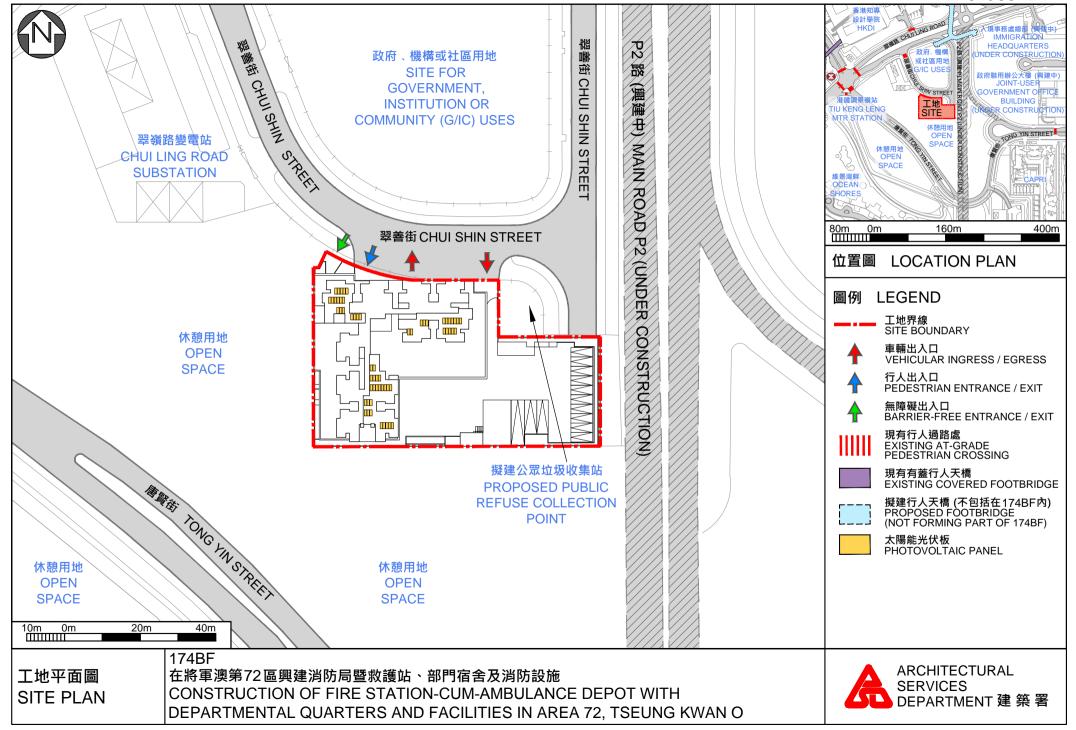
33. We upgraded **174BF** to Category B in September 2012. We engaged consultants to undertake various services, including architectural, structural, building services and quantity surveying services at a total cost of about \$20.9 million in MOD prices. We charged this amount to block allocation **Subhead 3100GX** "Project feasibility studies, minor investigations and consultants' fees for items in Category D of the Public Works Programme". The above services are on-going.

34. The proposed works will not involve any tree removal. We will incorporate planting proposals as part of the Project, including the estimated planting of two trees, 1 600 shrubs, 3 700 groundcovers and 160 climbers.

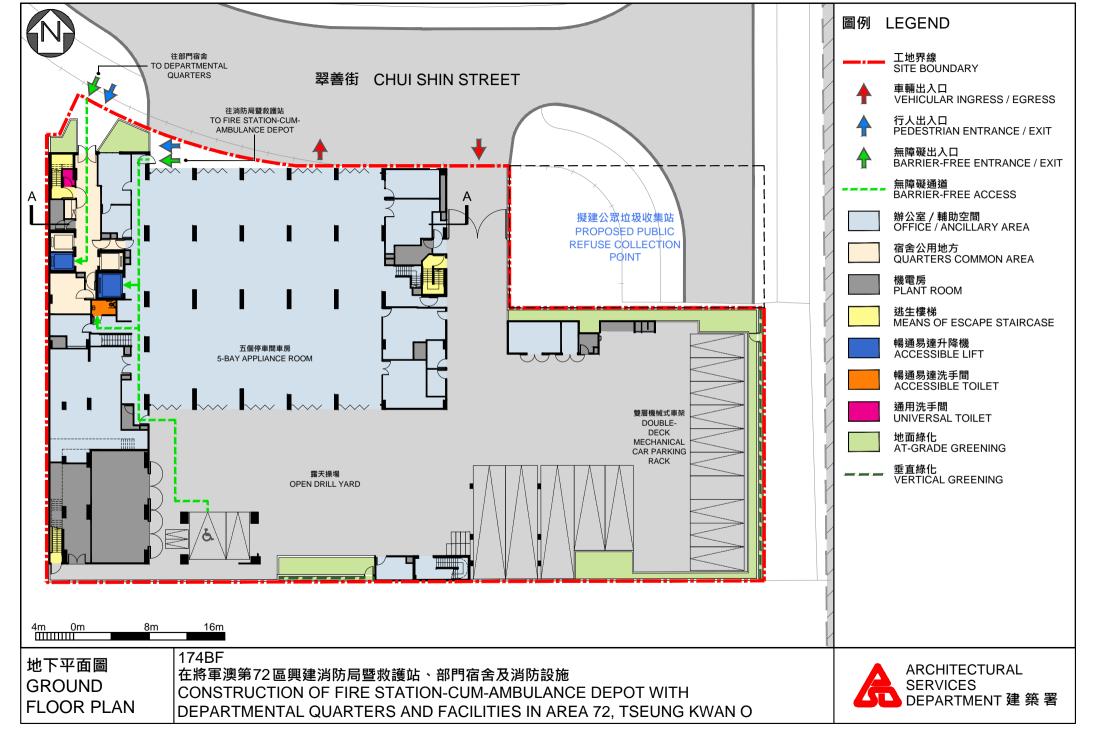
35. We estimate that the proposed works will create about 155 jobs (135 for labourers and 20 for professional or technical staff) providing a total employment of 4 585 man-months.

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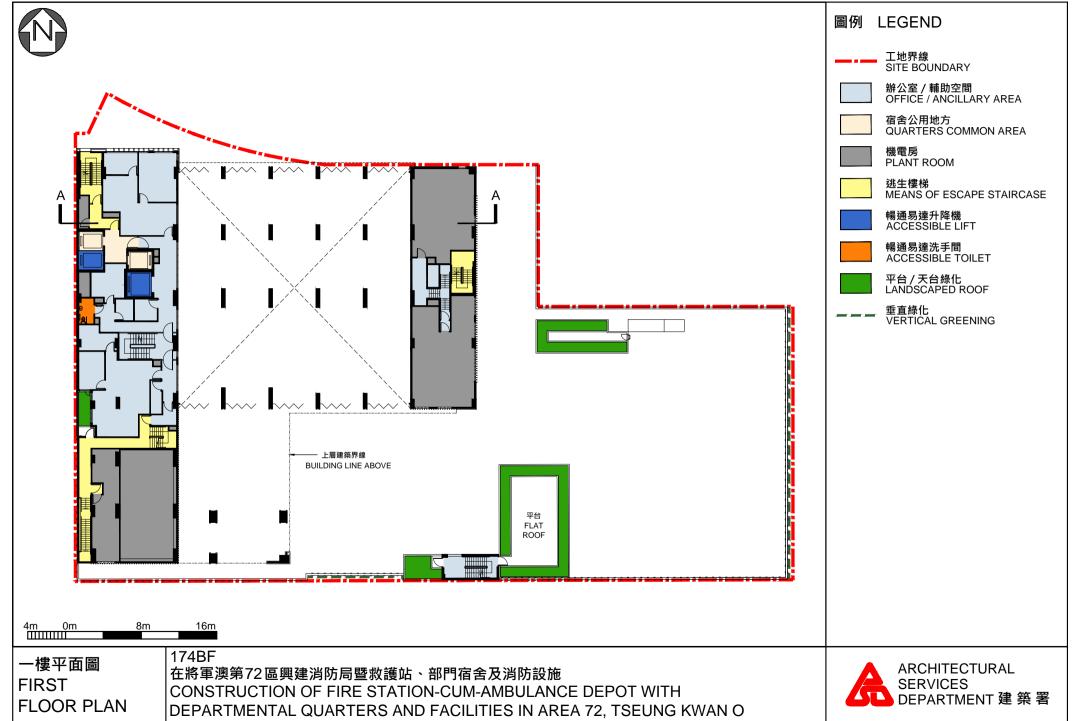
附件1 ENCLOSURE 1



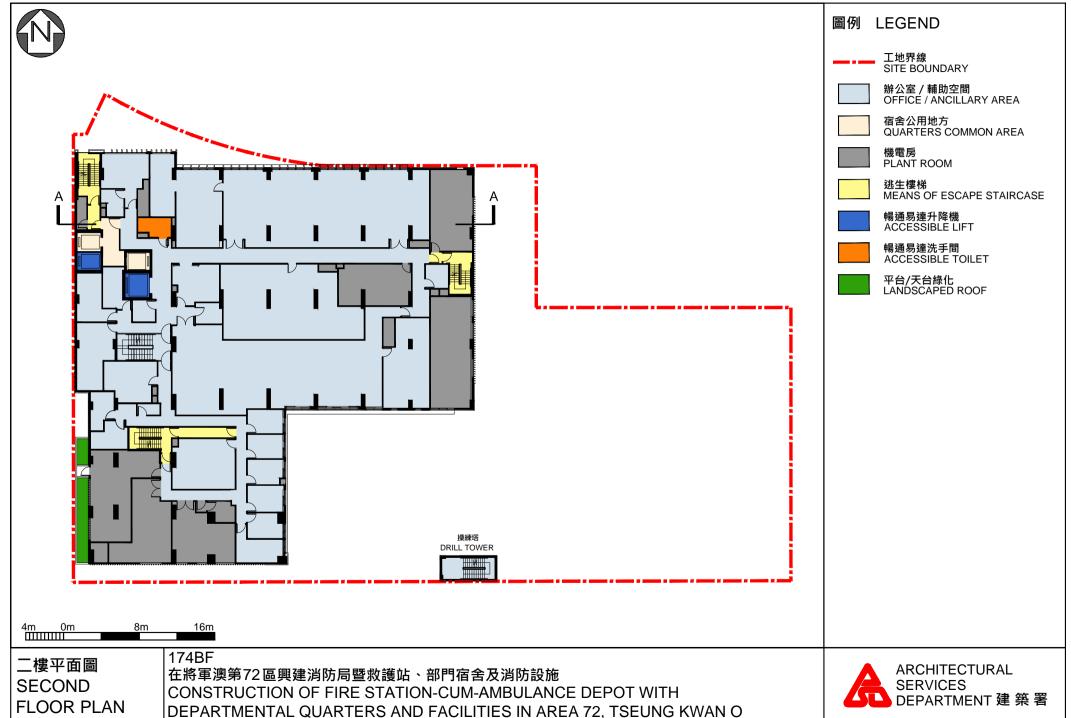
附件2 ENCLOSURE 2



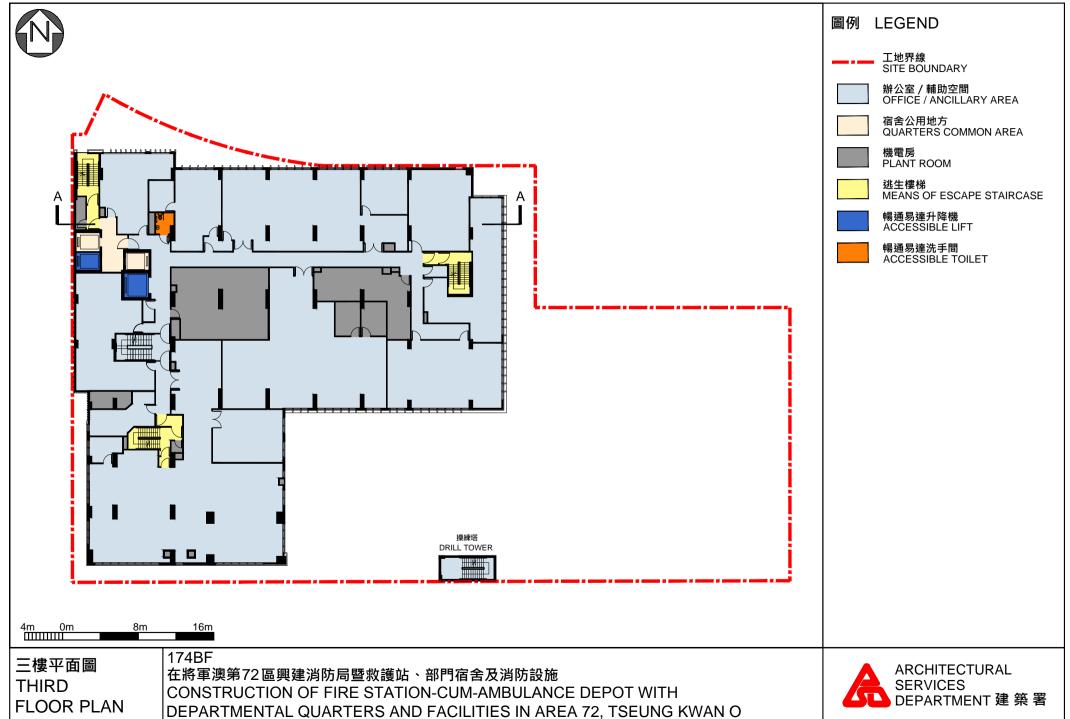




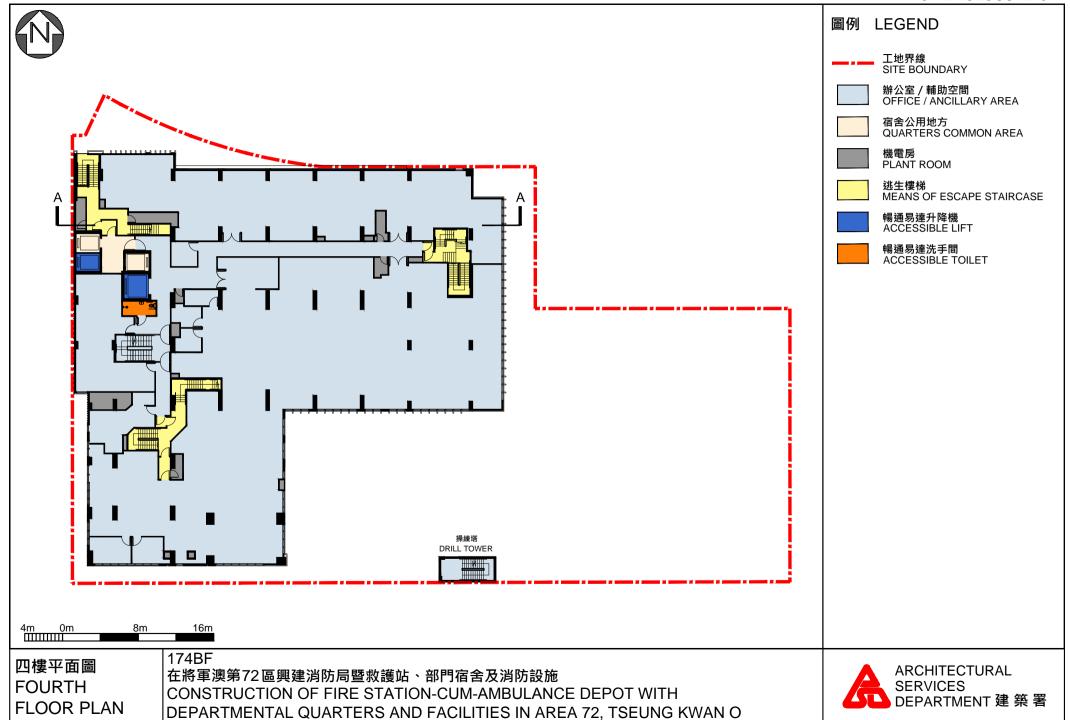
附件 4 ENCLOSURE 4



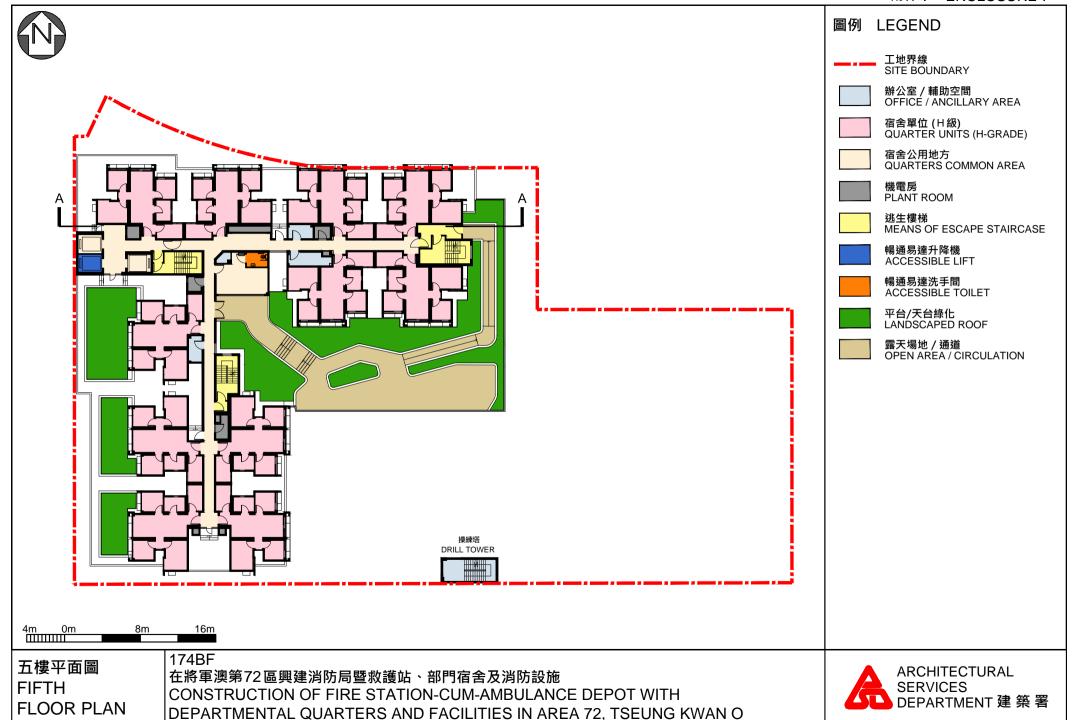
附件5 ENCLOSURE 5



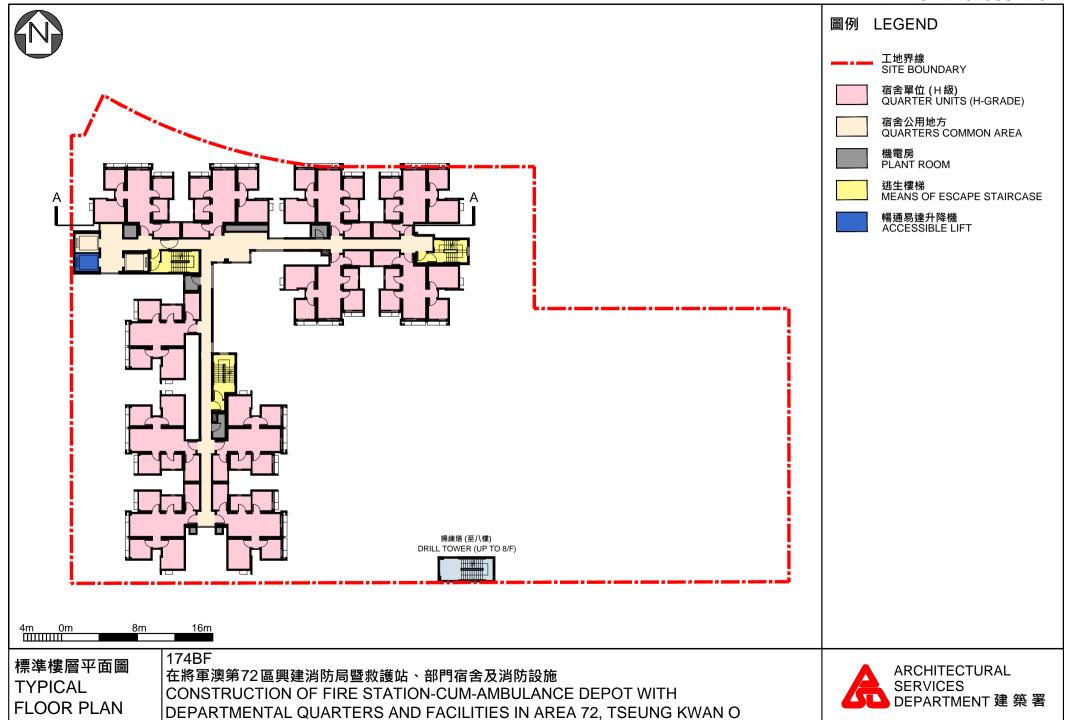
附件6 ENCLOSURE 6



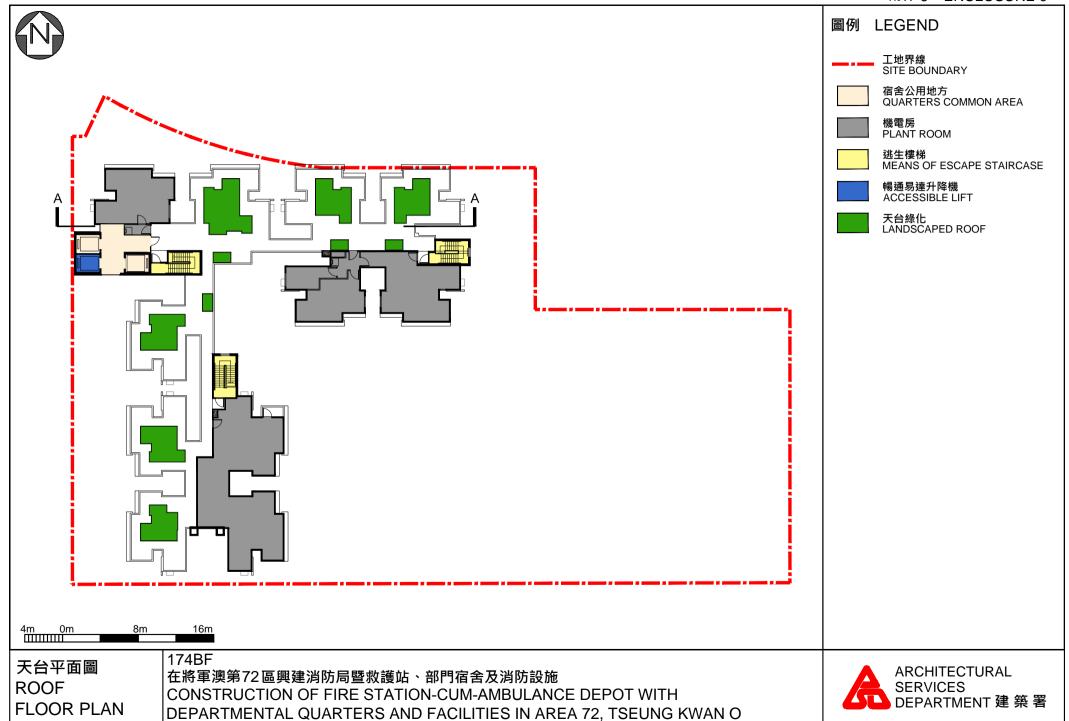
附件7 ENCLOSURE7



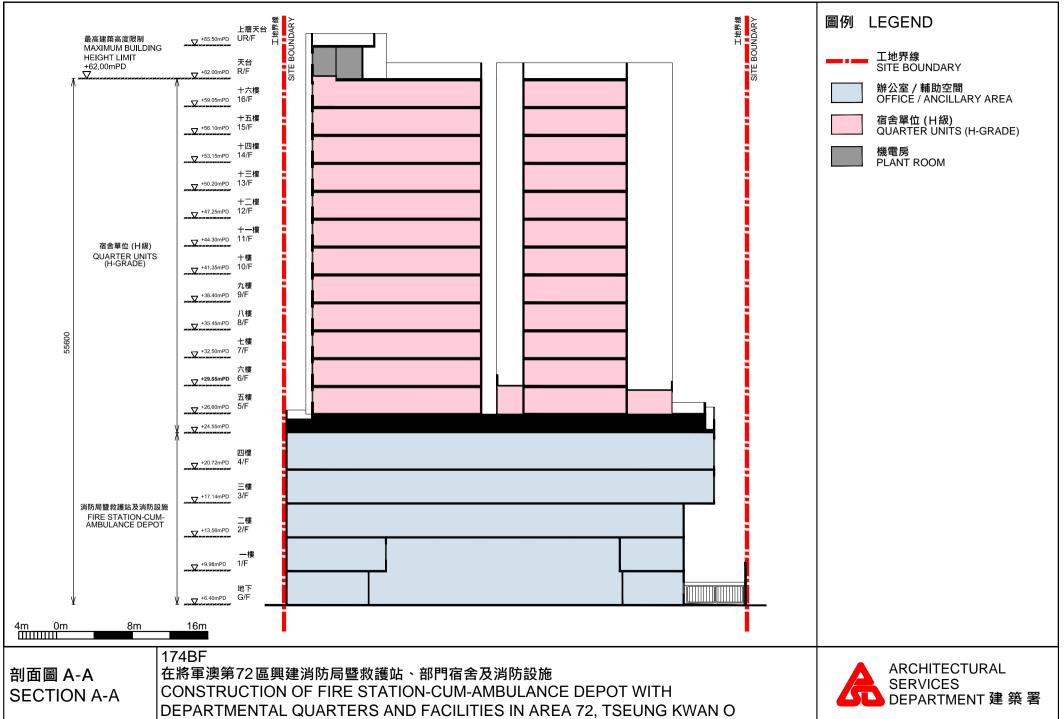
附件 8 ENCLOSURE 8



附件 9 ENCLOSURE 9



附件10 ENCLOSURE 10





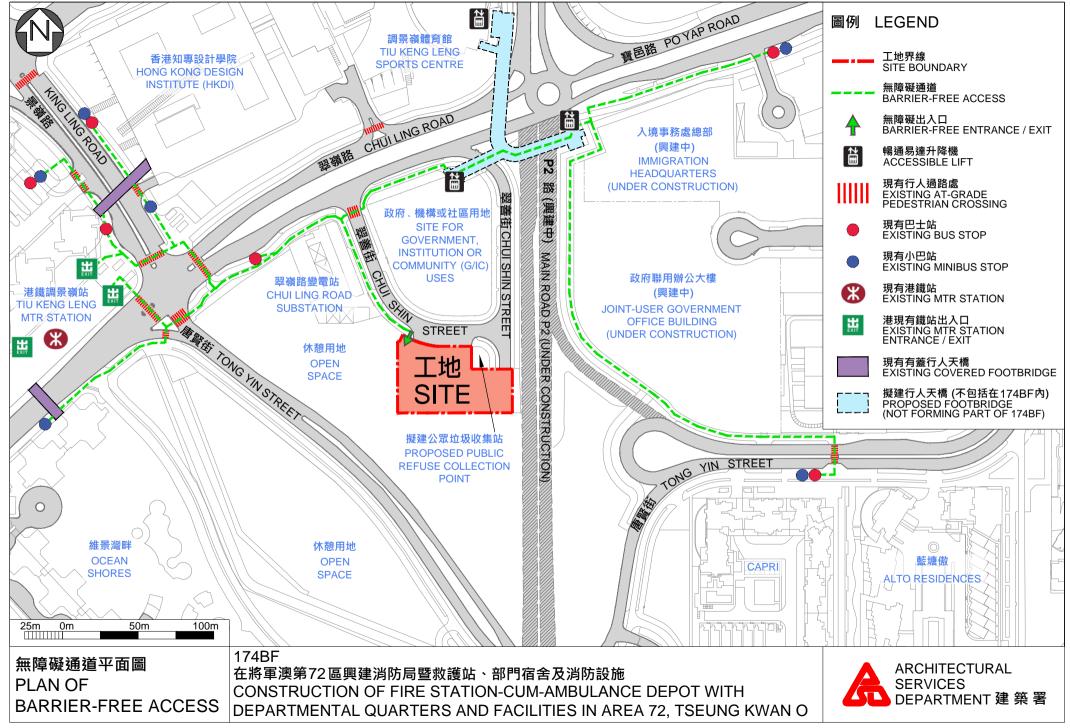
從東北面望向大樓 (構思透視圖) PERSPECTIVE VIEW FROM NORTHEAST DIRECTION

構思圖 ARTIST'S IMPRESSION

174BF 在將軍澳第 72 區興建消防局暨救護站、部門宿舍及消防設施 CONSTRUCTION OF FIRE STATION-CUM-AMBULANCE DEPOT WITH DEPARTMENTAL QUARTERS AND FACILITIES IN AREA 72, TSEUNG KWAN O



附件12 ENCLOSURE 12



174BF – Construction of fire station-cum-ambulance depot with departmental quarters and facilities in Area 72, Tseung Kwan O

Breakdown of the 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 Technical	_	_	_	15.0
			-	-	-	5.3
					Sub-total	20.3#
(b)	Resident site staff	Professional	24	38	1.6	3.3
	(RSS) costs (Note 3)	Technical	263	14	1.6	12.7
					Sub-total	16.0
Comprising -						
(i)	Consultants' fees for management of RSS					1.6#
(ii)	Remuneration of RSS					14.4#
					Total	36.3

^{*} MPS = Master Pay Scale

Notes

- 1. A multiplier of 1.6 is applied to the average MPS salary point to estimate the cost of RSS supplied by the consultants. (as at now, MPS salary point 38 = \$85,870 per month and MPS salary point 14 = \$30,235 per month.)
- 2. The consultants' fees for contract administration are calculated in accordance with the existing consultancy agreement for provision of contract administration and site supervision of **174BF**. The assignment will only be executed subject to Finance Committee's funding approval to upgrade **174BF** to Category A.
- 3. The consultants' fee and staff cost for site supervision is based on the estimate prepared by the Director of Architectural Services. We will only know the actual man-months and actual costs after completion of the construction works.

Remarks

The cost figures in this Enclosure are shown in constant prices to correlate with the MPS salary point of the same year. The cost figure marked with # are shown in money-of-the-day prices in paragraph 16 of the main paper.