

**For discussion
on 18 April 2012**

PWSC(2012-13)4

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS

Fitting-out – Others

401IO – Fitting-out works for Government facilities associated with midfield expansion project at Hong Kong International Airport

Members are invited to recommend to the Finance Committee the upgrading of **401IO** to Category A at an estimated cost of \$256.5 million in money-of-the-day prices for the fitting-out works for Government facilities associated with midfield expansion project at the Hong Kong International Airport.

PROBLEM

We need to provide Government facilities associated with the midfield expansion project which is being carried out by the Airport Authority (AA) at the Hong Kong International Airport (HKIA) to provide additional handling capacity to cater for the forecast growth in air traffic demand.

/PROPOSAL

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Transport and Housing, proposes to upgrade **401IO** to Category A at an estimated cost of \$256.5 million in money-of-the-day (MOD) prices for carrying out fitting-out works for Government facilities associated with the midfield expansion project at HKIA.

PROJECT SCOPE AND NATURE

3. The proposed scope of **401IO** comprises the design and fitting-out works for Government facilities located inside the new Midfield Concourse and the existing Terminal 1¹ at HKIA. The proposed works will cover a net operational floor area (NOFA) of 1 066 square metres (m²), with the following facilities –

(a) Customs and Excise Department (C&ED) – NOFA of 550 m²

(i) baggage examination rooms, personal search rooms, observation rooms, operation and case processing facilities for different units/teams, dog kennel, server rooms, firearms loading and unloading room, standby cum briefing room, exhibit store, changing room and pantry;

(b) Immigration Department (ImmD) – NOFA of 129 m²

(i) an interview room, a search room, a waiting room, a closed-circuit television (CCTV)/equipment room, a security lockers room and a changing room;

(c) Department of Health (D of H) – NOFA of 32 m²

(i) a Health Post comprising a client waiting room, a health screening room and a consultation room;

/(d)

¹ Additional Government facilities are required in Terminal 1 to strengthen the corresponding support for handling increasing passengers and baggage which will have to go through Terminal 1 to/from the New Midfield Concourse.

- (d) Civil Aviation Department (CAD) – NOFA of 111 m²
 - (i) equipment rooms for air traffic control equipment and related systems/facilities, outdoor masts for antennas and CCTV cameras; and
- (e) Hong Kong Police Force (HKPF) – NOFA of 244 m²
 - (i) a police report centre, an observation room, two interview rooms, two operation rooms, seven equipment rooms and four radio rooms.

4. A site plan and a location plan of the works sites concerned at the Midfield Concourse and Terminal 1 are at Enclosure 1. Layout plans of the proposed Government facilities are at Enclosures 2 to 8. A perspective view of the Midfield Concourse is at Enclosure 9. Subject to the funding approval of the Finance Committee, we plan to start the fitting-out works in November 2012 for completion in July 2015, so as to meet the planned commissioning of the Midfield Concourse in September 2015.

JUSTIFICATIONS

5. In 2011, HKIA handled 53.9 million passengers, 3.9 million tonnes of cargo and 333 760 aircraft movements. The existing airport configuration consists of two runways, which are supported by two passenger terminals and two concourses with 97 aircraft parking stands, as well as three cargo terminals and a cargo apron with 34 aircraft parking stands. To cope with the air traffic demand up to 2020, AA is implementing the midfield expansion project which seeks to maximise the use of the two existing runways and increase the handling capacity of the airport to 70 million passengers and 6 million tonnes of cargo per annum. The timely commencement of the midfield expansion project is essential for maintaining HKIA's competitiveness as an international aviation centre, especially at a time when HKIA is facing fierce competition from others in the region.

/6.

6. The midfield expansion project being carried out by the AA covers two phases. Commenced in late 2011, Phase 1 comprises a new Midfield Concourse with 20 aircraft parking stands to be completed by September 2015, of which 19 are served by bridges. The new Midfield Concourse will be connected to the Terminal 1 West Hall by Automated People Mover (APM). Phase 2 involves the expansion of the midfield development by 2020 with another row of 10 remote stands west of the Midfield Concourse.

7. We need to provide Government facilities (involving CAD, C&ED, D of H, HKPF and ImmD) at the new Midfield Concourse and existing Terminal 1 to tie in with the commissioning of the Midfield Concourse. According to the established arrangement, AA will provide rent-free accommodation for these Government facilities, while the Government will bear the costs of the fitting-out works. As the fitting-out works for the Government facilities are integral to the midfield expansion project being pursued by AA, subject to further negotiation with AA and internal approval, we intend to entrust the design and fitting-out works for the Government facilities to AA to minimise interfacing problems.

FINANCIAL IMPLICATIONS

8. We estimate the cost of the project to be \$256.5 million in MOD prices (please see paragraph 9 below), broken down as follows –

		\$ million
(a)	Building works	21.7
(b)	Building services	39.1
(c)	External works	23.0
(d)	Additional energy conservation measures	0.1
(e)	Entrustment fees for the design and fitting-out works ²	13.4
		/(f)

² For budgetary purpose, the entrustment fees payable to AA for carrying out the entrusted design and fitting-out works for the Government facilities will be capped at 16% of the value of the entrusted works. The exact entrustment fees will be subject to further negotiation with AA.

		\$ million	
(f)	Furniture and equipment ³	99.3	
(g)	Contingencies	9.7	
	Sub-total :	<u>206.3</u>	(in September 2011 prices)
(h)	Provision for price adjustment	50.2	
	Total :	<u>256.5</u>	(in MOD prices)

The construction floor area (CFA) of **401IO** is about 1 721 m². The estimated construction unit cost, represented by the building works and building services costs, is \$35,328 per m² of CFA⁴ in September 2011 prices. Taking into consideration the work nature and complexity, we consider the estimated project cost reasonable as compared with other projects undertaken by the Government.

9. Subject to approval, we will phase the expenditure as follows –

Year	\$ million (Sept 2011)	Price adjustment factor	\$ million (MOD)
2012 – 2013	7.0	1.05325	7.4
2013 – 2014	20.0	1.11118	22.2
2014 – 2015	25.0	1.17229	29.3

/Year

³ Based on an indicative list of furniture and equipment required by various departments.

⁴ The estimated construction unit cost has taken account of the specific work nature including the requirement on restricted working hours in Terminal 1 building and the provision of relevant cable containment for connection of the existing specialist systems in Terminal 1 to the new Midfield Concourse.

Year	\$ million (Sept 2011)	Price adjustment factor	\$ million (MOD)
2015 – 2016	95.0	1.23677	117.5
2016 – 2017	30.0	1.30479	39.1
2017 – 2018	20.0	1.37656	27.5
2018 – 2019	9.3	1.45227	13.5
	<hr/> 206.3 <hr/>		<hr/> 256.5 <hr/>

10. 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 building and construction output for the period 2012 to 2019. The contract will provide for price adjustments.

11. We estimate the annual recurrent expenditure, which covers the staff cost, maintenance cost and management cost, arising from ~~40110~~ to be \$109.2 million⁵.

PUBLIC CONSULTATION

12. Throughout the planning stage of the midfield expansion project, AA has consulted the relevant stakeholders, including International Air Transportation Association (IATA) and their subcommittees, airlines, ramp handlers, cargo operators, aircraft maintenance service providers, airline caterers, aviation fuel suppliers, etc between January 2011 and February 2012. They support the project and the plan to provide Government facilities and services associated with the project.

/13.

⁵ The estimated annual recurrent expenditure of \$109.2 million comprises recurrent expenditure for ImmD (\$39.4 million), C&ED (\$50.1 million), HKPF (\$16.2 million), CAD (\$3 million) and D of H (\$0.5 million) and will cover staff costs and departmental expenses such as management, minor repairs and maintenance costs, etc.

13. We consulted the Legislative Council Panel on Economic Development on 26 March 2012. Members of the Panel generally supported this project. Members also asked for information about the waiting time for visitors for immigration clearance at HKIA. According to ImmD, the average waiting time for some 98% visitors at HKIA was within 15 minutes in 2011. ImmD will closely monitor the situation and consider possible measures to handle the increasing number of passengers, if necessary.

ENVIRONMENTAL IMPLICATIONS

14. This is not a designated project under the Environmental Impact Assessment Ordinance. The project will not cause any long-term adverse environmental impact. We have included in the project estimates the cost to implement suitable mitigation measures to control short-term environmental impacts.

15. During construction, we will require AA to 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 lining or shields for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel-washing facilities.

16. During planning and design stages, we have required AA to consider measures to reduce the generation of construction waste where possible (e.g. using more prefabricated building elements including dry-wall partitioning and proprietary fittings and fixtures in the fitting-out works to reduce temporary formworks). In addition, we will require AA to reuse inert construction waste (e.g. use of inert construction waste 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 facilities⁶. We will encourage AA to maximise the use of recycled / recyclable inert construction waste, and the use of non-timber framework to further reduce the generation of construction waste.

/17.

⁶ Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public fill reception facilities requires a license issued by the Director of Civil Engineering and Development.

17. At the construction stage, we will require AA 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. We will require AA to ensure that the day-to-day operations on site comply with the approved plan. We will require AA to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will also require AA to 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.

18. We estimate that the project will generate in total about 35 tonnes of construction waste. Of these, we will reuse about two tonnes (5.7%) of inert construction waste on site and deliver about five tonnes (14.3%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose the remaining 28 tonnes (80%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be about \$3,635 for this project (based on a unit cost of \$27 per tonne for disposal at public fill reception facilities and \$125 per tonne⁷ at landfills).

HERITAGE IMPLICATIONS

19. This project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interests and Government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

20. This project does not require any land acquisition.

/ENERGY

⁷

This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at \$90 per m³), nor the cost to provide new landfills (which is likely to be more expensive) when the existing ones are filled.

ENERGY CONSERVATION MEASURES

21. This project has adopted various forms of energy efficient features, including –

- (a) demand control of fresh air supply with carbon dioxide sensors;
- (b) T5 energy efficient fluorescent tubes with electronic ballast and lighting control by occupancy sensors;
- (c) light-emitting diode (LED) type exit signs; and
- (d) LED feature lights.

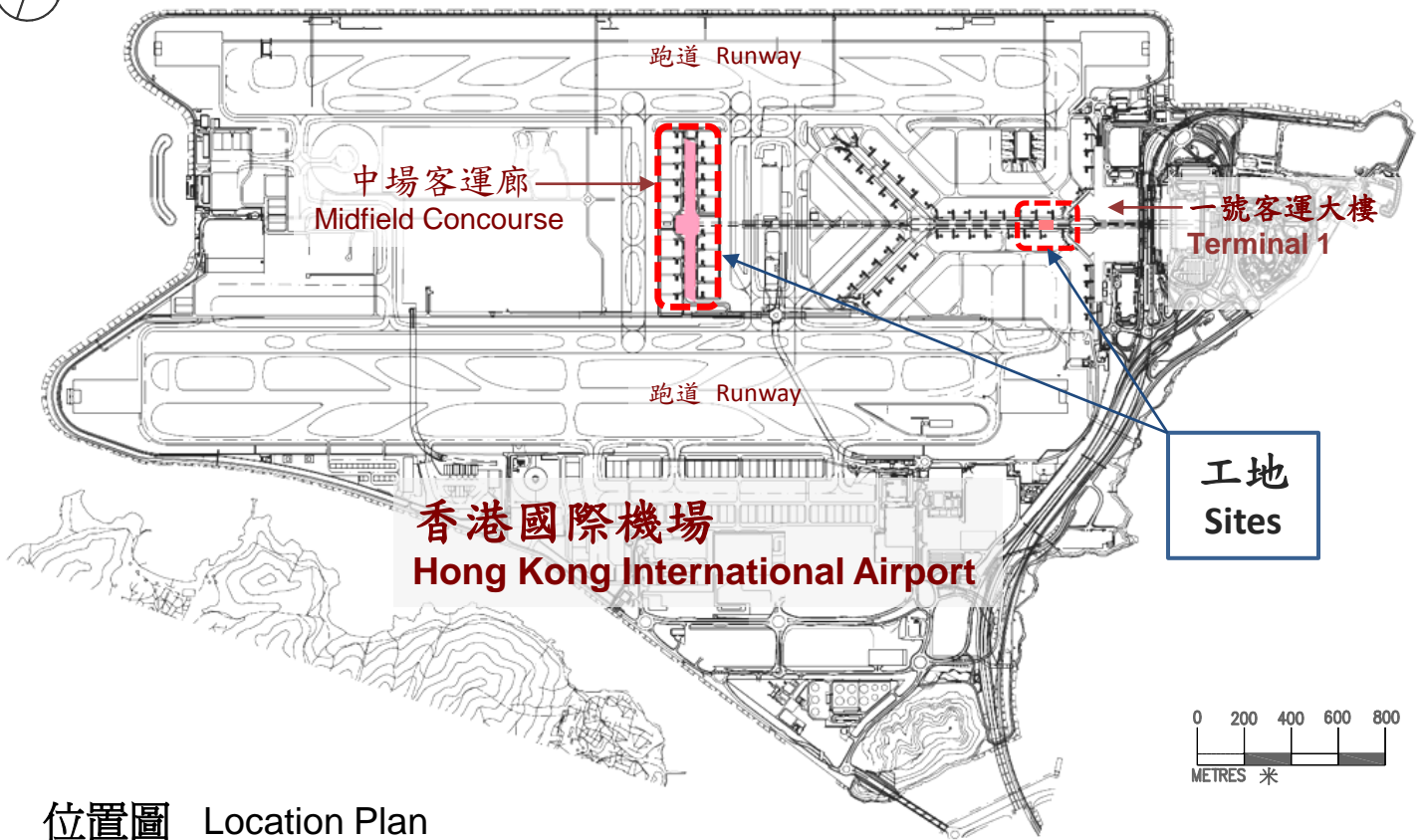
22. The total estimated additional cost for adoption of the energy efficient features is around \$0.1 million, which has been included in the cost estimate of this project. The energy efficient features will achieve 2.2% energy savings in the annual energy consumption with a payback period of about five years.

BACKGROUND INFORMATION

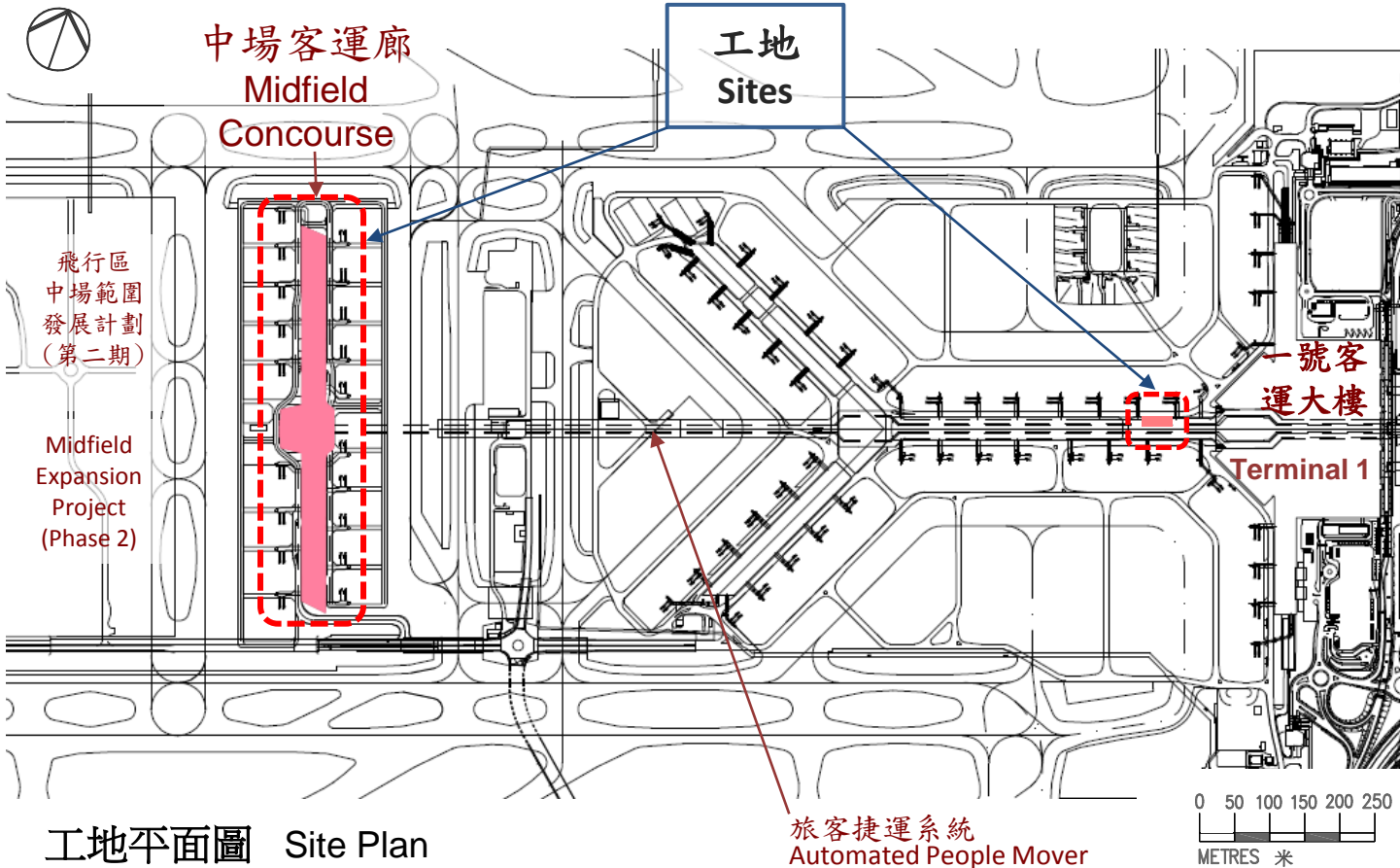
23. We upgraded **401IO** to Category B in September 2011.

24. The proposed fitting-out works will not involve any tree removal or planting proposal.

25. We estimate that the project will create about 65 jobs (59 for labourers and 6 for professional/technical staff) providing a total employment of 1 915 man-months.



位置圖 Location Plan



工地平面圖 Site Plan

title 項目名稱

40110

FITTING-OUT WORKS FOR GOVERNMENT FACILITIES
ASSOCIATED WITH MIDFIELD EXPANSION PROJECT
AT HONG KONG INTERNATIONAL AIRPORT

香港國際機場飛行區中場範圍發展計劃裝置相關的政府設施工程

drawn by 繪圖

C.K. SIN

approved by 批核

P.K. SO

office 辦事處

PROJECT MANAGEMENT BRANCH
工程策劃管理處

date 日期

10/4/2012

date 日期

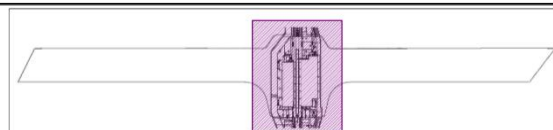
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drawing no. 圖則編號

PMB1/8048/XA101



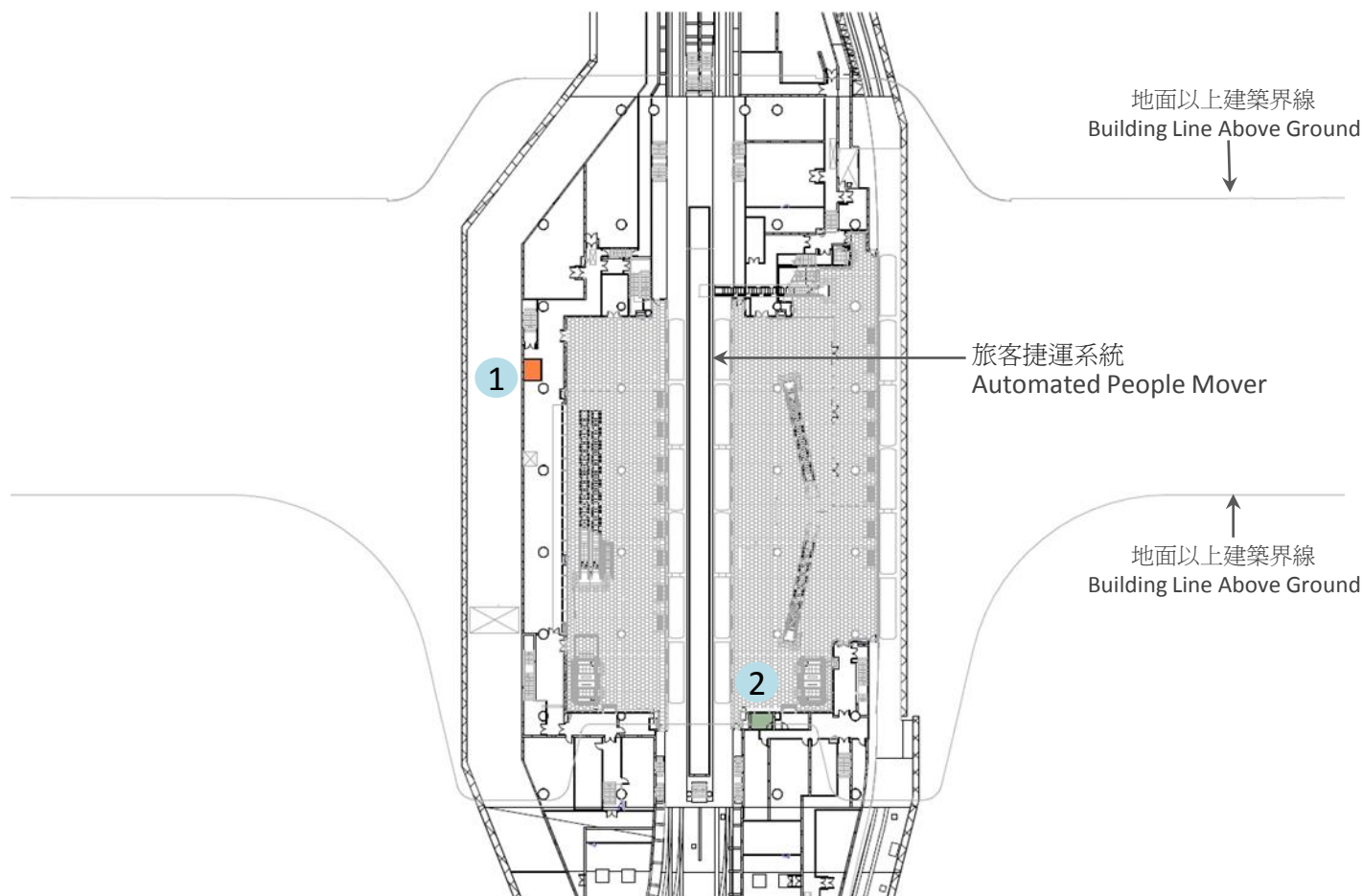
ARCHITECTURAL
SERVICES
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LOCATION PLAN

位置圖

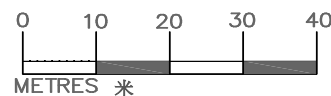
SCALE(比例) 1:10000



圖例

Legends

- 1 警務處無線電儀器室
Hong Kong Police Force Radio Room
- 2 海關監察室(離港旅客)
Customs and Excise Department Observation Room (Departure Passenger)



平面圖 - 中場客運廊 第一層 Layout Plan - Level 1 of Midfield Concourse

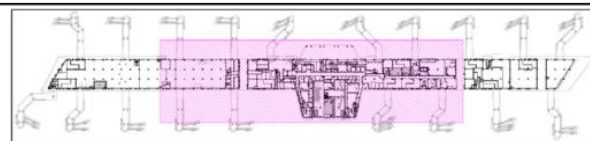
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AT HONG KONG INTERNATIONAL AIRPORT
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drawn by 繪圖
C.K. SIN
approved by 批核
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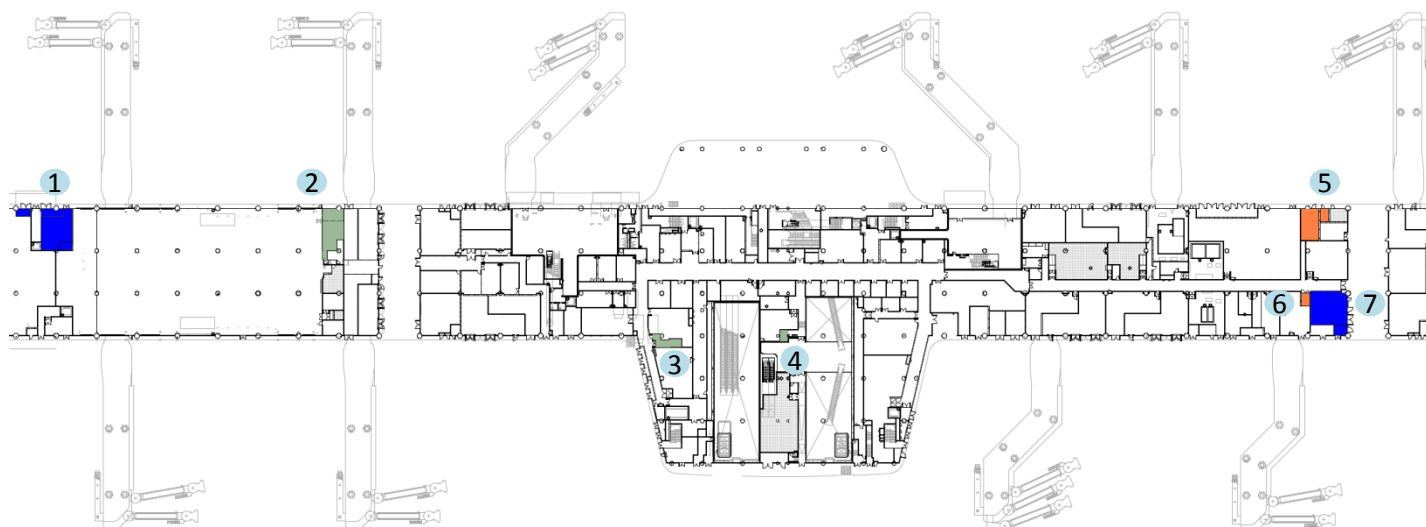




LOCATION PLAN

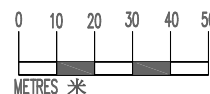
位置圖

SCALE(比例) 1:10000



圖例

Legends



- 1 民航處裝備室
Civil Aviation Department Equipment Room
- 2 海關搜查犬組辦公室及狗房 / 突擊及搜查小隊辦公室 / 行李檢查室
Customs and Excise Department Customs Detector Dog Team Office cum Dog Kennel / Strike and Search Team Office / Baggage Examination Room
- 3 海關電腦伺服器室
Customs and Excise Department Server Room
- 4 海關監察室(離港旅客)
Customs and Excise Department Observation Room (Departure Passenger)
- 5 警務處行動室 / 裝備室
Hong Kong Police Force Operation Room / Equipment Room
- 6 警務處無線電儀器室
Hong Kong Police Force Radio Room
- 7 民航處裝備室
Civil Aviation Department Equipment Room

平面圖 - 中場客運廊 第四層 Layout Plan - Level 4 of Midfield Concourse

title 項目名稱

40110

FITTING-OUT WORKS FOR GOVERNMENT FACILITIES
ASSOCIATED WITH MIDFIELD EXPANSION PROJECT
AT HONG KONG INTERNATIONAL AIRPORT

香港國際機場飛行區中場範圍發展計劃裝置相關的政府設施工程

drawn by 繪圖

C.K. SIN

approved by 批核

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office 辦事處

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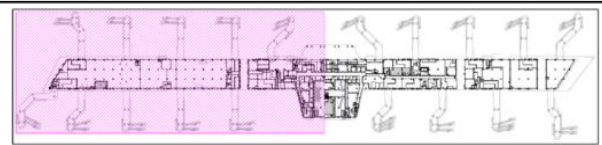
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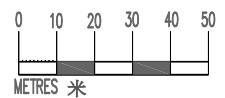
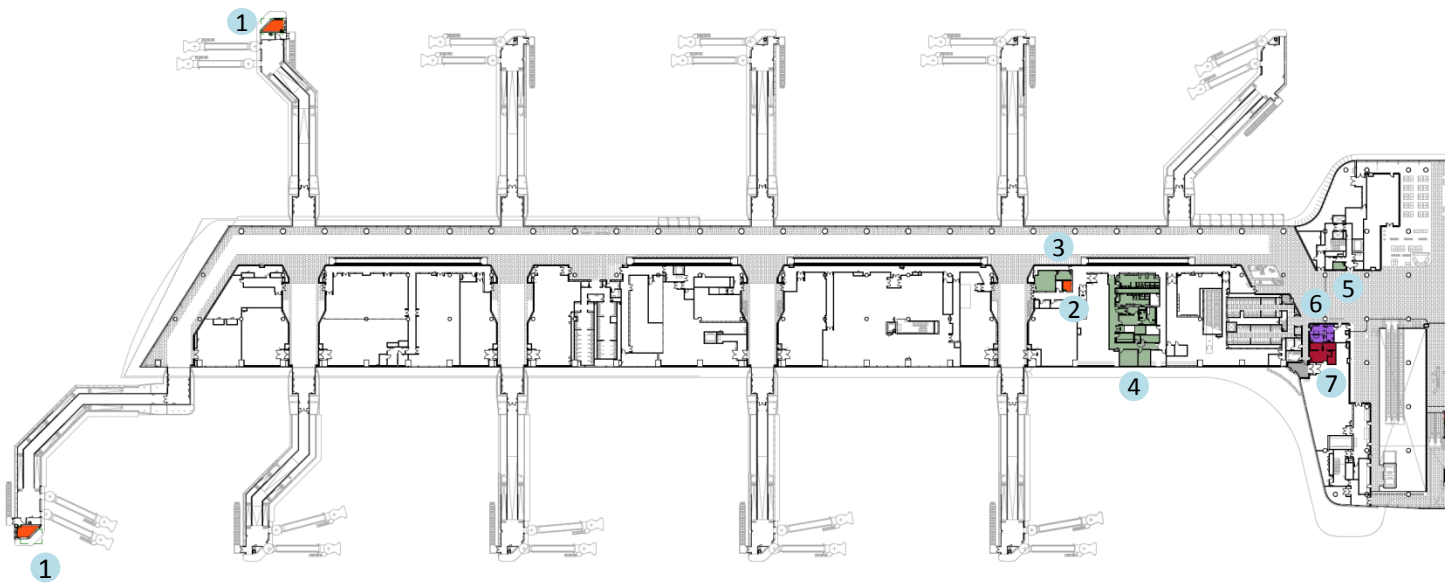


ARCHITECTURAL
SERVICES
DEPARTMENT 建築署



LOCATION PLAN

位置圖 SCALE(比例) 1:10000



圖例

Legends

- 1 警務處裝備室
Hong Kong Police Force Equipment Room
- 2 警務處無線電儀器室
Hong Kong Police Force Radio Room
- 3 海關行李檢查室(北面) / 旅客搜查室(北面)
Customs and Excise Department Baggage Examination Room (North) / Personal Search Room (North)
- 4 海關機動小隊辦公室 / 候命暨訓令室 / 羈留設施 / 電腦伺服器室 / 槍械上彈及退彈室 / 證物庫
Customs and Excise Department Tactical Team Office / Standby cum Briefing Room / Detention Facilities / Server Room / Firearms Loading and Unloading Room / Exhibit Store
- 5 海關監察室(南行旅客)
Customs and Excise Department Observation Room (Southbound Passenger)
- 6 衛生署衛生站(候診室 / 健康檢查室 / 診症室)
Department of Health Health Post (Client Waiting Room / Health Screening Room / Consultation Room)
- 7 入境處 搜查室 / 會面室 / 視控中心 / 候檢室
Immigration Department Search Room / Interview room / Closed-circuit Television Control Centre / Secondary Examination Waiting Lounge

平面圖 - 中場客運廊 第五層(北) Layout Plan - Level 5 of Midfield Concourse(North)

title 項目名稱

401IO

FITTING-OUT WORKS FOR GOVERNMENT FACILITIES
ASSOCIATED WITH MIDFIELD EXPANSION PROJECT
AT HONG KONG INTERNATIONAL AIRPORT

香港國際機場飛行區中場範圍發展計劃裝置相關的政府設施工程

drawn by 繪圖

C.K. SIN

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P.K. SO

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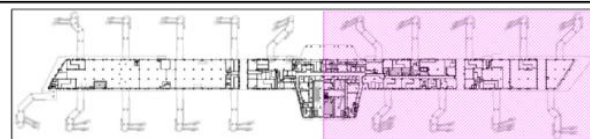
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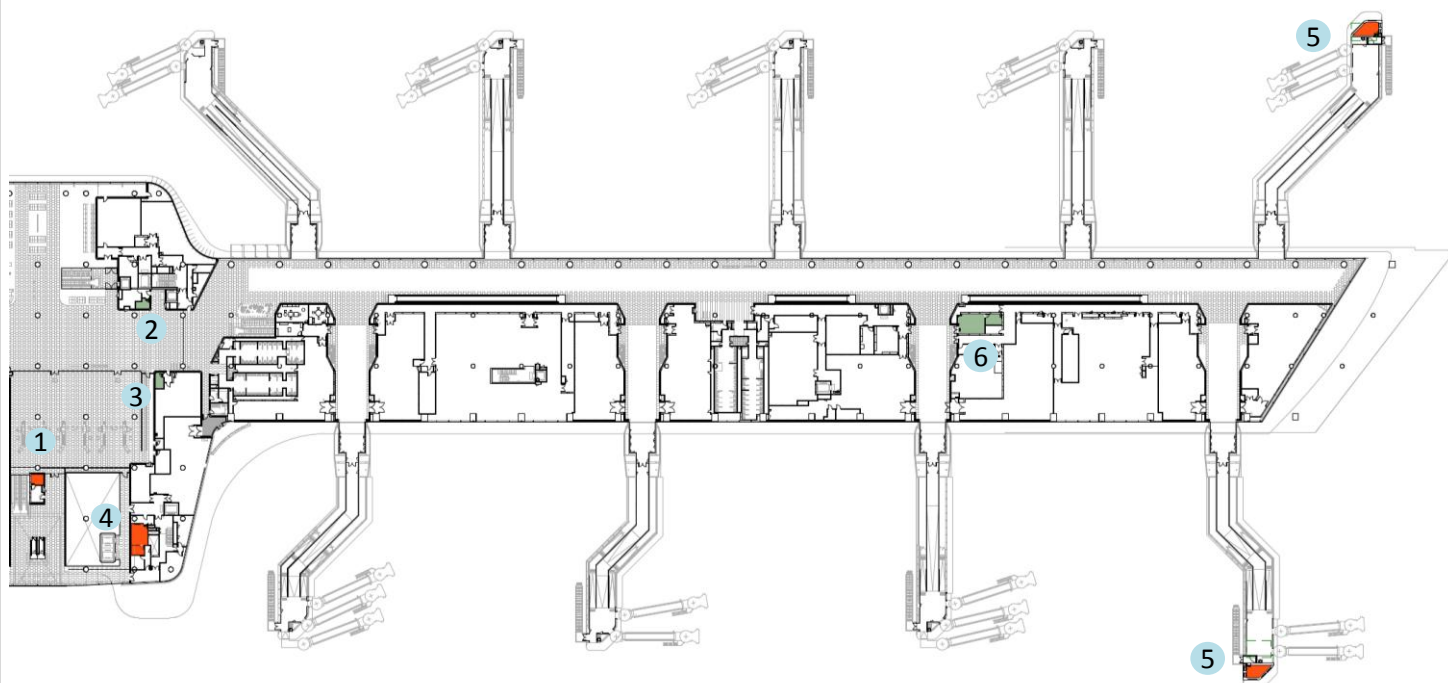
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LOCATION PLAN

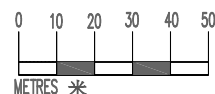
位置圖

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圖例

Legends



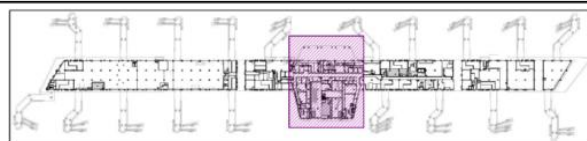
- 1 警務處觀察室
Hong Kong Police Force Observation Room
- 2 海關監察室(北行旅客)
Customs and Excise Department Observation Room (Northbound Passenger)
- 3 海關監察室(轉機旅客)
Customs and Excise Department Observation Room (Transfer Passenger)
- 4 警務處會面室 / 行動室
Hong Kong Police Force Interview / Operation Room
- 5 警務處裝備室
Hong Kong Police Force Equipment Room
- 6 海關行李檢查室(南面) / 旅客搜查室(南面)
Customs and Excise Department Baggage Examination Room (South) /
Personal Search Room (South)

平面圖 - 中場客運廊 第五層(南) Layout Plan - Level 5 of Midfield Concourse(South)

title 項目名稱 401IO FITTING-OUT WORKS FOR GOVERNMENT FACILITIES ASSOCIATED WITH MIDFIELD EXPANSION PROJECT AT HONG KONG INTERNATIONAL AIRPORT 香港國際機場飛行區中場範圍發展計劃裝置相關的政府設施工程	drawn by 繪圖 C.K. SIN	date 日期 10/4/2012	drawing no. 圖則編號 PMB1/8048/XA105
	approved by 批核 P.K. SO	date 日期 10/4/2012	 ARCHITECTURAL SERVICES DEPARTMENT 建築署
	office 辦事處 PROJECT MANAGEMENT BRANCH 工程策劃管理處		



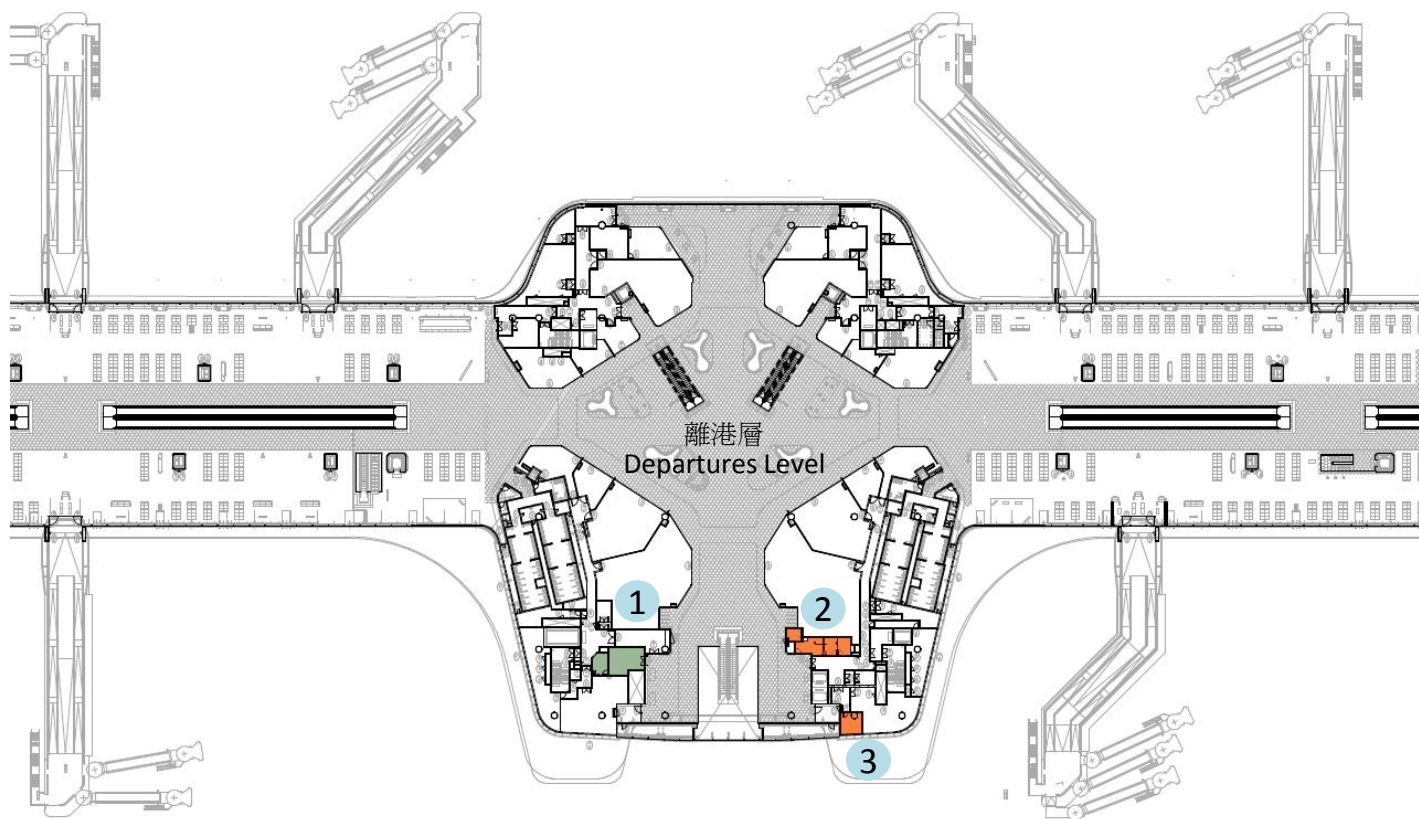
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LOCATION PLAN

位置圖

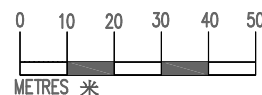
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圖例

Legends

- 1** 海關行李檢查室 / 旅客搜查室
Customs and Excise Department Baggage Examination Room / Personal Search Room
- 2** 警務處報案中心及會面室 / 無線電儀器室
Hong Kong Police Force Police Reporting Centre & Interview Room / Radio Room
- 3** 警務處裝備室
Hong Kong Police Force Equipment Room



平面圖 - 中場客運廊 第六層 Layout Plan - Level 6 of Midfield Concourse

title 項目名稱

40110

FITTING-OUT WORKS FOR GOVERNMENT FACILITIES
ASSOCIATED WITH MIDFIELD EXPANSION PROJECT
AT HONG KONG INTERNATIONAL AIRPORT

香港國際機場飛行區中場範圍發展計劃裝置相關的政府設施工程

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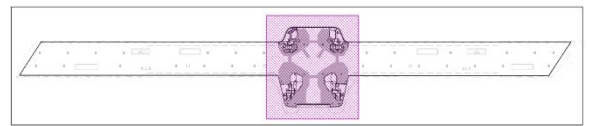
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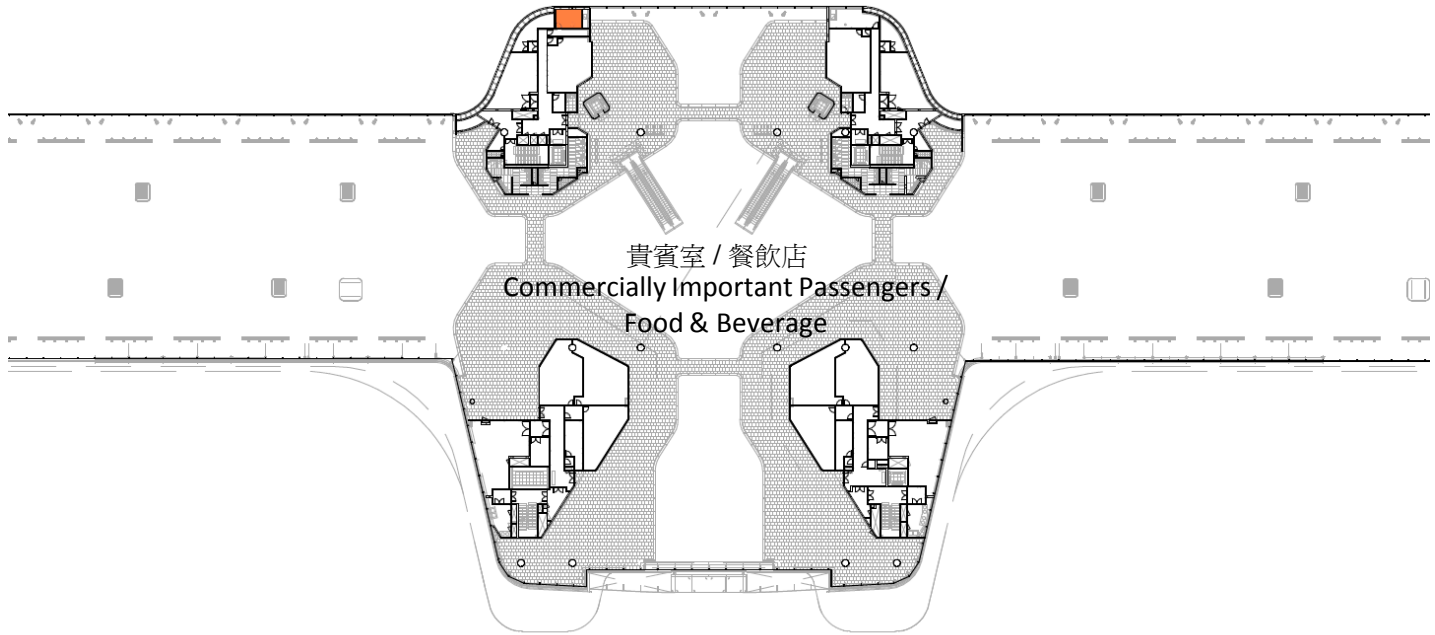


LOCATION PLAN

位置圖

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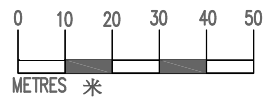
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圖例

Legends

- 1 警務處裝備室
Hong Kong Police Force Equipment Room



平面圖 - 中場客運廊 第七層 Layout Plan - Level 7 of Midfield Concourse

title 項目名稱

4011O

FITTING-OUT WORKS FOR GOVERNMENT FACILITIES
ASSOCIATED WITH MIDFIELD EXPANSION PROJECT
AT HONG KONG INTERNATIONAL AIRPORT

香港國際機場飛行區中場範圍發展計劃裝置相關的政府設施工程

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10/4/2012

office 辦事處

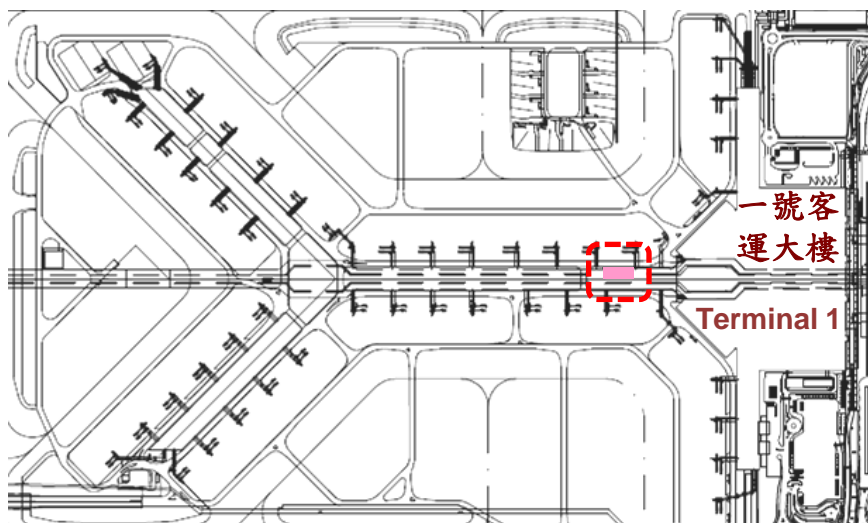
PROJECT MANAGEMENT BRANCH
工程策劃管理處

drawing no. 圖則編號

PMB1/8048/XA107

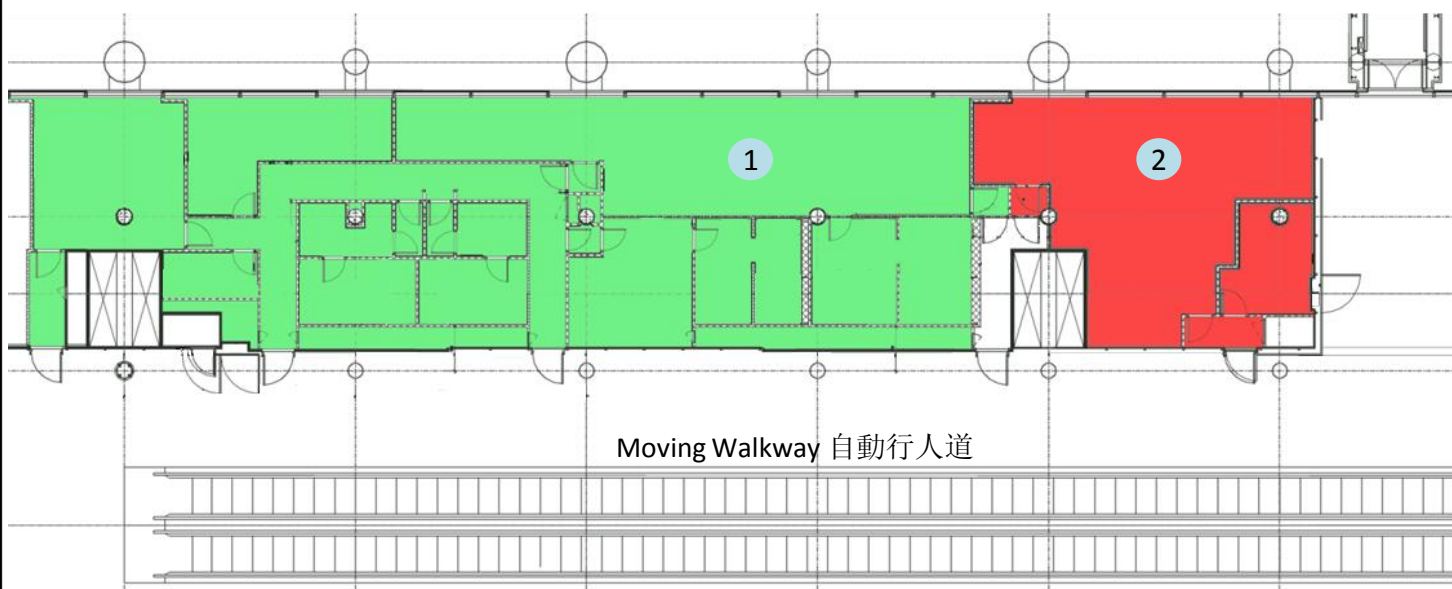
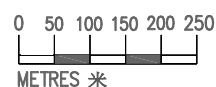


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LOCATION PLAN
(Site between Gate 22
and Gate 24 in Terminal 1)

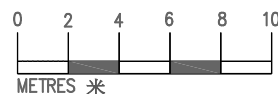
位置圖
(一號客運大樓閘口 22
與閘口 24 之間的工地)



圖例

Legends

- **1** 海關督察辦公室 / 候命暨訓令室 / 更衣室
Customs and Excise Department Inspector Office / Standby cum Briefing Room /
Changing Room
- **2** 入境處更衣室 / 貯物保管室
Immigration Department Changing Room / Security Lockers Room



平面圖 - 一號客運大樓 第五層

Layout Plan - Level 5 of Terminal 1

title 項目名稱

40110

FITTING-OUT WORKS FOR GOVERNMENT FACILITIES
ASSOCIATED WITH MIDFIELD EXPANSION PROJECT
AT HONG KONG INTERNATIONAL AIRPORT

香港國際機場飛行區中場範圍發展計劃裝置相關的政府設施工程

drawn by 繪圖

C.K. SIN

approved by 批核

P.K. SO

office 辦事處

PROJECT MANAGEMENT BRANCH
工程策劃管理處

date 日期

10/4/2012

date 日期

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PMB1/8048/XA108



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Perspective View of Midfield Concourse from Northeastern Direction (Artist's Impression)

從東北面望向中場客運廊(構思透視圖)

<p>title 項目名稱</p> <p>401IO</p> <p>FITTING-OUT WORKS FOR GOVERNMENT FACILITIES ASSOCIATED WITH MIDFIELD EXPANSION PROJECT AT HONG KONG INTERNATIONAL AIRPORT</p> <p>香港國際機場飛行區中場範圍發展計劃裝置相關的政府設施工程</p>	<p>drawn by 繪圖</p> <p>C.K. SIN</p> <p>approved by 批核</p> <p>P.K. SO</p>	<p>date 日期</p> <p>10/4/2012</p> <p>date 日期</p> <p>10/4/2012</p>	<p>drawing no. 圖則編號</p> <p>PMB1/8048/XA109</p> <p>office 辦事處</p> <p>PROJECT MANAGEMENT BRANCH</p> <p>工程策劃管理處</p>	<p>scale 比例</p> <p>Not To Scale</p> <p>不按比例</p>	<p> ARCHITECTURAL SERVICES DEPARTMENT 建築署</p>
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