

CIC MiC/MiMEP ACHIEVEMENT AWARD 2025

Outstanding MiC Project (Completed)

Building 11 of Hong Kong-Shenzhen Innovation and Technology Park at Lok Ma Chau Loop

3 August 2026

中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LIMITED

RONALD LU & PARTNERS

HSITP 港深創科園

1. Project Information



Client	**: Hong Kong–Shenzhen Innovation and Technology Park**
Architect	**: Ronald Lu & Partners (Hong Kong) Ltd.**
Structural Engineer	**: CM Wong & Associates Ltd. ;**
	Wong & Cheng Consulting Engineers Limited
Building Services Engineer	**: J. Roger Preston Limited**
Design and Build Contractor	**: China State Construction Engineering (HK) Ltd.**
Commencement Date	**: 1 June 2023**
Completion Date	**: 22 October 2024**
CFA	**: 7,300 m^2**
Site Area	**: 5,070 m^2**
Address	**: Lok Ma Chau Loop, New Territories**

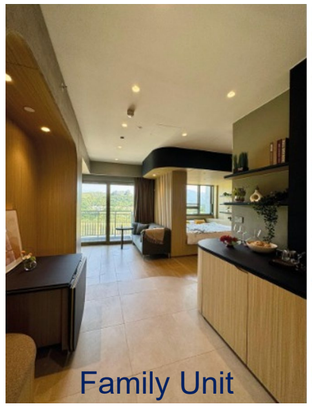


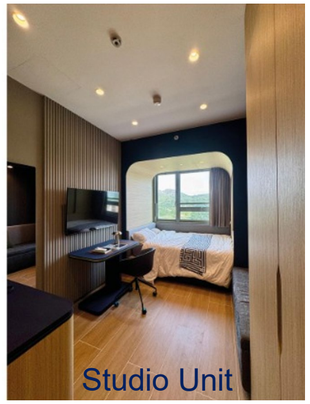
Ariel View of Building 11



Entrance View of Building 11

1. Project Information

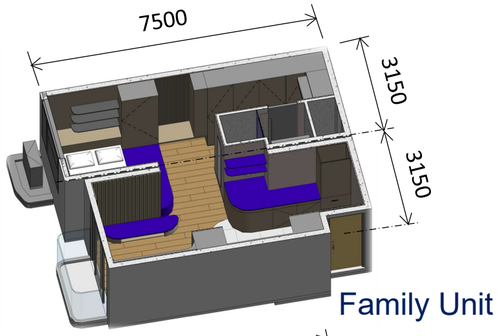


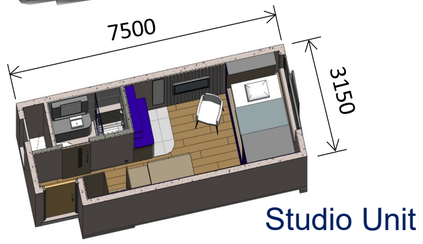


Interior Photos for MiC units

Architectural Background

- The **first** residential facility at HSITP
- Five-storey building with **7,300m²** GFA, including a retail podium with mezzanine.
- Total **106** MiC units (**7.5m × 3.15m × 3.16m** each)

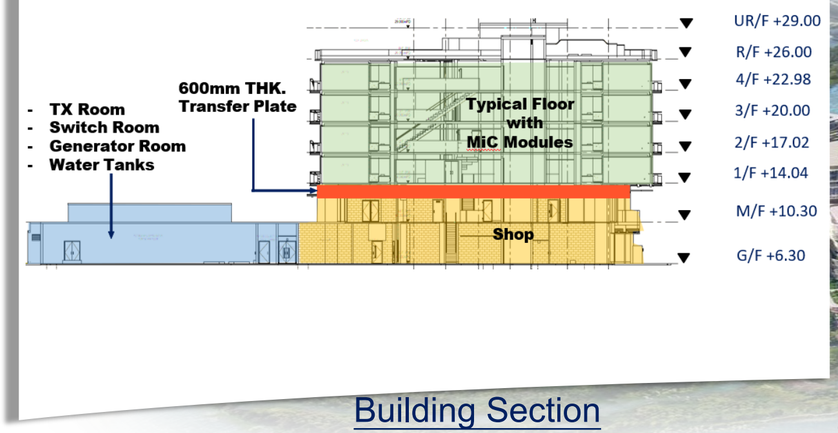




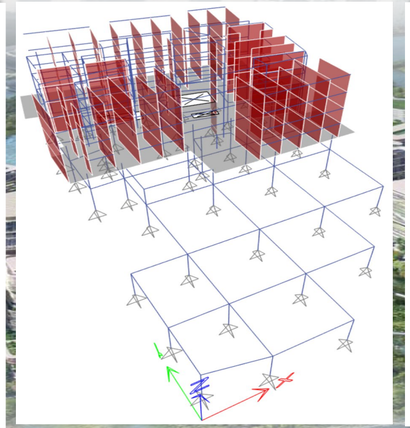
BIM Model for MiC Units

Structural System

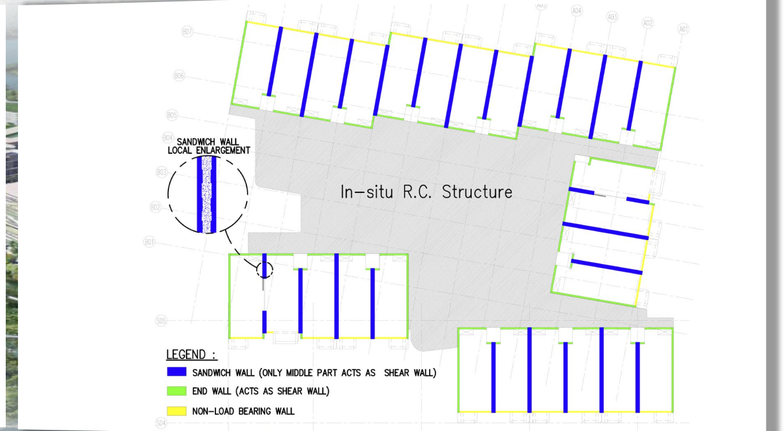
- RC frame with minimal shear walls below the transfer plate
- Frame-shear wall above the transfer plate
- MiC modules at the peripheral area



Building Section



Structural Analysis Model



MiC Wall Arrangement

2. Project Features

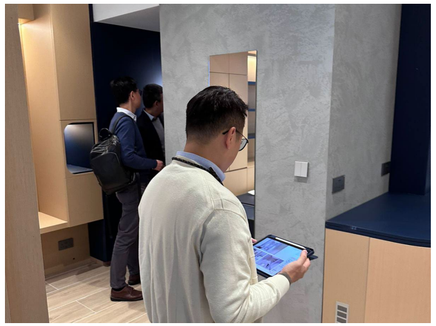
2.1 See It Before We Build It

- VR technology
- Physical mock-ups

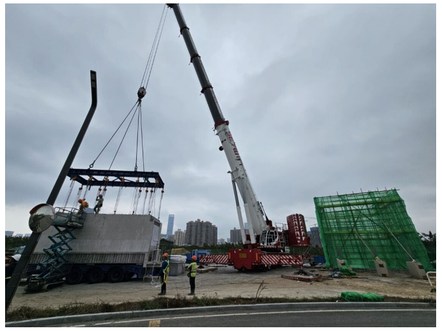




BIM and VR Review

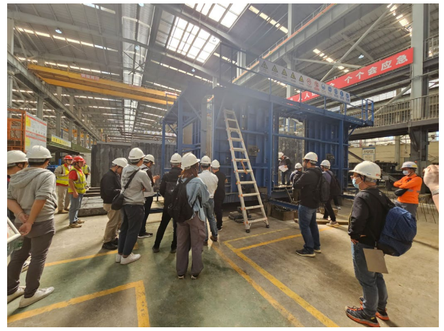


Off-site MiC Prototype





MiC Mockup Unit at Open Area of Site





Factory Visits prior to Mass Production

2. Project Features

2.2 Three Meetings a Day Keep Delays Away

01

Daily Tripartite Communication

- Morning meetings
- Midday check-ins
- Evening reviews



02

Back-Scheduled Milestones

- Supplier milestones
- Supply agreements
- Dedicated personnel stationed at factories

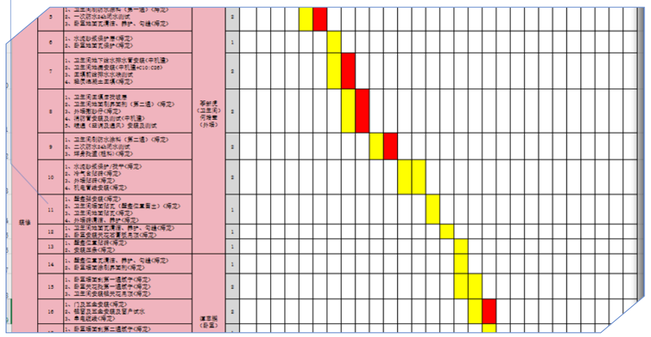


19	2024/3/2	腻子（白色）	立邦25kg/包	176包	通过	已定判	3.15	预计3月22日前到货	
20	2024/3/2	腻子（灰色）	立邦25kg/包	263包	通过	已定判	3.15	预计3月22日前到货	
21	2024/3/2	纸质铝合金蜂窝板	造饰	120块	已通过	已下单	3.13	已到货	
22	2024/3/2	木隔栅	10mm×10mm	470m2	通过 资料补充中（甜恩的测试报告），原厂家无法提供报告，重新找厂家 问题点：未编排 PSC 证明用，什么时候提供？物资采购部回复：3月13日有在群里反馈购买困难，没有相关的PSC认证，希望中建香港运动能提供帮助，还边依在找原厂家及资料，进度不好控制。 3.18更新进度：3.16已提交资料，样品3.18到营地。 最新进展：由地盘施工，不需要报批	报价中	3.19	报批通过后下单，15天交货不在工厂做，送地盘安装。	
23	2024/3/2	壁挂式空调	東芝	106台	已通过	已定判	3.21	第一批：单入29台，实际7台，已到货； 第二批：单入5台，预计4/21交货； 尾数：单入58台，预计5/15-5/20交货 （4月10MIC开始反映盘）	
24	2024/3/2	UPVC排水管	宝狮Φ32	184	通过	已定判	3.2	已到货	
25	2024/3/2	木隔栅油漆	pt-01		通过	报价中	3.19	木格栅确认后下单，交期20天（送地盘）	
26	2024/3/2	镜子	SN-19	99个	资料审批通过	已定判	3.26	3.27日到5套，剩余镜子已做好，等现场通知送货	
27	2024/3/2	斜镜	造饰	1个	资料审批通过	已定判	4.2	已做好，等现场通知送货	
28	2024/3/6	管道隔热材料	管道隔热材料（聚乙烯泡沫，8 mm厚）同吊架	184	通过	3.6分判改采购	3.20	已到	
29	2024/3/6	冷媒管（液管）	Φ6.35mm飞轮	828	通过	3.6分判改采购	3.20	已到	
30	2024/3/6	冷媒管（气管）	Φ12.7mm飞轮	828	通过	3.6分判改采购	3.20	已到	
31	2024/3/2	铝白天花合金吊顶	造型	370m2	事件描述：		3.13	计划4月9日前到货	
32	2024/3/2	承载龙骨	DU38×12×1.0/3000 （mm）	540米	1、3.17只报批未通过，待中建香港石天总帮忙咨询推荐搜集单位；		3.13	计划4月9日前到货	
33	2024/3/2	主龙骨件	PD38	950米	2、3.18日中建香港推荐满足要求的3家单位，供料于3/19日提交香港业务报批，其余安排样板厂家需要预计1周时间准备，做好后再通交；		3.13	计划4月9日前到货	
34	2024/3/2	40铝镁龙骨挂件	40	1780个	3、该报批单位反馈需要等日介间预付款后发货，生产周期预计需要2周时间。		3.13	计划4月9日前到货	
35	2024/3/2	勾搭龙骨	40×0.7mm	1430米	4、3月11日有报以已通知考察该生产样板，预计一周后寄到珠海；		3.13	计划4月9日前到货	
36	2024/3/2	可调节吊杆/自攻螺丝（@300规格，500规）	8.0/3000 （mm）	480米	5.资料已提交，样板预计3月13日到香港业务部 6、问题点：3月14日晚反馈新班常期天花模拟颜色不符合环球提报模拟颜色，需重新送样		3.13	计划4月9日前到货	
37	2024/3/2	收边条	50×50	850米			3.13	计划4月9日前到货	

03

Subcontractor Installation Scheduling

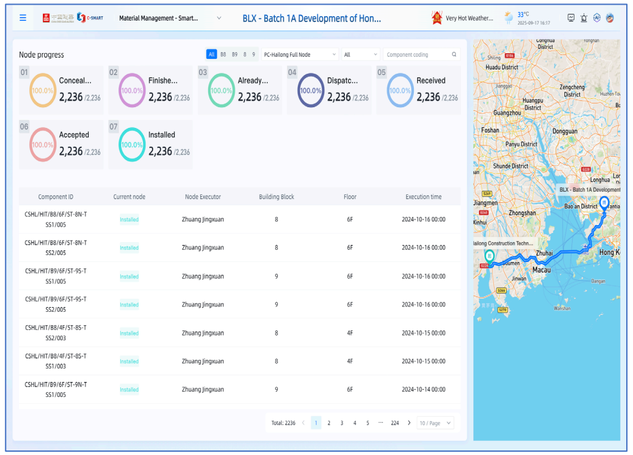
- Clearly defined start and completion dates
- Assigned responsible personnel
- Specified delivery and installation standards
- Logically sequenced construction activities



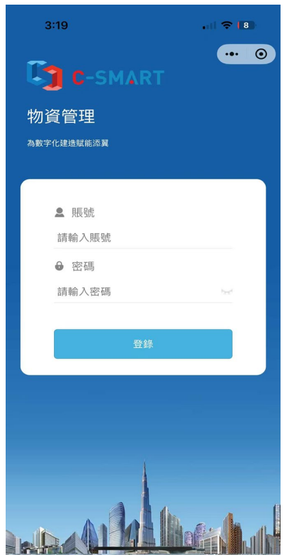
2. Project Features

2.3 One Scan, Full Traceability

- The C-SMART centralized information system
- Real-time tracking
- From procurement and transport to storage and usage



MIC Material Management
(Full Process Node Supervision)





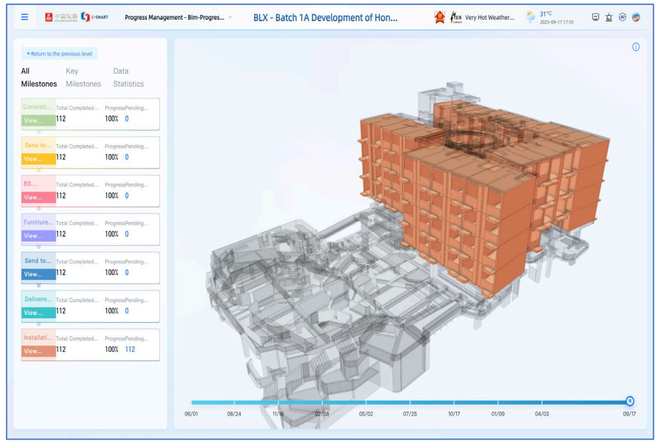


Confirmation of Receipt and Installation
through Material Management App.

2. Project Features

2.4 Every Module Knows Where It Is

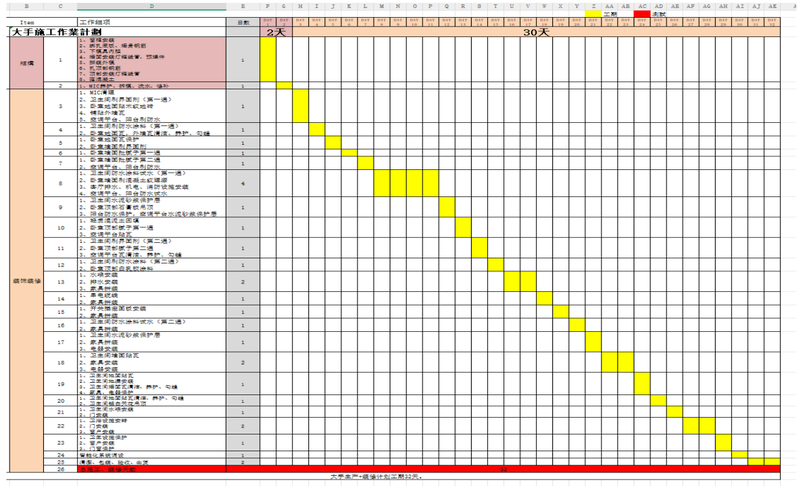
01 Site Construction Schedule → **02** Factory Production Plan → **03** Detailed Production Process Plan → **04** Transportation and Delivery Plan



Overall Milestone Monitoring



GPS Sensor Installed in Each MiC Unit



Site Construction Schedule

2. Project Features

2.5 Build It Twice — First in BIM

- BIM simulations before construction
- Safety and quality management



MiC Unit Installation Sequence



Concrete Casting Procedure



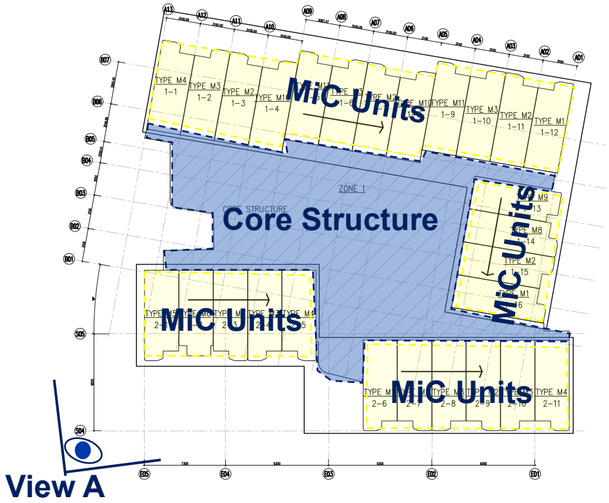
Wall Tie Hook Connection

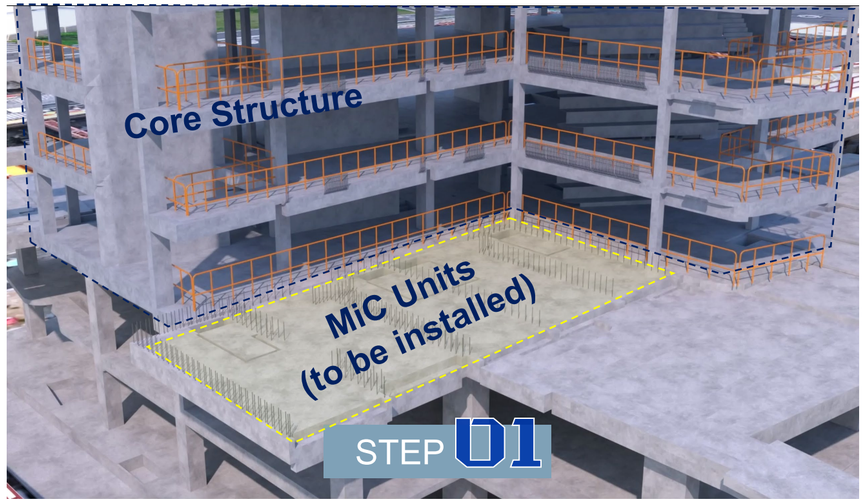
Scenarios Simulation through BIM Animation

2. Project Features

2.6 Core First, Modules Follow

- Constructed the cast-in-place core before installing peripheral MiC units
- Accelerated the overall schedule, and enhanced safety and operational efficiency





(View A) Core Structure Completed First



(View A) Peripheral MiC Units Installed

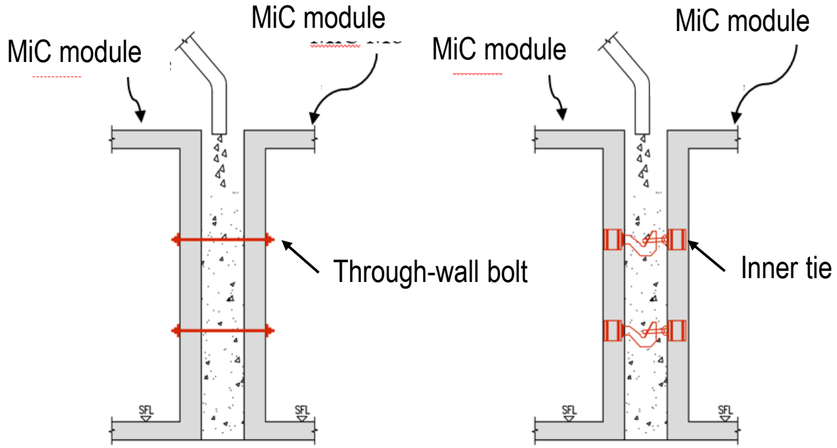
2. Project Features

2.7 Less Labour and Waste

- Reduced On-Site Labor Costs
- Minimized Material Waste and Rework
- Cost Estimation for Decision Support



Interior Fitting Installation at Factory

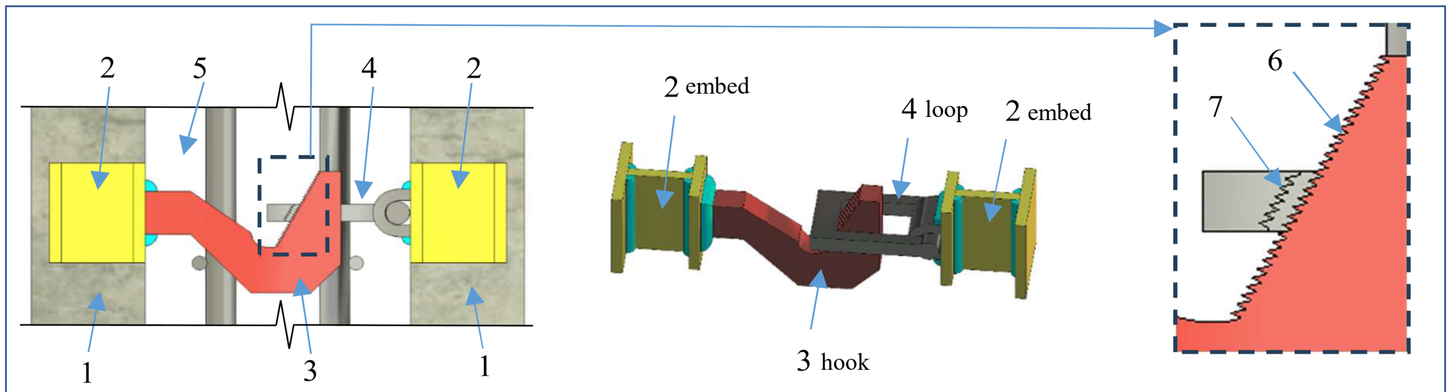


Fixing Details Comparison of Sandwich Wall

2. Project Features

2.8 A Hook Where a Bolt Used to Be

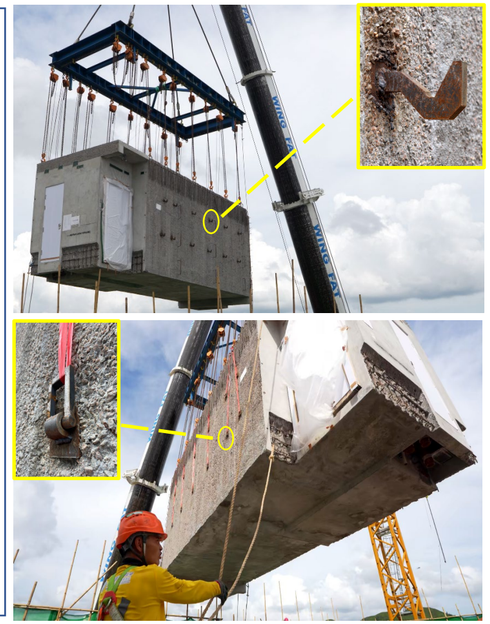
- Self-developed inner ties to temporarily secure sidewalls without penetrating the precast sidewalls
- Factory-installed hooks and loops, enabling effective tying during on-site concreting of sandwich wall
- Eliminates the need for through-wall bolts or thicker sidewalls



(a) Section diagram (b) 3D diagram (c) Enlarged view

1-precast side wall, 2-embed, 3-hook, 4-loop, 5- white area for concrete casting on site,
6-serrated surface on hook, 7-serrated surface on loop

Schematic Diagram for Innovative Inner Tie System Used in Sandwich Wall



- Achieved the highest prefabrication rate of over **95%** among RC MiC projects in Hong Kong.
- Together with a **35-day** reduction in construction time and **HKD 2.2 million** in cost saving.

2. Project Features

2.9 Certified Frames, Oversized Cranes

- Hoisting frame: larger capacity for heavy lifts
- Mobile crane: oversized heavy-duty model



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Mailing Address : GPO Box No. 10478, Central, Hong Kong
Tel : (852) 2787 2118 Fax : (852) 2787 6798

4. Declaration

I, the undersigned, confirm that the hoisting frame assembly as shown is satisfactory for an overall Safe Working Load of 50 tonnes.

Certified by

Dr Lee Chun Yu Jimmy
Director
Registered Professional Engineer
(Mechanical Discipline, RPE Reg. No. RP0267481)

充分考慮MiC重量、構件連接方式等

Hoisting Frame Capacity up to 50 tons

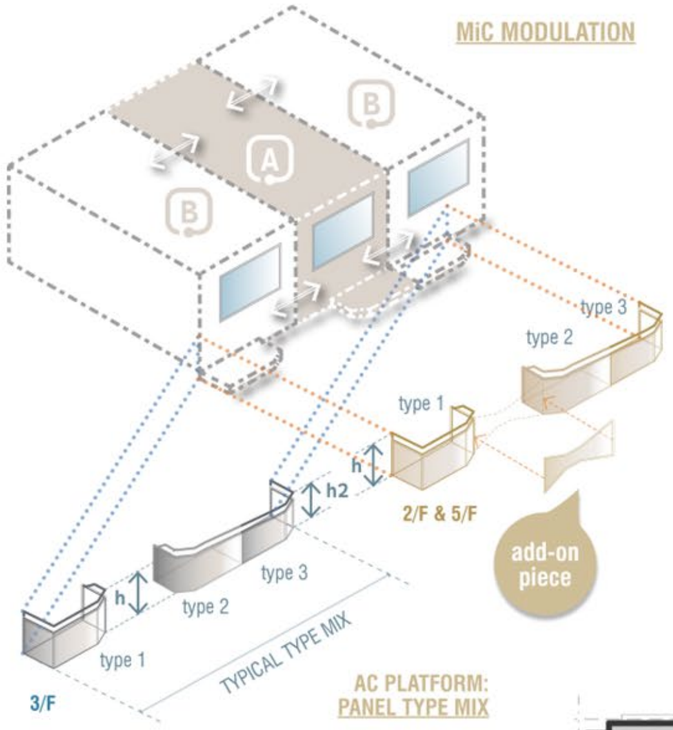


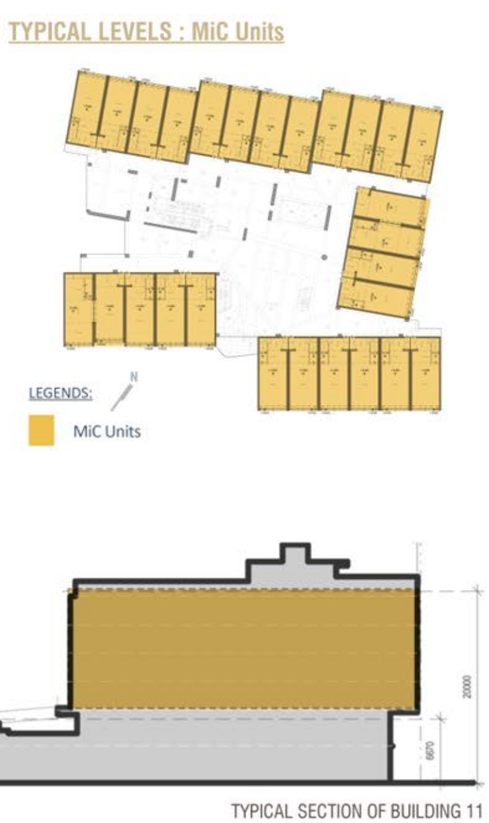
Heavy-duty Mobile Crane Lifting MiC Units

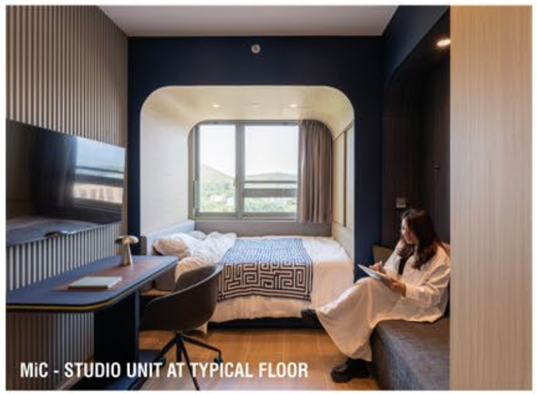
2. Project Features

2.10 A Quiet Neighbour to the Wetland

- MiC near ecological zone
- Rapid construction, minimal disruption





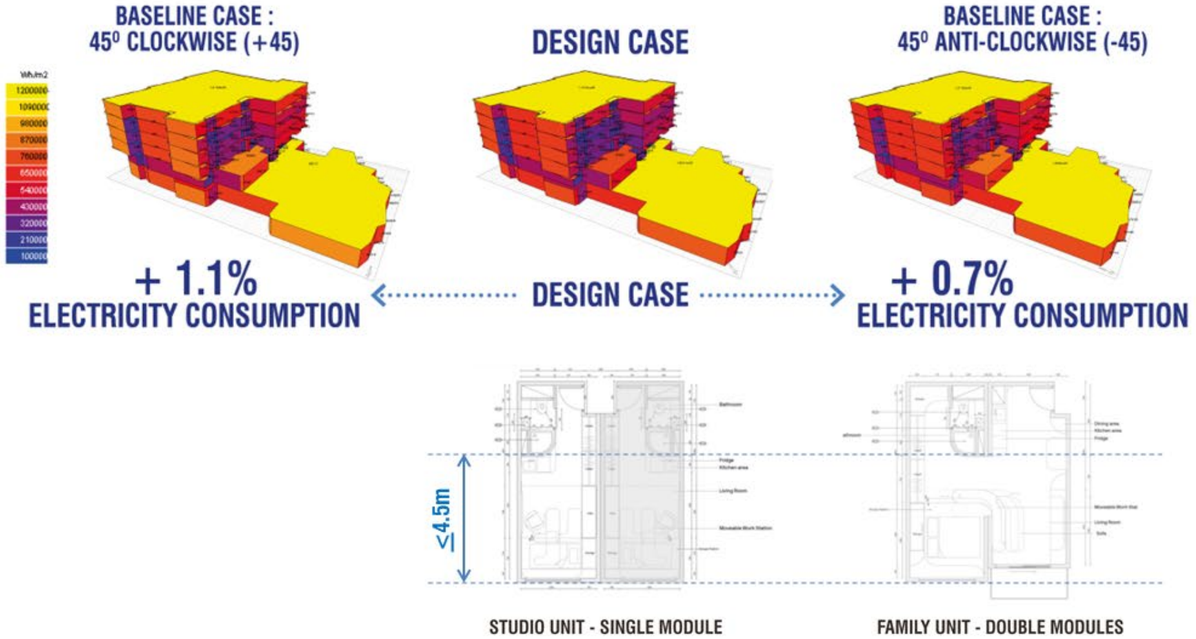




2. Project Features

2.11 Low-Energy Envelope, Daylit Units

- Low 20% window to wall ratio;
- Use of Grey tinted IGU glass;
- Favorable building orientation with windows mostly facing north or south
- Dual use of A/C platforms as sun shading devices to MiC units
- Habitable space within 4.5m away from window





3. Recognition Beyond the Site

3.1 A Vote of Confidence from the Top

- In Feb 2025, ITIB Secretary Prof. SUN Dong inspected Building 11
- In Mar 2025, Chief Executive Mr. John LEE K.C. visited Building 11
- In Jun 2026, Director of the Hong Kong and Macao Affairs Office, Mr. XIA Baolong visited Building 11



Mr. John LEE Discussed with Prospective Entrepreneurs at 3/F Atrium of Building 11 on 21 Mar 2025



Prof. Dong SUN Reviewed MiC Studio Unit of Building 11 on 27 Feb 2025.

3. Recognition Beyond the Site

3.2 Awards from the Industry

















4. Summary

- The innovative inner tie system replaces traditional through-wall bolts, enabling over 95% factory completion of E&M works and high-quality internal finishes.
- Powered by C-SMART platform, VR, and BIM, the project delivers integrated digital management across all phases of construction.
- These innovations significantly shorten the delivery cycle, fully harness the speed and efficiency of MiC, and realize the vision of “lift into place to deliver homes”, 一個模塊一套房，吊裝落位即“交房”.



(a) Southeast Side View



(b) Northeast Side View

Completion Photos of Building 11

Thanks!