

23 June 2020

Chun Wo Construction & Engineering Co., Ltd.
5C, HK Spinners Industrial Building Phase 1
601-603 Tai Nan West Street
Cheung Sha Wan, Kowloon

Dear Sir/Madam,

**Letter of In-principle Acceptance
(Acceptance Reference No.: MiC 7/2020)**

This letter is issued to **Chun Wo Construction & Engineering Co., Ltd.** to confirm that the Modular Integrated Construction (MiC) system (Model No. **CW.MiC001**) as submitted to the Buildings Department (BD) is acceptable in principle for use in private building projects in Hong Kong in respect of the performance aspects listed in Appendix I, subject to the following conditions:

- (i) The design and construction of any building project adopting the above MiC system shall comply with the provisions of the Buildings Ordinance (BO) and its subsidiary legislations;
- (ii) The conditions as set out in Appendix II and Appendix III shall be complied with;
- (iii) The modular units of the above MiC system shall be fabricated in the factories listed in Appendix IV with a valid ISO 9001 or equivalent quality assurance certification; and
- (iv) This in-principle acceptance (IPA) is subject to a validity period expiring on 23 June 2025.

General information of the MiC System (Model No. CW.MiC001) submitted by Chun Wo Construction & Engineering Co., Ltd. is available on BD's website.

This IPA shall not be construed as an exemption from obtaining prior approval and consent from the Building Authority under the BO before commencement of building works nor the granting of any exemption in gross floor area calculation.

This IPA does not give any warranties, explicit or implied, regarding their availability, efficacy, fitness for a particular purpose, title or non-infringement of copyright. The manufacturer/supplier/user must ensure that the above MiC system is safe for public use and complies with all relevant legislation and statutory requirements at all times.

Yours faithfully,



(AU YEUNG Hoi-pang)
Chief Officer/Technical Services
for Director of Buildings

c.c. CHE Kwai-leung Chris (Authorized Person)
LEUNG Wai-man (Registered Structural Engineer)
c/o P&T Architects and Engineers Ltd.
33/F, 633 King's Road,
North Point, Hong Kong

BD/MiC/181202 (S)

**Applicable Performance Aspects
for In-principle Acceptance Reference No. MiC 7/2020**

The in-principle acceptance covers the following performance aspects of MiC system (Model No. CW.MIC001) of Chun Wo Construction & Engineering Co., Ltd. under the Buildings Ordinance (BO) and its subsidiary legislations:

- (a) Provisions of means of escape required under Part B of the Code of Practice for Fire Safety in Buildings 2011 (FS Code) and regulation 41(1) of Building (Planning) Regulations (B(P)R);
- (b) Provisions for fire resisting construction required under Parts C and E of the FS Code and regulation 90 of Building (Construction) Regulations (B(C)R);
- (c) Height of storeys and provisions of natural lighting and ventilation required under regulations 24, 30 and 36 of B(P)R;
- (d) Sanitary provisions and associated drainage works within the modular unit pursuant to Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations;
- (e) Structural performance for loads required under Code of Practice on Wind Effects in Hong Kong 2004, Code of Practice for Dead and Imposed Loads 2011 and Part III of B(C)R; and
- (f) Provisions for structural performance required under Code of Practice for Structural Use of Steel 2011, Code of Practice for Structural Use of Concrete 2013, Code of Practice for Precast Concrete Construction 2016 and B(C)R.

2. For other performance aspects of the MiC system under the purview of the BO not listed above, compliance with the provisions of the BO and the subsidiary legislations shall be demonstrated when plans are submitted for approval under the BO.

**Acceptance Conditions (Building)
for In-principle Acceptance Reference No. MiC 7/2020**

The in-principle acceptance (IPA) of MiC system (Model No. CW.MiC001) of Chun Wo Construction & Engineering Co., Ltd. is subject to the following conditions:

- (a) This IPA is confined to adopting the MiC system for domestic use in a building not exceeding 40 storeys (maximum module units of 39 storeys) as applied for;
- (b) The design and construction of the MiC system should follow the plans accepted by the Buildings Department (accepted plans) and tally with the testing criteria of the submitted test reports. If alternative designs, materials or construction methods different from that shown in the accepted plans are used, compliance with the relevant provisions under the Buildings Ordinance (BO) and the subsidiary legislations should be demonstrated when plans are submitted for approval under the BO;
- (c) Authorized Person of the development project adopting the MiC system (AP) should ensure valid test and/or assessment reports complying the requirements under Part E of the Code of Practice for Fire Safety in Buildings 2011 would be available before the actual production in the prefabricated factory;
- (d) Applicant and AP should observe the requirements under Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers APP-13 on submission of Schedule of Building Materials and Products and certifying the compliance with the relevant provisions of the BO upon completion of works; and
- (e) User manual with maintenance and building safety instructions for future fitting, decoration, alterations and additions of the modules as submitted with the application for IPA should be provided to the owners/occupants/users of the building adopting this MiC system.

**Acceptance Conditions (Structural)
for In-principle Acceptance Reference No. MiC 7/2020**

The in-principle acceptance (IPA) of MiC system (Model No. CW.MIC001) of Chun Wo Construction & Engineering Co., Ltd. is subject to the following conditions:

- (a) The design and construction of MiC system should follow the plans accepted by the Buildings Department (accepted plans) and tally with the testing criteria of the submitted test reports. If alternative designs, materials, proprietary products or construction methods different from that shown in the accepted plans are used, compliance with the relevant provisions under the Buildings Ordinance (BO) and the subsidiary legislations should be demonstrated when future plans are submitted for approval under the BO;
- (b) The MiC system is accepted based on the assumptions listed below. Overall stability, structural analysis, adequacy of structural member and/or structural connections, lateral deflection etc. should be checked when there are any deviations with future structural plans submitted for approval under the BO.
 - (i) Maximum building height from Ground Floor of 129.8m;
 - (ii) Maximum modular units of 39 storeys;
 - (iii) Maximum design wind pressure of 2.97kPa (unfactored);
 - (iv) Imposed loads, superimposed loads and assumed façade loads as shown on drawing no.: E3-51-1 & E3-61-1. Imposed loads for vehicular traffic and parking are not considered;
 - (v) Lateral stability is provided by modular units and in-situ portions as shown on drawing no.: E3-10-1;
 - (vi) Fabrication and installation tolerances of modular units as shown on drawing no.: E0-01; and
 - (vii) No modular units are stacked more than one-storey above the completed level of each zone as shown on drawing no.: E9-21-5.

- (c) A full-scale mockup is required prior to the commencement of the following works:
- (i) Type 1 wall between modular units forming composite structural wall as specified in the drawing no. E0-01;
 - (ii) Type 2 wall using Groutec S grouted pipe sleeve system specified in the drawing no. E9-21-6; and
 - (iii) Type 3 wall using full height corrugated duct for reinforcement specified in the drawing no. E0-01.
- (d) Structural details of in-situ part (semi-precast slab at corridor; in-situ floor at corridor, lift lobby & staircase; core-walls at lift and staircase) at 1/F to 39/F as shown on drawing no.: E3-10-1, and roof floor slab are not included in this acceptance.

Manufacturer and Prefabrication Factory

Details of the accepted manufacturer and prefabrication factory for fabrication of the modular units under In-principle Acceptance reference no. MiC 7/2020 for MiC system (Model No. CW.MIC001) of Chun Wo Construction & Engineering Co., Ltd. are as follows:

Manufacturer: Chun Wo Construction & Engineering Co., Ltd.

Prefabrication Factory: Integrated Precast Solutions Pte. Ltd.

Address of Prefabrication Factory: Lot 902 & 903, Jalan Perdana,
Off Jalan Ulu Pulai, Jeram Batu,
81500 Pekan Nanas, Johor, Malaysia

Remarks:

- (a) *The above factory shall maintain a valid ISO 9001 or equivalent quality assurance certification at all times.*
- (b) *The following items in the Quality Assurance Scheme are for information only. Updated information should be submitted for future building projects with MiC.*
 - (i) *Frequency and extent of inspection by in-house staff and independent parties required in Appendix B of PNAP ADV-36;*
 - (ii) *Frequency and extent of audit by in-house staff and independent parties required in Appendix B of PNAP ADV-36;*
 - (iii) *Details of concrete supplier certified under the Quality Scheme for the Production and Supply of Concrete (QSPSC) or equivalent; and*
 - (iv) *Details of laboratories for quality control tests.*

27 May 2022

Chun Wo Construction & Engineering Co., Ltd.
5C, HK Spinners Industrial Building Phase 1
601-603 Tai Nan West Street
Cheung Sha Wan, Kowloon

Dear Sir/Madam,

**Letter of In-principle Acceptance – Addition of Structural Drawings and
Prefabrication Factory
(Acceptance Reference No.: MiC 7/2020)**

Further to the Letter of In-principle Acceptance (IPA) issued to you on 23 June 2020 (IPA Letter) confirming that Modular Integrated Construction (MiC) system (Model No. CW.MIC001) is acceptable in principle for use in private projects in Hong Kong in respect of the performance aspects listed therein, this letter confirmed that the additional structural drawings and prefabrication factory for fabrication of the aforesaid MiC System is considered acceptable, subject to the following conditions:

- (i) The conditions as set out in Appendix I shall be complied with; and
- (ii) The modular units of the above MiC system shall be fabricated in the factory listed in Appendix II with a valid ISO 9001 or equivalent quality assurance certification and/or the factory as stipulated in paragraph 1(iii) and Appendix IV of the IPA Letter dated 23 June 2020; and
- (iii) All conditions and validity period contained in the IPA Letter dated 23 June 2020 remain applicable and this letter should be read in conjunction with the said IPA Letter.

Yours faithfully,

c.c. CHE Kwai-leung Chris (Authorized Person)
LAU Wing-yin (Registered Structural Engineer)
c/o P&T Architects and Engineers Ltd.
33/F, 633 King's Road,
North Point, Hong Kong

BD/MiC/181202


(CHAN Yuen-ming, Mary)
Chief Officer/Technical Services
for Director of Buildings

**Acceptance Conditions (Structural)
for In-principle Acceptance Reference No. MiC 7 /2020**

The in-principle acceptance (IPA) of MiC system (Model No.: CW.MIC001) of Chun Wo C&E Co., Ltd. is subject to the following conditions:

- (a) The design and construction of MiC system should follow the plans accepted by the Buildings Department (accepted plans) and tally with the testing criteria of the submitted test reports. If alternative designs, materials, proprietary products or construction methods different from that shown in the accepted plans are used, compliance with the relevant provisions under the Buildings Ordinance (BO) and the subsidiary legislations should be demonstrated when future plans are submitted for approval under the BO;
- (b) The MiC system is accepted based on the assumptions listed below. Overall stability, structural analysis, adequacy of structural member and/or structural connections, lateral deflection etc. should be checked when there are any deviations with future structural plans submitted for approval under the BO.
 - (i) Maximum building height from Ground Floor of 129.8m;
 - (ii) Maximum modular units of 39 storeys;
 - (iii) Maximum design wind pressure of 2.97kPa (unfactored);
 - (iv) Imposed loads, superimposed loads and assumed façade loads as shown on drawing no.: E3-51-1 & E3-61-1. Imposed loads for vehicular traffic and parking are not considered;
 - (v) Lateral stability is provided by modular units and in-situ portions as shown on drawing no.: E3-10-1;
 - (vi) Fabrication and installation tolerances of modular units as shown on drawing no.: E0-02.
 - (vii) No modular units are stacked more than one-storey above the completed level of each zone as shown on drawing no.: E9-21-5.
- (c) A full-scale mockup is required prior to the commencement of the following works:
 - (i) Alternative type 1 wall between modular units forming composite

structural wall as specified in the drawing no. E0-01. The corresponding quality control, supervision requirements, concreting procedure and installation details are stipulated in the drawing nos. E0-01, E0-02, E9-61-1, E9-61-2, E9-61-3, E9-61-4, E9-61-5, E9-61-6, E9-61-7 & E9-62-1.

- (ii) Type 2 wall using NMB Splice Sleeve Coupler (as alternative to Groutec S grouted pipe sleeve system) specified in the drawing nos. E0-02, E9-61-7 & E9-62-2 ;
 - (iii) Type 3 wall using full height corrugated duct for reinforcement specified in the drawing no. E0-01.
- (d) Structural details of in-situ part (semi-precast slab at corridor; in-situ floor at corridor, lift lobby & staircase; core-walls at lift and staircase) at 1/F to 39/F as shown on drawing no.: E3-10-1, and roof floor slab are not included in this acceptance.

Manufacturer and Prefabrication Factory

Details of the accepted manufacturer and prefabrication factory for fabrication of the modular units under In-principle Acceptance reference no. MiC 7/2020 for MiC system (Model No. CW.MIC001) of Chun Wo C&E Co., Ltd. are as follows:

Manufacturer: Chun Wo C&E Co., Ltd.

Prefabrication Factory: Redland Precast Concrete Products (China) Ltd.

Address of Prefabrication Factory: Nizhou District, Shatian Town, Dongguan City, Guangdong Province, PRC.

Remarks:

- (a) *The above factory shall maintain a valid ISO 9001 or equivalent quality assurance certification at all times.*
- (b) *The following items in the Quality Assurance Scheme are for information only. Updated information should be submitted for future building projects with MiC.*
 - (i) *Frequency and extent of inspection by in-house staff and independent parties required in Appendix B of PNAP ADV-36;*
 - (ii) *Frequency and extent of audit by in-house staff and independent parties required in Appendix B of PNAP ADV-36; and*
 - (iii) *Details of laboratories for quality control tests.*