



MEMO

From Secretary for Development
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Construction Site Safety Manual

Safety Precautionary Measures for Floor Openings and Free Edges at Buildings and Structures and Control on Conveying Debris through Floor Openings

This memo promulgates a set of new particular specification (PS) clauses to enhance the safety precautionary measures for floor openings and free edges at buildings and structures, and to tighten up the control on conveying debris through floor openings in public works contracts, with a view to mitigating the fall from height hazard through openings and struck by falling objects hazard. The clauses are attached at **Annex A** of this memo.

Effect on Public Works Contracts

2. This new set of PS clauses at Annex A shall be incorporated in all public works contracts (including capital works contracts and maintenance contracts) of which the tenders are to be invited **on or after 29 July 2022**. For public works contracts to be tendered before 29 July 2022, project officers are strongly encouraged to incorporate the new PS clauses as far as reasonably practicable. For existing public works contracts, contract administrators are encouraged to explore the feasibility on implementing the measures described in the new PS clauses with the contractors. Taking into account the circumstances of individual existing public works contracts, the relevant measures should be adopted as far as reasonably practicable.

Incorporation into Manuals/Handbooks

3. The new set of PS clauses at Annex A would be incorporated into the Construction Site Safety Manual in its next updating exercise.

4. Please bring this memo to the attention of the project officers who are responsible for the preparation of tenders for public works contracts and the project officers, consultants and resident site staff supervising public works contracts.

Enquiries

5. Any enquiries on the above should be addressed to Mr LEE Man-yiu, Assistant Secretary (Works Policies 5) 5 at 3509 8305.

(Alan WONG)
for Secretary for Development

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**Particular Specification –
Safety Precautionary Measures
for Floor Openings and Free Edges at Buildings and Structures
and Control on Conveying Debris through Floor Openings**

**Safety Precautionary Measures for Floor Openings and Free Edges at
Buildings and Structures**

- (1) (a) The Contractor shall fully cover all floor openings or erect railings around them. The Contractor shall post warning notices at the floor openings to alert site personnel of the floor openings.
- (b) Covers to all floor openings shall be constructed with solid material of sufficient strength and securely fixed in position to prevent fall of persons, materials and article. All covers to all floor openings shall be clearly and boldly marked to show their purpose.
- (c) The Contractor shall erect rigid and secure railings around the floor openings and at the free edges of a building or structure. They shall include but not be limited to the following –
 - (i) top railing at a height of 900 mm to 1 150 mm;
 - (ii) intermediate railing at a height of 450 mm to 600 mm;
 - (iii) toe board of 200 mm high above the floor surface where no permanent upstand exists; and
 - (iv) brightly coloured safety meshes mounted on the top railings and down to the toe boards.
- (d) On top of the provisions in sub-clause (c) of this Clause, for floor openings with considerable risks or safety concerns of falling persons or objects, the Contractor shall provide safety nets of suitable size and sufficient strength covering the floor openings. The safety nets shall be clear of any debris.
- (e) Where the erection of railings or provision of covers to prevent fall from a floor opening or a free edge is considered impracticable, the Contractor shall provide suitable fall arrest system to workers with reference to the Guidance Notes on Classification and Use of Safety Belts and their Anchorage Systems published by the Labour Department.
- (f) The Contractor shall develop and implement an effective and safe

system of work to ensure that the above safety measures are properly implemented and maintained.

- (g) For the avoidance of doubt, this Clause is applied to all buildings or structures, irrespective of whether they are permanent or temporary in nature.

Control on Conveying Debris through Floor Openings

- (2) (a) Debris generated in the works shall be regularly removed to prevent excessive stockpiling that could –
 - (i) affect the integrity of the building or structure;
 - (ii) affect the access to and egress from the workplaces;
 - (iii) result in a risk of fire; or
 - (iv) cause health and safety hazards.
- (b) The Contractor shall only convey debris through floor openings with suitable chutes, full enclosures or shafts.
- (c) The Contractor shall define designated areas for conveying debris through floor openings with chute, full enclosure or shaft for acceptance by the Architect/Engineer. The designated areas shall have an enclosed structure to contain the falling debris where the hazard of workers or the public being struck by falling objects/rebounding debris is eliminated. The designated areas shall be clearly identified, and fenced off or barricaded to prevent unauthorized entry. Overhead conveyance of debris through designated areas shall be suspended during removal of debris therein. All site personnel involved shall be unequivocally informed of the suspension of overhead conveyance of debris through the designated areas. Warning notice shall be posted at all entry points of the designated areas to warn site personnel of the potential hazards.
- (d) The Contractor shall ensure that all chutes, full enclosures or shafts installed at the floor openings –
 - (i) shall be of adequate strength and securely fixed and supported to allow safe and free falling of debris therein;
 - (ii) shall be fully enclosed at every entry point to prevent a person from falling therein;
 - (iii) shall be adequately secured having regard to the weight of the chute, full enclosure or shaft and the weight of possible accumulated load therein;

- (iv) shall prevent escape of materials and dust; and
 - (v) shall be able to minimise the noise while debris is passing through.
- (e) The Contractor shall ensure that every entry point for the designated area mentioned in sub-clause (c) of this Clause, and all chutes, full enclosures or shafts mentioned in sub-clause (d) of this Clause shall be adequately protected by barriers during the removal of debris by mobile plant, and suitably guarded by barriers with adequate strength at all times. Barriers shall be high enough to prevent mobile plant from riding over them, and strong enough to halt a fully loaded mobile plant.
- (f) Where the compliance of any provision in sub-clauses (b), (c), (d) and (e) of this Clause by the Contractor is considered impracticable, the Contractor shall submit an alternative proposal for conveying debris through floor openings, with due consideration and mitigation of hazards including, but not limited to falling from height and struck by falling objects, for acceptance by the Architect/Engineer before the commencement of conveying debris through floor openings.
- (g) For the avoidance of doubt, this Clause is applied to all buildings or structures, irrespective of whether they are permanent or temporary in nature.