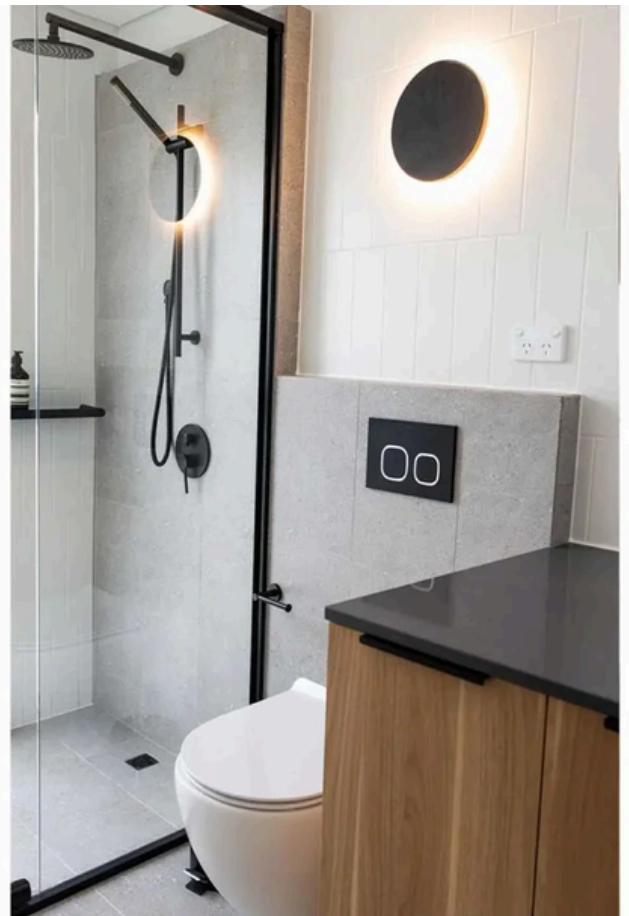


Installation Method



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1. Introduction

This method statement provides a comprehensive plan for the transportation, lifting, and installation of Modular Integrated Construction (MiC) units at the Disinfection Facilities at Shatin Ambulance Depot. This document outlines the methodologies, safety requirements, and quality control measures necessary to ensure safe and efficient lifting operations.

The work will be carried out in accordance with:

- Approved drawings and technical specifications
- Statutory regulations and building codes
- Risk management and site-specific safety protocols

Regular reviews and updates will be made to accommodate changing site conditions and ensure compliance with best practices.

2. Scope of Works

The scope of work includes:

Pre-installation activities: Site survey, lifting route planning, and ground preparation

Transportation: Route selection, customs clearance, and traffic management

Lifting operations: Use of cranes, slings, shackles, and other lifting gear to safely install MiC modules

Module installation: Positioning, leveling, and securing each unit in alignment with structural requirements

Quality control and safety inspections before, during, and after installation

Coordination with stakeholders, including engineers, safety officers, and logistics personnel

3. Transportation Route

3.1 Route Identification

Modules will be transported via sea freight to Hong Kong, followed by road transport to the installation site.

Preferred route: Modules will be offloaded at Tuen Mun Public Cargo Working Area (TMPCWA) before being transported to Shatin Ambulance Depot.

Alternative route: A secondary transport route will be available in case of disruptions.

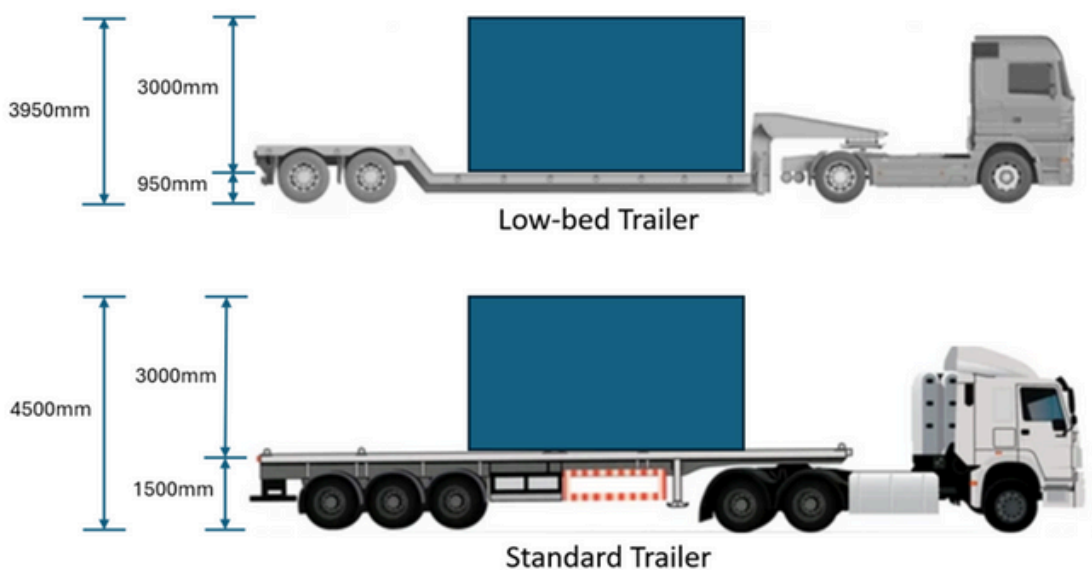
3.2 Key Considerations

Clearance & Height Restrictions: Special permits will be obtained for oversized loads exceeding 2.5m width.

Traffic Management: Escorts and temporary road closures will be arranged where necessary.

Unloading Zones: Designated unloading areas will be prepared to ensure safe handling of modules.

Weather Contingency: Adverse weather conditions will be closely monitored, with backup scheduling in place.



4 General information about MiC modules

Module Specifications

- The project includes 5 MiC modules, with 5 different types of varying dimensions.
- The maximum module weight is approximately 16.69 tons.
- The MiC units are prefabricated off-site and transported for installation.

类型	尺寸/型号	总用量	单位	单位总量kg	拆分用量					拆分重量kg				
					MIC-1	MIC-2	MIC-3	MIC-4	MIC-5	MIC-1	MIC-2	MIC-3	MIC-4	MIC-5
地砖	300x300	28	平方米	122.5	0	4	8.5	7.5	8	0	490	1041.25	918.75	980
墙砖	300x300	56	平方米	82.5	0	13	12	12	19	0	1072.5	990	990	1567.5
口字铝方通	50x25x3	185	米	1.12	5	49	24	73	34	5.6	54.88	26.88	81.76	38.08
铝板		60	平方米	8.5	13	9	9	9	20	110.5	76.5	76.5	76.5	170
水泥板	9厘	50	平方米	12.6	16	8.5	8.5	8.5	8.5	201.6	107.1	107.1	107.1	107.1
1.2米光管		6	件	3	2	1	1	1	1	6	3	3	3	3
0.6米光管		13	件	2	0	3	4	3	3	0	6	8	6	6
门槛石	900x100x15	3	件	3.65	1		1		1	3.65	0	3.65	0	3.65
百叶窗	950x400	3	件	4.2	1		1		1	4.2	0	4.2	0	4.2
给水管	φ28	11	米	2.7	2	2	2	3	2	5.4	5.4	5.4	8.1	5.4
给水管	φ22	40	米	2.24	8	8	8	11	5	17.92	17.92	17.92	24.64	11.2
刚圆	φ28	3	件	0.3		1		1	1	0	0.3	0	0.3	0.3
刚圆	φ22	3	件	0.3	3					0.9	0	0	0	0
地面	φ100	9	件	0.1	1	1	1	4	2	0.1	0.1	0.1	0.4	0.2
角圆	φ22	3	件	0.2					3	0	0	0	0	0.6
线管	φ20	40	米	0.9	8	8	8	11	5	7.2	7.2	7.2	9.9	4.5
线管	φ25	4	米	1.13				4		0	0	0	4.52	0
方形铁线管	100x50x50	8	米	4.5	4	4				18	18	0	0	0
方形铁线管	75x50x50	8	米	3.5	3	3	2			0	10.5	10.5	7	0
86接线盒	86x86	30	件	0.1	5	5	6	7	7	0.5	0.5	0.6	0.7	0.7
插座		3	件	0.1			3			0	0	0.3	0	0
室外带保护接线盒		2	件	0.5	2					1	0	0	0	0
空调开关		2	件	0.2		1	1			0	0.2	0.2	0	0
单控开关		4	件	0.2	2		1		1	0.4	0	0.2	0	0.2
时间控制开关		2	件	0.2			1		1	0	0	0.2	0	0.2
自流平		11	平方米	7.5	9	2				67.5	15	0	0	0
风管	500x200	6	米	2.5			2		4	0	0	5	0	10
风管	300x200	1	米	2.1				1		0	0	0	2.1	0
风管	250x200	1	米	2		0.5	0.5			0	1	1	0	0
风管	200x200	10	米	0.8		4	2	2	2	0	3.2	1.6	1.6	1.6
间墙(华科)		31	平方米	22		5		20	6	0	110	0	440	132
洗手台		1.5	平方米	85					1	0	0	0	0	85
洗手盆		2	个	25					25	0	0	0	0	625
间板		10	平方米	28		6			4	0	168	0	0	112
镜子	1100x600(0.66m²)	5	件	9.9		3			2	0	29.7	0	0	19.8
排气扇		1	件	30	1					30	0	0	0	0
入户门		3	件	80	1		1		1	80	0	80	0	80
脏衣服收纳		1	件	30				1		0	0	0	30	0
干净衣服架		1	件	30			1			0	0	30	0	0
风机		2	件	35			1		1	0	0	35	0	35
现场灌浆		0.5	立方米	2400	0.1	0.1	0.1	0.1	0.1	240	240	240	240	240
水槽		12.46	米	9	2.492	2.492	2.492	2.492	2.492	22.428	22.428	22.428	22.428	22.428
落水管		6	米	1	3				3	3	0	0	0	3
空调		2	台	30		1	1			0	30	30	0	0
合计										825.898	2489.428	2748.228	2974.798	4268.658

Structural Considerations

Concrete Composition: The reinforced concrete structure comprises steel bars and high-strength concrete.

Lifting Points: Modules are equipped with dedicated lifting points for balanced and secure lifting.

Built-in Services: Modules include pre-installed mechanical, electrical, and plumbing (MEP) systems that require careful handling.

Storage & Staging: Modules will be placed on level ground with protective measures to prevent damage before installation.

5. Delivery Schedule

Coordination with Installation Plan

- Modules will be delivered in phases according to the lifting sequence.
- Daily tracking of deliveries will be conducted to prevent scheduling conflicts.

5.2 Unloading & Temporary Storage

- Modules will be stored on-site with protective covers to prevent exposure to environmental conditions.
- Dedicated storage zones will be marked and prepared before arrival.
- Quality inspection will be carried out before installation to check for transport-related damage.

INFORMATION TABLE FOR MiC MODULAR /MiC模块信息表

S/N 序号	MARK 模块编号	NO. 数量	WEIGHT OF RC(kg) 模块RC重量(kg)	WEIGHT OF DECORATION(kg) 装修重量(kg)	TOTAL WEIGHT(kg) 总重量(kg)	NOTE 备注
1	MiC-1	1	13846	825.898	14671.898	
2	MiC-2	1	13746	2489.428	16235.428	
3	MiC-3	1	10269	2748.228	13017.228	
4	MiC-4	1	10870	2974.798	13844.798	
5	MiC-5	1	12424	4268.658	16692.658	
	Total	5	61155	13307.01	74462.01	

WEIGHT OF RC(kg) 模块RC重量(kg)

			钢筋重量(kg)	混凝土重量(kg)		总重
1	MiC-1		937.04	12908.96		13846
2	MiC-2		953.22	12792.78		13746
3	MiC-3		871.03	9397.97		10269
4	MiC-4		873.55	9996.45		10870
5	MiC-5		933.27	11490.73		12424

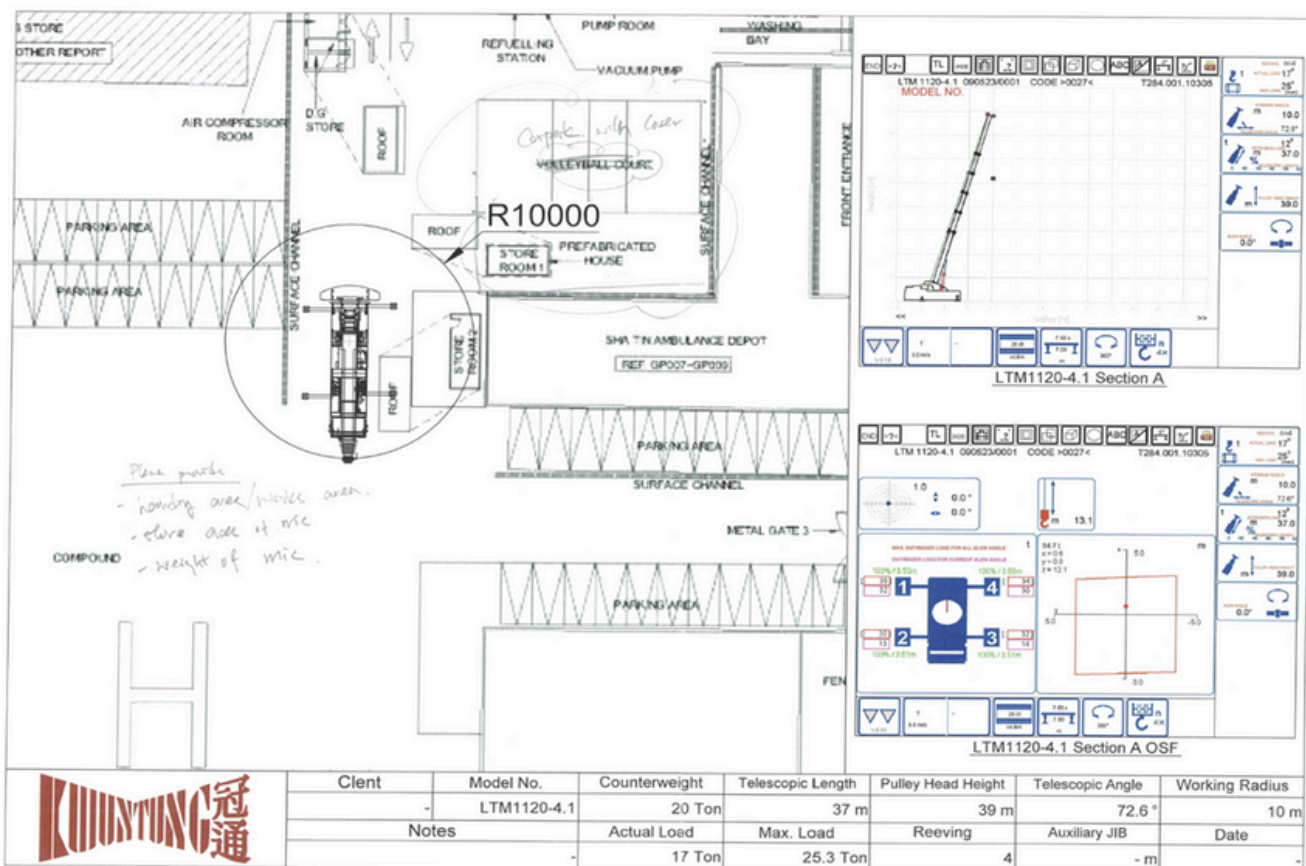
6. Installation of The Modular Units

6.1 Site Preparation

- Surveying: Setting out points will be verified using approved drawings.
- Surface Readiness: The base slab will be cleaned, leveled, and prepared for module installation.

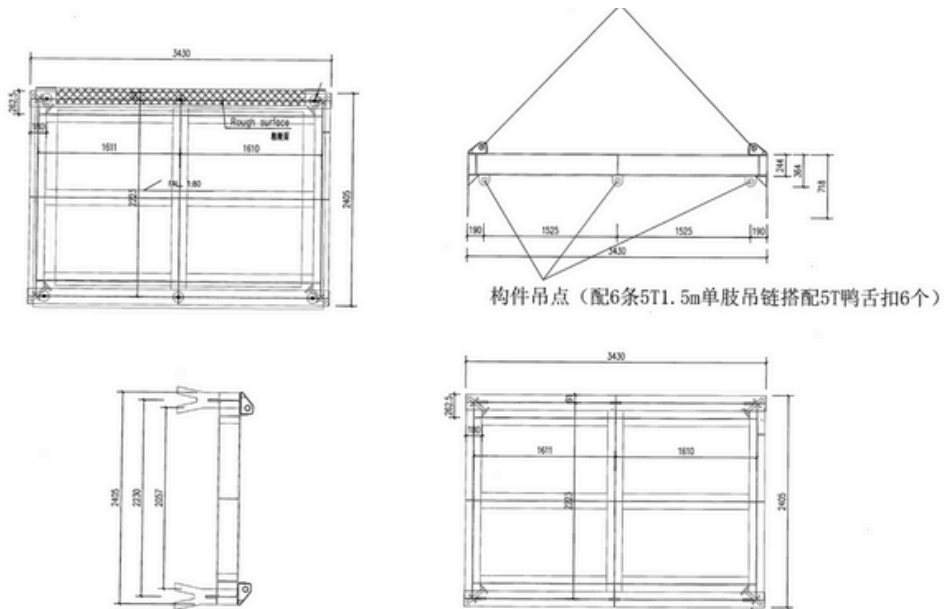
6.2 Lifting Methodology

The modules will be lifted using a mobile crane with a lifting frame.



Lifting gear includes:

- 4-leg chain slings
- Spreader beams
- Certified shackles and hooks

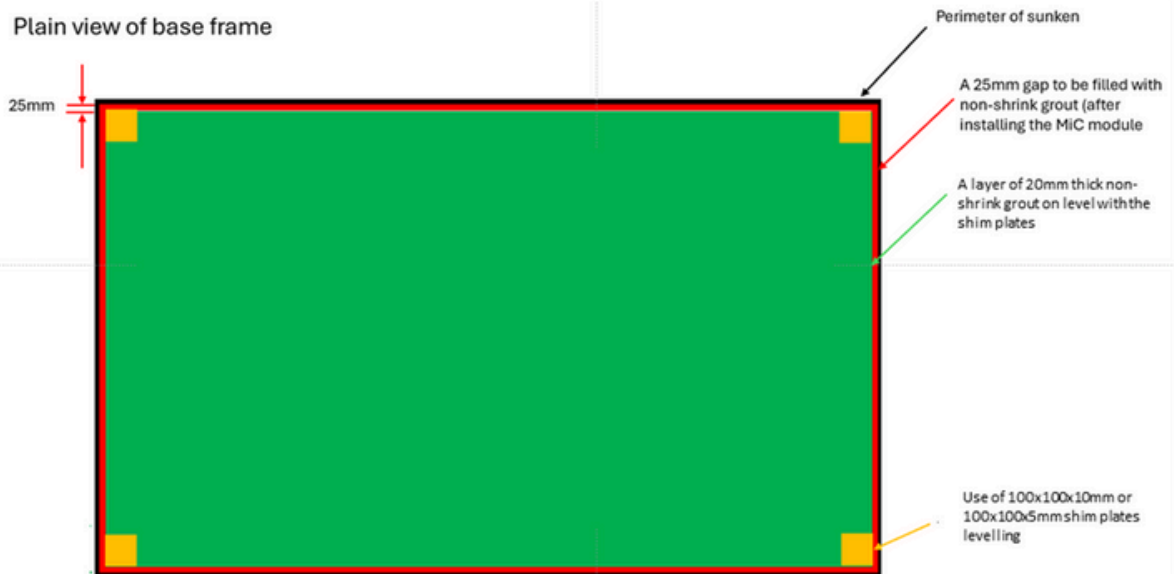


6.3 Module Alignment & Positioning

- Shim plates and backer rods will be used to ensure accurate leveling.
- Laser leveling tools will be used for precision alignment.
- Non-shrink grout will be applied to secure modules in position.

6.4 Connection & Integration

- Joint sealing: Expansion joints will be filled with appropriate sealant and rock wool.
- Structural Fixation: MEP connections will be aligned, and modules will be bolted in place.



7. Plants & Lifting Equipment

7.1 Lifting Equipment

- Mobile Crane – Primary lifting mechanism
- Electric Scissor Lift Platform – Used for upper-level installations
- Aluminum Ladder Platform – For access at lower levels
- Lifting Frame & Gear – Custom-designed frame for module lifting

7.2 Equipment Inspection & Certification

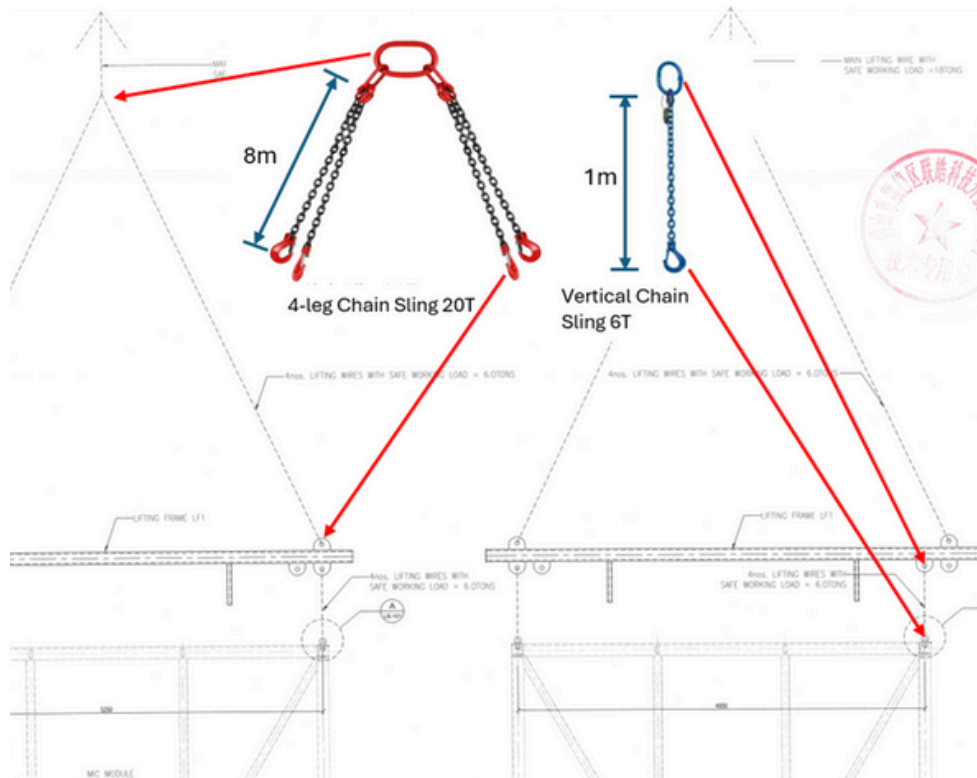
- All lifting equipment will be certified and undergo pre-use inspections.
- Regular maintenance schedules will be followed.

7.3 Lifting Frame and Lifting gears

A Lifting Frame is designed to be able to handle modules with different dimensions. The drawing and calculation of the Lifting Frame will be submitted for approval before production and commissioning. The product will be tested and certified by an approved Testing Laboratory. Before the lifting work commences on-site it will be inspected by the Site Supervisor or Resident Engineer on its validity of certificate and its satisfactory condition for uses.



A 4-leg chain sling with SWL of 20T is connected to upper side eye plates of the lifting frame while 4 single chain slings with SWL of 6T are used to connect to the lower side eye plates which located on the top four corners of each module. Note that appropriate



8. Personnel of Installer

Roles & Responsibilities

- Project Manager: Oversees logistics and progress.
- Lifting Supervisor: Ensures compliance with safety regulations.
- Crane Operator: Operates the tower crane for precise lifting.
- Riggers & Signalmen: Attach lifting gear and provide directional guidance.
- Safety Officer: Conducts risk assessments and enforces safety protocols.
- Quality Inspector: Verifies correct installation of each module.

9. Safety Requirement

9.1 Safety Protocols

Exclusion Zones: Unauthorized personnel are strictly prohibited from entering the lifting zone.

PPE Requirement: All workers must wear helmets, gloves, steel-toe boots, and high-visibility vests.

Weather Considerations: Lifting operations will be suspended during high winds or heavy rain.

Emergency Preparedness: First aid kits and emergency response teams will be on standby.

9.2 Toolbox Talks & Training

- Daily briefings will be conducted to discuss safety measures before lifting begins.
- All personnel will undergo mandatory safety training.

9.3 Personal Protection Equipment and Safety

Safety helmets, safety boots and reflective vest, safety goggles & hearing protectors if needed.

Secured anchor point at the top of the modules would be provided to attach the independent lifelines and safety harness will be provided to the workers.

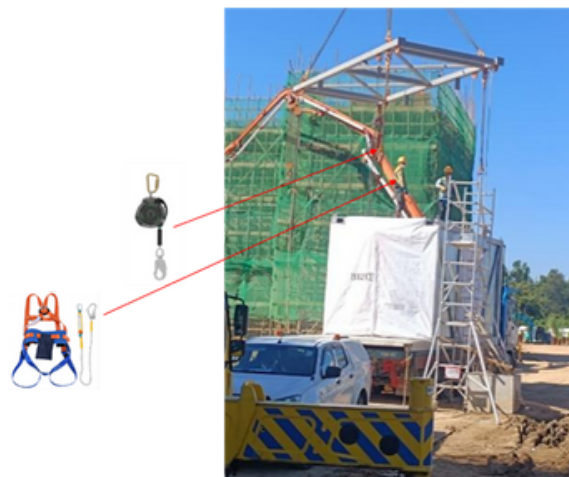
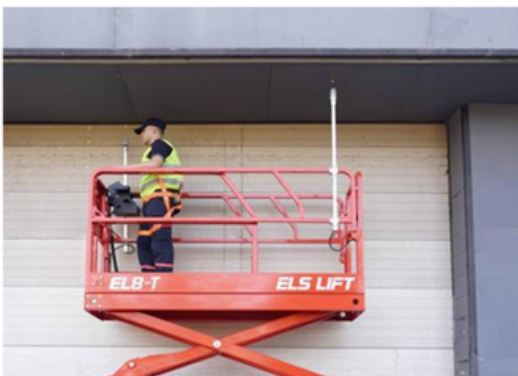
Scissor platform will be provided to the workers for accessing upper levels when working at height as described in following section.

9.4 Barricade lifting zone

Fence off the working area with suitable materials such railing barriers or water fillable blocks as to avoid trespass of pedestrian or vehicle. Warning signs and barriers will be erected where necessary.

9.4.1 Summary of Different Coloured Barriers for Heavy Lifting Operations

Based on the CIC Lifting Safety Handbook, different coloured barriers are used in heavy lifting operations to ensure controlled access, safety zoning, and risk mitigation in the lifting area. The colour-coded barriers serve as a visual safety measure for workers, site personnel, and visitors.



10. Risk Assessment

10.1 Key Risks & Mitigation Measures

- Unstable Loads: Load calculations will be verified before lifting.
- Equipment Failure: Backup lifting gear will be available on-site.
- Falling Objects: Rigging techniques will be double-checked to prevent accidents.
- Ground Instability: Site inspections will confirm stable crane positioning.

10.2 Incident Reporting & Continuous Improvement

- All incidents and near-misses will be reported and analyzed.
- Corrective actions will be implemented to improve lifting practices.





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