

STEEL ERECTION OPERATIONS

SITE ORGANIZATION & GENERAL SAFETY

- Compliance with OSHA job-site warnings and signage for hard hat zones and restricted areas should be ensured
- Pre-job safety meetings are recommended to address site-specific hazards such as hand injuries, falls, and back injuries
- Clear communication between crane operators and ground personnel should be ensured using radios or hand signals.
- Controlled access zones should be established around active work areas to limit unauthorized entry
- Tools and equipment are recommended to be inspected and maintained to prevent malfunctions or injuries
- Adequate lighting should be provided for all work areas to ensure visibility
- Housekeeping should be performed regularly to keep the site free of debris and trip hazards
- First aid stations should be fully stocked and easily accessible to all workers
- Daily safety checklists are recommended to ensure all hazards are identified and mitigated
- Traffic control measures should be implemented to protect workers from moving vehicles
- Designated break areas should be provided to reduce distractions in active work zones
- Ensure all workers are trained in recognizing and mitigating site-specific hazards.
- Inspect all equipment, tools, and materials before use.
- Establish clear communication protocols for safe operations.



WEATHER & ENVIRONMENTAL SAFETY

- Operations are advised to be suspended during lightning storms to prevent strikes on steel structures.
- Weather conditions should be monitored, and schedules should be adjusted to avoid high winds and unsafe environments.
- Protective measures, such as securing loose materials, should be implemented during strong winds.
- Workers should be trained to recognize weather-related hazards, including heat stress and hypothermia.
- Shade and hydration stations should be provided during extreme heat conditions.

FALL PROTECTION AND HEIGHT SAFETY

Controlled Decking Zones (CDZ)

- Establish CDZs for decking work performed between 15 and 30 feet above the next level.
- Train workers in CDZ-specific safety protocols and access restrictions.
- Ensure only authorized personnel enter CDZs to minimize risk.

- The proper use of fall protection systems, including PFAS, perimeter cables, guardrails, and safety nets, should be ensured.
- Controlled decking zones (CDZ) are recommended to be established where metal decking is installed between 15 and 30 feet above the next level.
- All workers in CDZs should be trained and monitored to ensure compliance with OSHA regulations.
- It is advised that connectors remain tied off at all times while working at heights.
- Regular inspections of anchor points, lifelines, and fall protection equipment are encouraged to maintain compliance and safety.
- Clear signage should be posted to indicate areas where fall protection is mandatory.
- Training sessions should be conducted regularly to reinforce fall protection protocols.
- Only approved and properly rated fall protection equipment should be utilized.
- A competent person should supervise work at height to ensure safety measures are adhered to.
- Ladders and scaffolds should be inspected before use to ensure stability and compliance.

DROPPED OBJECTS AND SCAFFOLDING SAFETY

- A policy requiring workers to avoid walking beneath scaffolding and other overhead activities is recommended to be enforced.
- Scaffolding should be inspected for stability and compliance with safety standards before use.
- Toeboards and screens are recommended to be provided to minimize the risk of falling debris.
- Workers should secure tools and equipment when working at height to prevent dropping items.
- Access to scaffolding should be restricted to authorized personnel only.
- Regular maintenance of scaffolding is recommended to address wear and potential hazards.
- Require workers to secure tools and materials at heights.
- Install screens, nets, and barriers to catch debris.
- Ensure workers wear appropriate PPE, including hard hats and face shields.



COMMON SAFETY HAZARDS ASSOCIATED WITH STEEL-ERECTION JOBS

- Falls from elevation due to lack of proper fall protection
- Injuries from falling or flying objects like tools or debris
- Hazards from operating heavy machinery, cranes, and hoists
- Exposure to hazardous materials such as asbestos or lead

PPE REQUIREMENTS OR RECOMMENDATIONS

- The use of hard hats in compliance with OSHA regulations and ANSI Z89 for hard hat zones should be enforced
- PPE, including long-sleeved shirts, gloves, safety glasses, steel-toed boots, and ear protection, is recommended to be provided and required to be worn
- The proper use of respiratory protection when hazardous materials are present should be monitored
- High-visibility clothing is recommended to ensure workers are seen by equipment operators
- Inspect PPE regularly for wear and replace as needed



RIGGING, MATERIAL HANDLING AND HOISTING SAFETY

- Bolt bags are recommended for safely hoisting loose materials
- Rigging equipment, including slings, shackles, and tag lines, should be inspected before each use
- Hoisting equipment will be operated only by certified personnel
- Workers should be trained in proper lifting techniques to prevent back injuries
- Material storage areas are recommended to be checked for stability and organization to reduce tipping and tripping risks
- Heavy materials should be hoisted only within equipment load limits to prevent failures
- Tag lines should be used to control loads during hoisting operations
- All hoisting activities should be coordinated with a spotter to ensure site safety
- Dropped object prevention devices, such as nets or tethered tools, should be implemented
- Inspect rigging equipment such as slings, shackles, and hooks before each use
- Use tag lines to control loads during hoisting operations
- Ensure only qualified personnel handle rigging activities

CRANE SAFETY PRECAUTIONS

- Ensure crane operators are certified and follow load charts
- Inspect cranes daily for mechanical issues or damage
- Maintain a safe distance from overhead power lines



HOT WORK AND FIRE SAFETY

- Hot work permits are often recommended or required for all welding and cutting operations on-site.
- Fire watches with fire extinguishers or hoses must be provided and maintained during and until 30 minutes after hot work activities within 35 feet of a flammable or combustible
- Welding equipment must be inspected, and proper shielding and ventilation should be ensured
- Flammable materials should be removed from the area or covered before hot work begins
- Spark guards should be used to prevent the spread of fire during welding
- Emergency fire evacuation procedures should be communicated to all workers
- Obtain hot work permits before starting welding activities
- Ensure adequate ventilation to prevent exposure to fumes
- Provide welding shields and fire-resistant PPE to workers.

HAZARDOUS MATERIALS

- Hazards from asbestos and other hazardous materials on steel erection sites should be identified and mitigated
- Appropriate PPE and training are recommended to be provided for workers handling or near hazardous materials
- The safe disposal of hazardous substances should be enforced in accordance with regulations
- A hazardous material management plan should be developed and communicated to workers
- Spill kits and emergency cleanup supplies should be readily available at the site
- Identify hazardous substances like asbestos and ensure proper handling procedures
- Provide respiratory protection & hazard communication training
- Dispose of hazardous materials in compliance with regulations.

MATERIAL HANDLING AND STORAGE

- Store materials securely to prevent shifting or tipping
- Use proper lifting techniques & equipment to prevent injuries
- Segregate hazardous materials from general storage areas to minimize risk

PREVENTING INJURY & EQUIPMENT PROPERTY DAMAGE

- Fall protection systems, include PFAS PPE, guardrails, or nets
- Install toe boards and debris nets to catch falling objects
- Follow manufacturer guidelines for operating equipment
- Conduct regular inspections of rigging and lifting systems
- Inspect tools regularly for wear, damage, and defects
- Require workers to tether tools when working at heights
- Train workers on the proper use and maintenance of power tools, extension cords & GFCIs

WARNING SIGNS

- Post clear signage for restricted areas, hard hat zones, and hazardous materials
- Use brightly colored, durable, and weather resistant signs
- Regularly update signs to reflect current site conditions

