JOB HAZARD ANALYSIS (JHA)

Business name

Document: JHA-001 Rev 1
Prepared: Nov 9, 2026
Review by: Dec 9, 2026
Highest risk after controls: Medium

1. BUSINESS AND JOB DETAILS

Job	Structural steel erection	**Start date**	Nov 9, 2026
Working hours	7:00 am to 3:30 pm	**Trade**	Welding and fabrication

2. JOB STEPS, HAZARDS AND CONTROLS

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
1	Review the erection sequence and lift plan, and check the crane sits on firm ground	Crane and lifting failure Structural collapse during alterations Rules: 29 CFR 1926 Subpart CC	**High Unlikely / Fatality**	1.1 Barricade the lift zone and keep everyone out from under the load. [Engineering (guarding)] 1.2 Use a crane rated for the load at the radius, set up on firm ground with outrigger pads. [Engineering] 1.3 Crane and lifting failure: see step 4 for the full controls [Administrative] 1.4 Get an engineer to check before removing any wall, beam, post or bracing that may be load-bearing. [Elimination] 1.5 Keep everyone clear of the area under and next to the work. [Engineering (guarding)] 1.6 Structural collapse during alterations: see step 7 for the full controls [Administrative]	**Medium Rare / Fatality**	Site supervisor
2	Check for power lines and set the exclusion zone	Contact with overhead power lines Public entering the work area Falling tools and materials Rules: 29 CFR 1926.1408 and 1926.416; 29 CFR 1926.501(c)	**High Possible / Serious injury**	2.1 Ask the utility to de-energize, move or insulate the lines before work starts. [Elimination] 2.2 Use non-conductive (fiberglass) ladders near any power lines. [Substitution] 2.3 Mark the safe distance with flags, tape or warning lines and keep all equipment and people outside it. [Engineering (guarding)] 2.4 Keep equipment at least 10 feet from lines up to 50 kV once the utility confirms the voltage, more for higher voltages, and 20 feet when the voltage is unknown (29 CFR 1926.1408). [Administrative] 2.5 Use a dedicated spotter whenever equipment moves or raises anything near lines. [Administrative] 2.6 Treat all lines as energized. If equipment touches a line, the operator stays in the cab and everyone else keeps well away. [Administrative] 2.7 Fence off the site with secure temporary fencing and lock the gates when you leave. [Engineering (guarding)] 2.8 Give pedestrians a safe, marked path around the work, with ramps for strollers and wheelchairs. [Engineering (guarding)] 2.9 Use hoarding, covered walkways or catch fans where	**Medium Unlikely / Serious injury**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				work is above public areas. [Engineering] 2.10 Put signs at each entry: site name, contact number and "No unauthorized entry". [Administrative] 2.11 Make the site safe at the end of each day: cover holes, lower plant, remove ladders and lock tools away. [Administrative] 2.12 Barricade and sign the drop zone under overhead work so nobody walks beneath. [Engineering (guarding)] 2.13 Fit toe boards, kick plates and mesh screens on scaffolds and edges. [Engineering] 2.14 Falling tools and materials: see step 9 for the full controls [Administrative]		
3	Before steel arrives, get written notice from the controlling contractor that footings, piers and walls have reached 75% of design strength (or enough to carry erection loads) and that any anchor bolt repairs were approved (29 CFR 1926.752(a))	Structural collapse during alterations	**High Unlikely / Fatality**	3.1 Install temporary props, needles or shoring as designed before removing any support. [Engineering] 3.2 Follow the engineer's sequence. Do not change it without approval. [Administrative] 3.3 Structural collapse during alterations: see step 7 for the full controls [Administrative]	**Medium Rare / Fatality**	Site supervisor
4	Sling and lift members with a qualified rigger and a qualified signal person. Route loads so nobody works under them, and use multiple lift rigging only as 29 CFR 1926.753 allows	Crane and lifting failure Falling tools and materials Strong wind and storms Rules: 29 CFR 1926 Subpart CC; 29 CFR 1926.501(c)	**High Possible / Serious injury**	4.1 Barricade the lift zone and keep everyone out from under the load. [Engineering (guarding)] 4.2 Use a crane rated for the load at the radius, set up on firm ground with outrigger pads. [Engineering] 4.3 Check slings, chains, shackles and hooks before use. Remove anything damaged or not tagged. [Engineering] 4.4 Plan the lift: weight, radius, ground, path and landing area. Use a written lift plan for complex lifts. [Administrative] 4.5 Use a certified crane operator who has also been evaluated by the employer, with the evaluation documented on site (29 CFR 1926.1427), plus a qualified rigger (1926.1425) and a qualified signal person (1926.1428). [Administrative] 4.6 Use catch fans, debris netting or covered walkways where people pass below. [Engineering] 4.7 Tether hand tools when working at height. [Engineering] 4.8 Falling tools and materials: see step 9 for the full controls [Administrative] 4.9 Check the forecast each morning and plan work at height and lifting around the weather. [Elimination] 4.10 Tie down or weigh down loose sheets, panels, boards and rubbish at the end of each shift. [Engineering] 4.11 Strong wind and storms: see step 7 for the full controls [Administrative]	**Medium Unlikely / Serious injury**	Site supervisor
5	Guide members into place	Falling tools and materials	**High**	5.1 Keep platforms tidy. Do not stack materials near edges or	**Medium**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
	with tag lines, never standing under the load, and line up bolt holes with a podger, never fingers	Crane and lifting failure Rules: 29 CFR 1926.501(c); 29 CFR 1926 Subpart CC	**Possible / Serious injury**	above toe board height. [Administrative] 5.2 Lower materials with a hoist, chute or rope. Never throw or drop anything down. [Administrative] 5.3 Falling tools and materials: see step 9 for the full controls [Administrative] 5.4 Use tag lines to control loads and agree on clear radio or hand signals. [Administrative] 5.5 Stop lifting in high wind or when the operator cannot see the signal person. [Administrative] 5.6 Never ride on a load or hook. [Administrative] 5.7 Crane and lifting failure: see step 4 for the full controls [Administrative]	**Unlikely / Serious injury**	
6	Bolt up from an aerial lift where you can. On the steel, use fall protection above 15 feet; trained connectors must be tied off above 30 feet or two stories and wear the gear to tie off from 15 feet (29 CFR 1926.760)	Aerial lift tip-over or crush Falling from height Rules: 29 CFR 1926.453 (boom lifts); 1926.452(w) and 1926.454 (scissor lifts); 29 CFR 1926 Subpart M	**Critical Likely / Fatality**	6.1 Check the ground before setting up. Use outriggers and spreader pads, and keep clear of trenches, pits and slopes. [Engineering] 6.2 Use a platform with tilt alarm and secondary guarding (anti-entrapment) where there is an overhead crush risk. [Engineering] 6.3 Only trained and authorized operators use aerial lifts and scissor lifts (29 CFR 1926.453 for boom lifts, 1926.452(w) and 1926.454 for scissor lifts). [Administrative] 6.4 Do a pre-start check each day. Keep a trained person on the ground who can lower the platform in an emergency. [Administrative] 6.5 Never exceed the safe working load, climb on the rails or use a ladder in the basket. [Administrative] 6.6 In boom-type platforms, wear a harness clipped to the basket anchor point. [PPE] 6.7 Do the work from the ground where you can, for example pre-assemble on the ground or use extension poles. [Elimination] 6.8 Install guardrails or edge protection on all open edges before work starts. [Engineering (guarding)] 6.9 Use a scaffold, mobile work platform or aerial lift instead of working off a ladder. [Engineering] 6.10 Where edge protection is not practical, use a fall restraint or fall arrest system on a rated anchor point. [Engineering] 6.11 Provide fall protection at 6 feet or more and train workers to recognize fall hazards (29 CFR 1926.503). [Administrative] 6.12 Have a rescue plan so a worker hanging in a harness can be brought down within minutes. [Administrative] 6.13 Wear a full body harness with a shock-absorbing lanyard, clipped on at all times when using fall arrest. [PPE]	**Medium Rare / Fatality**	Site supervisor
7	Bolt each member with at least two wrench-tight bolts per connection before	Structural collapse during alterations Strong wind and storms	**High Possible / Serious injury**	7.1 Get an engineer to check before removing any wall, beam, post or bracing that may be load-bearing. [Elimination] 7.2 Keep everyone clear of the area under and next to the	**Medium Rare / Fatality**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
	releasing the hoist line (29 CFR 1926.756(a)), and install temporary bracing or guying to the erection design, leaving it until the permanent bracing is complete			work. [Engineering (guarding)] 7.3 Install temporary props, needles or shoring as designed before removing any support. [Engineering] 7.4 Follow the engineer's sequence. Do not change it without approval. [Administrative] 7.5 Check props daily. Do not remove them until the permanent support is in and approved. [Administrative] 7.6 Wear a hard hat and safety boots. [PPE] 7.7 Check the forecast each morning and plan work at height and lifting around the weather. [Elimination] 7.8 Tie down or weigh down loose sheets, panels, boards and rubbish at the end of each shift. [Engineering] 7.9 Set wind limits for roof work, platforms and cranes, using the manufacturer's limits, and stop when they are reached. [Administrative] 7.10 Stop work and get down in lightning. Wait 30 minutes after the last thunder before going back up. [Administrative] 7.11 Check scaffold, fencing and edge protection after strong wind before anyone uses them. [Administrative] 7.12 Do not carry large sheets on roofs in wind. [Administrative] 7.13 Wear a hard hat with a chin strap at height in windy conditions. [PPE]		
8	Plumb the frame, then tension bolts or weld under a hot work permit	Welding and cutting fumes Fire from hot works Eye injuries Rules: 29 CFR 1926 Subpart J; 29 CFR 1926.352 and NFPA 51B (35 ft rule also in 1910.252(a))	**Critical Likely / Serious injury**	8.1 Remove paint, galvanizing and coatings from the weld area first, or use a process that makes less fume. [Substitution] 8.2 Use fume extraction (local exhaust ventilation) close to the weld. [Engineering] 8.3 Weld outdoors or in a well-ventilated area, and keep your head out of the fume plume. [Engineering] 8.4 Never weld or cut in a confined space without testing the air and using forced ventilation. [Administrative] 8.5 Wear a powered air respirator or fitted respirator when extraction is not enough. [PPE] 8.6 Use cold work methods where you can, such as bolting, press fittings or cutting with a saw instead of a torch. [Elimination] 8.7 Move anything that can burn at least 35 feet away, or cover it with fire blankets. [Engineering (guarding)] 8.8 Use fire-resistant screens to stop sparks reaching people or gaps in walls and floors. [Engineering] 8.9 Get a hot work permit before starting. [Administrative] 8.10 Keep a charged fire extinguisher and fire blanket at the work spot. [Administrative] 8.11 Use tool guards and screens to stop flying particles. [Engineering] 8.12 Use dust extraction and water to keep dust out of the air. [Engineering] 8.13 Keep others out of the area when cutting, grinding or	**Medium Unlikely / Serious injury**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				chipping. [Administrative] 8.14 Keep an eye wash station or eye wash bottles on site. [Administrative] 8.15 Wear safety glasses at all times, goggles for dust and chemicals, and a face shield for grinding. [PPE]		
9	Check connections and permanent bracing. Where metal decking goes down, use a controlled decking zone only between 15 and 30 feet, with trained workers and marked boundaries (29 CFR 1926.760(c)). Then clean up offcuts and bolts	Poor housekeeping and waste Falling tools and materials Rules: 29 CFR 1926.501(c)	**High Possible / Serious injury**	9.1 Order materials to size and send packaging back where you can. [Elimination] 9.2 Put dumpsters and waste chutes close to the work. [Engineering] 9.3 Clean as you go, and do a full clean up at the end of each day. [Administrative] 9.4 Keep exits, stairs and walkways clear at all times. [Administrative] 9.5 Stack materials neatly on level ground, away from edges. [Administrative] 9.6 Wear gloves when handling waste. [PPE] 9.7 Barricade and sign the drop zone under overhead work so nobody walks beneath. [Engineering (guarding)] 9.8 Fit toe boards, kick plates and mesh screens on scaffolds and edges. [Engineering] 9.9 Use catch fans, debris netting or covered walkways where people pass below. [Engineering] 9.10 Tether hand tools when working at height. [Engineering] 9.11 Keep platforms tidy. Do not stack materials near edges or above toe board height. [Administrative] 9.12 Lower materials with a hoist, chute or rope. Never throw or drop anything down. [Administrative] 9.13 Wear a hard hat anywhere objects could fall. [PPE]	**Medium Unlikely / Serious injury**	Site supervisor

Risk key: risk = likelihood x consequence on a 5 x 5 matrix. Low, Medium, High, Critical. Work must not start while the risk after controls is high or above. Controls are listed in order of the hierarchy of controls: Elimination, Substitution, Engineering (guarding), Engineering, Administrative, PPE.

3. PPE AND PERMITS

Required PPE	Permits and plans
Safety-toe boots (ASTM F2413) Hard hat (ANSI Z89.1) High-visibility safety apparel, ANSI/ISEA 107 Class 2 or 3 (Type R near roadways) Personal fall arrest system (harness) Work gloves Safety glasses (ANSI Z87.1) Welding helmet (ANSI Z87.1) Welding gloves Half-face respirator (P100 cartridges) Coveralls Face shield (ANSI Z87.1)	Critical lift plan Written fall protection plan (only where guardrails, nets or personal fall arrest are not feasible, 1926.502(k)) Hot work permit (fire watch at least 60 minutes after, NFPA 51B)

Required PPE	Permits and plans
Safety goggles (ANSI Z87.1)	

4. PLANT AND EQUIPMENT

Plant / equipment	License or training needed	Inspection needed	Rego / ID	Last inspected	Certificate / report
Mobile crane	Operator certified by an accredited body or audited employer program (29 CFR 1926.1427) and evaluated by the employer, with a signed evaluation on site (1926.1427(f)); qualified rigger (1926.1425) and qualified signal person (1926.1428)	Shift inspection by a competent person (29 CFR 1926.1412(d)), documented monthly inspection (1926.1412(e)) and annual inspection by a qualified person (1926.1412(f))			
Boom lift (aerial lift)	Trained and authorized operator (29 CFR 1926.453, ANSI A92.24 training and familiarization)	Lift controls tested each day before use (29 CFR 1926.453(b)(2)(i)); frequent and annual inspections to ANSI A92.22 and the manufacturer			
Welding machine					
Power drill		Visual check of cord, plug and guards before each day's use; if you run an assured equipment grounding program instead of GFCIs, test every 3 months (29 CFR 1926.404(b)(1))			
Hand tools					

5. TRAINING REQUIRED FOR THIS WORK

- Crane operator certification plus documented employer evaluation (29 CFR 1926.1427); qualified rigger (1926.1425); qualified signal person (1926.1428)
- Aerial lift operator training and familiarization (29 CFR 1926.453 or 1926.454, ANSI A92.24)
- Fall protection training by a competent person, with a written certification record (29 CFR 1926.503)

6. CREW TRAINING AND CERTIFICATIONS

Crew listed at sign-on below, with ticket and licence numbers.

7. EMERGENCY ARRANGEMENTS

Emergency number	911	**First aid kit**	In the work vehicle
Fire extinguisher	In the work vehicle	**Alarm and evacuation**	Shout for help and stop work. Make the area safe and go to the assembly point. Call the emergency number and send someone to meet the ambulance.
Reporting incidents	Report a fatality to OSHA within 8 hours, and an in-patient hospitalization, amputation or eye loss within 24 hours.		

8. MONITORING, REVIEW AND LEGAL BASIS

A competent person inspects the job site, materials and equipment before work each day and as conditions change (29 CFR 1926.20(b)(2)). Any time this JHA is revised, the affected crew is re-briefed and signs again.

Legal basis: OSH Act Section 5(a)(1) and 29 CFR 1926, Safety and Health Regulations for Construction (incl. 1926.20 and 1926.21). OSHA requires employers to find and fix hazards and to train workers on them. A JHA breaks the job into steps, lists the hazards in each step and the controls that protect the crew. General contractors often require one before you start.

Keep this JHA on site during the job, and keep it with the training and inspection records for at least 1 year after the job (longer if your state plan or general contractor requires it). OSHA does not set a retention period for JHAs themselves.

9. REVISION HISTORY

Rev	Date	By	What changed
1	Nov 9, 2026		First issue

10. SIGN-OFF

	Name	Signature	Date	
Prepared by				
Supervisor				
General contractor review				Accepted for use: Yes / No

By signing below, each crew member confirms they were trained on the hazards and controls in this JHA before work started, and will follow it. Stop work and tell the supervisor if conditions change.

Name	Role / company	Tickets / licences	Signature	Date

Name	Role / company	Tickets / licences	Signature	Date