

Structural Steel Column Erection JHA

Worked instructional example

Work and worksite

A specialist erection crew will crane-set one identified steel building column onto a released foundation and anchor-rod arrangement. The column's designed leveling, anchorage and any required guys or braces will be installed before crane support is released. This fictional learning example describes planned controls; it records no actual inspection or work authorization.

- The steel erector receives required written foundation-strength and anchor-rod modification notifications before erection begins.
- The released lift, receiving support and column stability arrangement govern this member; actual load/rigging capacities are not supplied by this example.
- Beam connecting, bay plumbing, final connection work and repairing or field-modifying anchor rods are separate scopes.

Questions before work

- Which written foundation and anchor-rod notifications must the erector receive before this lift?
- Who confirms the base, leveling arrangement and column anchorage match the released design?
- What guys or braces does the competent-person evaluation require before crane support is released?

Task Hazard Control

1 Verify erection readiness

Hazard: Insufficient foundation strength or an unreported anchor modification can cause the column base to fail.

Control: Erection lead obtains the controlling contractor's required written notifications and compares the foundation and anchor-rod arrangement with current documents. Resolve damaged, displaced or modified rods through the required engineering process; do not adapt the base in the field.

Verification: Lead records receipt and checks the identified column base before the lift proceeds.

Reasoning: A foundation that looks complete may still be unready for erection loads.

2 Establish receiving support and stability

Hazard: Incorrect leveling support or missing guys can allow a newly set column to overturn.

Control: Prepare the specified leveling plates, nuts or shim packs and approved anchorage. Have a competent person evaluate needed guying or bracing; arrange it and safe installer positions before hoisting rather than deciding under a suspended column.

Verification: Erection lead verifies support readiness and the competent-person stability determination.

Reasoning: The crane-release decision must be planned before the column arrives.

3 Inspect and rig the identified column

Hazard: Unsuitable gear or an incorrect member orientation can drop or swing the suspended column.

Control: Qualified rigging personnel match the member identity, weight, center of gravity and lift points to the planned lift and inspected gear. Keep workers clear of restrained stock and test the planned balance under the released lifting method.

Verification: Rigging lead checks member/gear compatibility and signal roles before the lift.

Reasoning: Similar-looking columns may need different lifting arrangements.

Complete the work and hand over

4 Hoist and receive from designated positions

Hazard: Workers can be caught between the moving column and base or struck in the suspended-load path.

Control: Maintain the planned hoisting exclusion and required signal control. Receive from designated positions using the planned alignment method with hands clear of closing base gaps; stop for unexpected movement or a lost boundary.

Verification: Lift lead checks the route and receiver positions through the controlled landing.

Reasoning: Hands and bodies cannot serve as stops for a crane-supported member.

5 Anchor and confirm initial stability

Hazard: Premature crane release can leave a column supported by incomplete or unsuitable anchorage.

Control: Install the released base and leveling arrangement and required anchorage; steel columns require at least four anchor rods under 1926.755. Complete needed guys/braces and the specified initial checks before the designated lead authorizes crane release.

Verification: Erection lead checks actual anchorage and installed temporary support against the release criteria.

Reasoning: The four-rod minimum does not replace the designed base and stability checks.

6 Release rigging and transfer restrictions

Hazard: Rigging removal or later brace interference can destabilize the column and expose other trades.

Control: After the designated crane-release decision, remove gear from protected access and maintain required temporary support. Communicate incomplete connections, loading limits and brace restrictions to the next erection operation; keep unapproved activity away.

Verification: Erection lead records initial stability handover and receiving crew responsibilities.

Reasoning: This column-set release does not authorize later support removal or arbitrary loading.

Pause and reassess

- Missing foundation notification or unexpected anchor damage/modification.
- The column does not seat on the released leveling/base arrangement.
- Required guys/braces, controlled receiving positions or lift communication cannot be maintained.

Improve the controls

Needs improvement: Bolt the column down and let the crane go.

More useful: Erection lead verifies the released base arrangement, required anchorage and installed guys/braces before authorizing crane release.

Needs improvement: The foundation is old enough.

More useful: Lead receives the controlling contractor's required written readiness notifications and resolves actual base discrepancies before erection.

Decisions that change the analysis

Do four anchor rods alone make the column ready for crane release?

No. The base/anchor assembly must meet its design requirements, and the competent-person evaluation determines required guys or braces. Fit, leveling support and installed stability arrangements remain part of the actual release decision.

What must the crew record for actual use?

Record the column identity, current erection/base design, required written notifications, competent-person guy/brace determination, actual support and anchorage findings, lift roles and crane-release decision. Keep later bolting, bay plumbing and brace-removal records separate.

Training needs

- Steel erection training for assigned column-placement roles, including anchor/base recognition and initial stability hold points.
- Qualified rigging/signal instruction as applicable, plus task-specific protected access, pinch-path and crane-release communication.

Confirm applicable qualifications and actual training evidence for the people assigned. Related toolbox talks support discussion; they do not establish competence.

References and adaptation

OSHA 1926.755 Column anchorage
<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.755>

OSHA 1926.752 Steel erection readiness and sequence
<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.752>

OSHA 1926.753 Steel erection hoisting and rigging
<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.753>

References reviewed October 9, 2026. Use actual equipment and product instructions, project design and site requirements. This instructional example supplies no actual inspection results, signatures or work approval.