

Tilt-Up Panel Erection Safety Checklist

Site / Project	_____	Address	_____
Inspector name	_____	Company	_____
Date	_____	Time	_____

Documentation aid only. Adapt this resource to the site, manufacturer instructions, and applicable local requirements. It does not replace a competent person, professional judgment, legal advice, or a required statutory form.

Inspection checklist

Lifting Inserts & Rigging Inspection

☐ Verify lifting inserts are rated for at least 2x the panel's weight, accounting for dynamic loads. Check engineering documentation.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ Inspect all lifting inserts for cracks, corrosion, or damage before each lift. Discard any suspect inserts.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ Ensure shackles, slings, and other rigging hardware are of the correct size and capacity for the panel weight. Verify WLL markings are legible.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ Confirm sling angles do not exceed the manufacturer's recommendations (typically 45 degrees). Use longer slings or a spreader bar if needed.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ If using a strongback, inspect it for straightness, weld integrity, and proper attachment to the panel. Ensure it's rated for the load.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ If using a spreader bar, verify its load rating exceeds the panel weight with a safety factor of at least 2. Inspect welds and connections.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ Verify the number and location of lifting points match the panel's engineered lifting plan. Do not deviate without approval.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐ Confirm lifting inserts were installed per the manufacturer's specifications, including proper embedment depth and concrete consolidation.	☐ Pass	☐ Fail	☐ N/A	Notes: _____

☐	Review load test records for lifting inserts, if applicable. Ensure tests were performed by a qualified technician.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify all rigging hardware has current inspection tags. Remove any rigging with expired or missing tags from service.	☐ Pass	☐ Fail	☐ N/A	Notes: _____

Crane & Operator Competency

☐	Verify the crane operator is certified for the type and capacity of crane being used. Check NCCCO or equivalent certification.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Review the crane's daily and annual inspection records. Ensure all maintenance is up-to-date and documented.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Confirm the crane's load chart is readily available and legible. The operator must understand how to use it.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify the crane is properly leveled according to the manufacturer's specifications. Use bubble levels or electronic leveling systems.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure outriggers are fully extended and properly supported on suitable pads. Check for ground settlement.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Barricade the crane's swing radius to prevent unauthorized personnel from entering the area.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Establish clear communication signals between the crane operator, signal person, and ground crew. Use hand signals or radios.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify the crane maintains a safe clearance distance from overhead power lines (at least 10 feet).	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Monitor wind speed. Cease lifting operations if wind speeds exceed the crane manufacturer's recommendations.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Assess ground conditions for stability. Ensure the ground can support the crane's weight and the panel load.	☐ Pass	☐ Fail	☐ N/A	Notes: _____

Panel Bracing & Stability

☐	Verify the bracing plan is approved by a qualified engineer and is readily available on site.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure bracing is installed according to the approved bracing plan, including proper spacing, angle, and connection details.	☐ Pass	☐ Fail	☐ N/A	Notes: _____

☐	Inspect bracing hardware (e.g., bolts, welds, anchors) for damage or corrosion. Ensure they are properly tightened.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Calculate the wind load on the panels and verify the bracing system is adequate for the expected wind conditions. Re-evaluate daily.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify bracing connections to the panel and the foundation are secure and properly installed. Check for loose bolts or damaged welds.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Inspect ground anchors for proper embedment depth and pull-out resistance. Ensure they are installed in stable soil.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Do not adjust or remove any bracing without the approval of a qualified engineer. Document all changes to the bracing system.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Conduct daily inspections of the bracing system to identify any signs of damage, loosening, or instability.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify panels are plumb after erection and before releasing the crane. Adjust bracing as needed to maintain plumbness.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure bracing is installed sequentially as panels are erected to maintain stability throughout the process.	☐ Pass	☐ Fail	☐ N/A	Notes: _____

Site Conditions & Housekeeping

☐	Ensure the work zone is clear of obstructions, including materials, equipment, and personnel not involved in the lifting operation.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Establish a controlled access zone around the lifting area to prevent unauthorized pedestrian traffic.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify the ground is level and stable in the panel staging area. Prevent panels from tipping or shifting.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Monitor weather conditions, including wind speed, temperature, and precipitation. Adjust operations as needed to maintain safety.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure adequate lighting is provided in the work area, especially during evening or early morning operations.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Maintain good housekeeping practices in the work area to prevent slips, trips, and falls. Remove debris and waste materials regularly.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure clear access for emergency vehicles and personnel. Keep pathways and roadways unobstructed.	☐ Pass	☐ Fail	☐ N/A	Notes: _____

☐	Verify communication systems (e.g., radios, cell phones) are functioning properly and readily available for emergency use.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure fall protection is in place for workers accessing the top of staged panels. Use guardrails or personal fall arrest systems.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure taglines are used to control panel movement during lifting and placement. Tagline operators must be properly trained.	☐ Pass	☐ Fail	☐ N/A	Notes: _____

Personal Protective Equipment (PPE)

☐	Verify all personnel in the work area are wearing hard hats that meet ANSI Z89.1 standards.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure all personnel are wearing safety glasses with side shields to protect against flying debris.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify all personnel are wearing high-visibility clothing (e.g., vests, jackets) that meet ANSI 107 standards.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure all personnel are wearing steel-toe boots that meet ASTM F2413 standards.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify personnel are wearing appropriate gloves for the task, such as leather gloves for handling panels or rigging.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure hearing protection is available and used in areas with high noise levels (e.g., crane operation, concrete cutting).	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Inspect fall protection harnesses for damage or wear before each use. Ensure they fit properly and are correctly attached.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	If dust or other airborne contaminants are present, ensure personnel are using appropriate respiratory protection (e.g., N95 masks).	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Verify an eyewash station is readily available in case of eye contact with concrete or other irritants.	☐ Pass	☐ Fail	☐ N/A	Notes: _____
☐	Ensure all PPE is in good condition and properly maintained. Replace damaged or worn PPE immediately.	☐ Pass	☐ Fail	☐ N/A	Notes: _____

Findings

#	Item	Location	Severity	Action required
1				
2				
3				
4				
5				
6				
7				
8				

Signature

Inspector signature _____

Name _____

Date _____