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Inspect precast façade panel install: plumbness & bearing

Inspect precast façade panel installation for plumbness and bearing using an interactive checklist that's commentable and ready to export as PDF/Excel for secure, compliant records.

Project:
Date:
Filled by:

Pre-Installation Controls

1	Verify latest approved shop drawings and erection sequence are on site; confirm stated tolerances for plumbness and bearing per approved project specifications and authority requirements; record document numbers and initials.
2	Inspect supports (inserts, corbels, brackets, welded plates) for location, cleanliness, and damage; acceptance: free of laitance, deformation, and heavy corrosion; capture close-up photos and mark-up any defects.
3	Confirm survey control and façade datums transferred to elevation; tool: total station; acceptance: horizontal/vertical closure ≤ 5 mm over the elevation; upload the survey report and station setup sketch.
4	Check lifting gear and slings against panel mass; acceptance: $WLL \geq \text{panel mass} \times \text{safety factor}$ as per lift plan; photograph tags and record WLL and certification expiry.
5	Verify access platforms/MEWPs/scaffolds have current inspection tags; acceptance: green tag within validity; attach photos of tags and working area housekeeping.

Panel Setting and Temporary Support

6	Place approved bearing pads to layout; tool: caliper/feeler gauge; acceptance: thickness 10–25 mm, full contact with seat; record pad batch/lot and photos with scale.
7	Dry-set panel onto pads and shims maintaining joint gaps; acceptance: joint width per drawings ± 3 mm; capture tape-measure photos at top, mid, bottom.
8	Install adjustable braces to slab/structure; tools: torque wrench, inclinometer; acceptance: brace angle 45–60°, bolts torqued per data sheet; record torque values and brace IDs.
9	Confirm panel ID matches drawings and intended location; acceptance: correct mark and orientation; take a photo of the panel mark and elevation reference.
10	Verify shim stacks (steel/neoprene) are seated flat, dry, and aligned; acceptance: contact area $\geq 80\%$ and stack height per drawings; photograph stacks with ruler for scale.

Plumbness Verification	
11	Confirm instrument calibration: digital level/inclinometer/total station with current certificate; acceptance: certificate in date; upload photo of certificate and instrument ID.
12	Measure out-of-plumb in both primary axes at multiple heights; acceptance: ≤ 6 mm in 3 m and ≤ 12 mm overall, or per approved project specifications; log readings by elevation.
13	Check face alignment to control line or laser plane; acceptance: deviation ≤ 5 mm from reference; capture laser target photos and note offsets.
14	Verify top and bottom centerline offsets to grid; tool: total station/steel tape; acceptance: ± 5 mm to grid; upload point list and annotated photo of prism positions.
15	Adjust braces/shims to achieve tolerance, remeasure, and lock bracing; acceptance: final readings within specified limits; record before/after readings and brace lockout photo.

Bearing and Support Verification	
16	Measure effective bearing length on each seat; tools: mirror, gauge; acceptance: continuous bearing ≥ 50 mm or per drawings; provide scaled photos at each support.
17	Check anchor bolts/threads engagement and nuts/washers installation; tools: thread gauge, torque wrench; acceptance: engagement $\geq 1.5 \times$ bolt diameter, torque per data sheet; record values and hardware batch.
18	Inspect weld plates and temporary tack welds if used; acceptance: correct weld size/length, free from cracks/undercut; upload weld map, welder ID, and clear photos.
19	Confirm bearing grout fully fills under seat; tools: probe, inspection ports; acceptance: voids $\leq 5\%$ and strength per mix design; attach grout batch tickets and cube reports.
20	Verify sealants or firestops do not intrude into bearing line; acceptance: bearing surfaces unobstructed; take close-up photos before final closure.

Finalization and Handover	
21	Remove lifting gear and recheck plumbness after stabilization (≥ 1 h); acceptance: change ≤ 2 mm; upload time-stamped before/after measurements.
22	Compile inspection photos with scales, measurement logs, pad/bolt/grout batches; acceptance: all mandatory fields completed; export draft PDF for review.
23	Obtain electronic sign-offs from erector, precast supplier, and consultant; acceptance: all signatures captured with dates; attach approval note or NCR closure if applicable.
24	Affix QR code tag linking to the inspection record; acceptance: successful scan from 1 m distance; upload scan screenshot and panel location photo.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
<p>Inspect precast façade panel installation for plumbness and bearing to ensure panels are truly vertical and correctly supported on their seats. This checklist focuses on verticality, plumb verification, bearing length, shim and pad arrangement, and load path continuity. It is tailored for field engineers, quality inspectors, and erection crews managing precast façade installation. By controlling the plumb line with a total station or digital level and confirming proper bearing on approved pads and shims, you reduce cracking risks, prevent serviceability issues like racking doors or glazing misfits, and protect long-term performance. The scope excludes architectural finish acceptance, water-tightness testing, and permanent joint sealing beyond verifying seals do not intrude the bearing line. Outcomes include consistent alignment within tolerance, documented support conditions, and traceable approvals per approved project specifications and authority requirements. Use this interactive checklist to tick items, add comments with photos, and export your results to PDF or Excel with an embedded QR code for verification.</p>	<ol style="list-style-type: none"> 1. Preparation: Gather approved drawings, erection plan, calibration certificates, and lift plan. Equip a total station or digital level/inclinometer, torque wrench, calipers, feeler gauges, ruler, camera, PPE, and safe access (MEWP/scaffold). Confirm survey control and safe working area. 2. Open the checklist: Start a new panel record, select elevation and grid, and scan or enter panel ID. Preload tolerances from the project specification or use defaults as instructed by the quality manager. 3. Measure and capture: Record plumb readings by axis and height, bearing lengths at each support, brace torques, and joint gaps. Add photos with scales and attach batch tickets for pads and grout. 4. Comment and collaborate: Use the comment field to flag variances, propose corrective actions, and tag responsible parties. Link to relevant detail numbers and add timestamps for each note. 5. Resolve and recheck: After adjustments to braces or shims, remeasure and update readings. Mark items as compliant when within tolerance, or raise an NCR with evidence if not. 6. Export: Generate a commentable, time-stamped PDF/Excel pack including photos, measurements, and signatures. Ensure the QR code is embedded for on-site verification and quick retrieval. 7. Sign-off and archive: Capture digital signatures from the erector, precast supplier, and consultant. Distribute to stakeholders, then archive by building zone, elevation, and grid for audit readiness.