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Review façade glass thickness and pane build-up checklist

Review façade glass thickness and pane build-up against loading criteria using an interactive checklist. Commentable, traceable, and export as PDF/Excel.

Project:

Date:

Filled by:

Documentation and Inputs

1	Obtain approved façade glass schedule and shop drawings; measure typical panel width/height with a calibrated laser; acceptance: dimensions within ± 3 mm of drawings; evidence: photos and marked drawing with measurer's initials and date.
2	Confirm glazing orientation (vertical) and system type (captured/SSG) from approved details; acceptance: orientation consistent across elevation; evidence: referenced detail numbers and architect confirmation email saved to record.
3	Collect supplier data sheets for each glass ply, interlayer, and coating; acceptance: nominal thicknesses match specification exactly; evidence: datasheet filenames, revision dates, and lot/batch numbers recorded.
4	Record EOR design load summary: ultimate/service wind pressures (Pa), barrier/impact loads (kN/m or N), and design temperature range ($^{\circ}\text{C}$); acceptance: stamped document attached; evidence: document ID, author, and issue date logged.

Load Cases and Combinations

5	Assign wind pressure zones per elevation using the EOR zoning table; method: panel coordinate check; acceptance: correct zone applied to each panel; evidence: annotated elevation screenshot with panel IDs.
6	Confirm serviceability criteria for deflection and stress per approved project specifications and authority requirements; acceptance: criteria statement attached; evidence: spec excerpt or EOR email reference number.
7	Include human impact or barrier line loads where glazing forms a guard; method: review fall-risk lines on plans; acceptance: load case listed for affected panels; evidence: meeting minute reference and marked plan.
8	Check thermal differential assumption (ΔT , $^{\circ}\text{C}$) for coated/partially shaded panes; method: compare with manufacturer limits; acceptance: $\Delta T \leq$ published limit; evidence: highlighted datasheet page and note.

Glass Make-up and Thickness Selection

9	Verify proposed glass make-up (e.g., 10–16–10 IGU with laminated inner) against loads using supplier software or hand calculations; acceptance: utilisation ≤ 1.0 ; evidence: calculation report number and version.
10	Validate interlayer shear modulus at design temperature/duration for laminated plies; method: manufacturer curve selection; acceptance: values traceable to datasheet; evidence: screenshot of curve with inputs circled.
11	For IGUs, assess cavity pressure vs site altitude/temperature; method: manufacturer calculator; acceptance: predicted bow/edge tension within limits; evidence: calculator export saved and referenced.
12	Confirm heat-treatment level (annealed/heat-strengthened/fully tempered) from stress, impact, and thermal risk; acceptance: EOR sign-off specifying treatment; evidence: approval email or marked calc sheet.

Structural and Serviceability Checks

13	Compute pane bending stresses (MPa) for each ply under ultimate wind; method: plate theory/software; acceptance: design stress $\leq$ allowable; evidence: calc page with inputs and load case highlighted.
14	Check centre deflection under service wind; method: software output; acceptance: deflection $\leq$ allowable per spec; evidence: output screenshot showing result and limit side-by-side.
15	Verify edge stress at supported edges and around holes/notches; method: local stress check; acceptance: margin of safety $\geq 10\%$; evidence: detailed sketch and referenced equations page.
16	Confirm self-weight load path onto setting blocks and frame; method: reaction check; acceptance: bearing pressures within system limits; evidence: block reaction calc and detail reference.

Edge Support and Risk Controls

17	Confirm glass bite, edge clearance, and setting block locations from system details; method: dimension take-off; acceptance: meets system supplier requirements; evidence: marked detail and take-off sheet.
18	Review structural silicone (if SSG) thickness and joint geometry; method: manufacturer design tool; acceptance: stress and factor of safety within limits; evidence: design report and product ID.
19	Check gasket hardness/profile compatibility with coatings and interlayers; method: material compatibility memo; acceptance: manufacturer confirmation attached; evidence: datasheet and email log.
20	Evaluate risks from ceramic frit or partial shading causing local ΔT ; method: sun-path/thermal review; acceptance: mitigation noted (treatment/heat-strengthen); evidence: review note and diagram.

Fabrication Records and Approvals	
21	Cross-check purchase order against approved make-up and thickness; method: line-by-line review; acceptance: exact match of ply and thickness; evidence: PO copy with reviewer signature.
22	Assign unique panel IDs linking drawings, calcs, and PO; method: schedule update; acceptance: IDs consistent across documents; evidence: export of register and QR mapping file.
23	Capture certificates: heat soak, lamination batch, and coating batch; method: collect from supplier; acceptance: certificates per delivery batch; evidence: certificate numbers logged and filed.
24	Obtain final approval from EOR and main contractor; method: digital signature workflow; acceptance: signed cover sheet on record; evidence: archived PDFs with timestamp.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
Review façade glass thickness and pane build-up against loading criteria is focused on verifying glazing make-up against defined design actions. This checklist helps assess facade glazing thickness, laminated and insulated glass units, interlayer properties, wind pressure effects, and thermal differentials. It concentrates on vertical façade panels only, using the approved shop drawings, engineer-of-record (EOR) load summaries, and manufacturer data to confirm that each pane configuration meets ultimate and serviceability requirements. By structuring inputs, load cases, and acceptance limits, the process prevents under-specified plies, excessive deflection, spontaneous breakage, and costly rework. It also ensures traceability: every decision is supported by datasheets, calculation outputs, batch certificates, and formal approvals per approved project specifications and authority requirements. Use this as a pre-fabrication and pre-order verification, then as a live reference during procurement. Start interactive mode to tick items, add comments for clarifications, and export your verified record as PDF/Excel with a secure QR link.	1. Preparation: Gather approved shop drawings, EOR load summaries, supplier datasheets, and calculation tools (vendor software or spreadsheets). Prepare a calibrated laser/tape for dimension checks and ensure SI units are set throughout. 2. Start interactive mode: Create or select the façade elevation, add panel IDs, and work through items. Tick completed tasks, attach photos/PDFs, and paste calculation outputs. Use comments to flag assumptions or request clarifications. 3. Collaborate and resolve: Mention the EOR or supplier in comments to confirm loads, interlayer properties, or treatment choices. Update items with responses, and maintain a clear audit trail of changes and approvals. 4. Sign-off and export: Apply digital signatures from responsible parties. Export the record as PDF/Excel and share. Archive the package with a QR-authenticated link so field teams can verify the latest approved version.