



# Review façade system selection against project geometry and exposure conditions

Review façade system selection against project geometry and exposure conditions using an interactive checklist that is commentable and can export as PDF/Excel for cladding decisions.

Project:

Date:

Filled by:

## Geometry Verification

|   |                                                                                                                                                                                                                                                           |
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| 1 | Confirm horizontal gridline spacing against BIM and setting-out; use calibrated laser distance meter and total station; acceptance: cumulative deviation $\leq \pm 5$ mm over 10 m; evidence: annotated survey extract and photo of instrument setup.     |
| 2 | Measure floor-to-floor and clear story heights against system mullion span limits; tool: laser level; acceptance: spans within manufacturer-rated limits without extra mid-supports; evidence: highlighted datasheet and recorded heights.                |
| 3 | Check slab edge straightness and level using a 2 m straightedge and laser; acceptance: local deviation $\leq 3$ mm and levelness within $\pm 5$ mm; evidence: photos with straightedge and measured readings.                                             |
| 4 | Verify corner angles and façade curvature radii; tool: laser scanner or angle finder; acceptance: within $\pm 1^\circ$ or $\pm 10$ mm of design; evidence: point cloud snapshot and marked-up drawings.                                                   |
| 5 | Confirm joint allowances for construction tolerances and fit-up; method: compare as-built variance vs designed joint width; acceptance: remaining reserve $\geq 20\%$ after worst-case; evidence: joint schedule with reserve noted.                      |
| 6 | Review interstory drift compatibility; method: compare structural model outputs with system tested displacement; acceptance: system accommodates calculated drift or $\geq H/400$ , whichever governs; evidence: calculations and manufacturer statement. |

## Exposure and Climate Assessment

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| 7  | Establish design wind pressures by elevation and zone; tool: wind study or engineer's calc; acceptance: system rating $\geq$ design ultimate/service pressures (kPa); evidence: report excerpt and capacity table.                   |
| 8  | Assess driving rain exposure by height and orientation; method: climate data and facade zoning; acceptance: drained and pressure-moderated design on windward zones; evidence: zoning diagram and rationale.                         |
| 9  | Check temperature and UV range against sealants and gaskets; tool: product datasheets; acceptance: validated performance from $-20^\circ\text{C}$ to $+50^\circ\text{C}$ , UV-stable; evidence: manufacturer compliance letter.      |
| 10 | Confirm corrosion exposure (coastal/industrial) and specify protection; method: site proximity and pollutants; acceptance: corrosion category and finishes per approved project specifications; evidence: finish schedule and notes. |
| 11 | Evaluate thermal and seismic movements; method: calculation of combined movements; acceptance: joint capacity $\geq$ calculated movement + 20% reserve; evidence: movement table and detail references.                              |

### System Compatibility and Detailing

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| 12 | Verify substrate type (concrete/steel/CMU) matches tested fixing details; method: compare submittals to test evidence; acceptance: same or engineering-verified equivalent; evidence: test reports and marked details.             |
| 13 | Review slab edge/column interface details; method: tolerance stack-up; acceptance: shimming/packing capacity for $\pm 10$ mm misalignment using non-combustible materials; evidence: detail markup and materials list.             |
| 14 | Validate glazing/infill weight and thickness vs mullion/transom capacity; method: datasheet check; acceptance: panel mass $\leq$ rated kg/m <sup>2</sup> and thickness within tested range; evidence: product datas and calc note. |
| 15 | Confirm fire performance at floor zones; method: review cavity barriers and fire-stops; acceptance: continuous barriers and tested assemblies per approved project specifications; evidence: shop drawings with approvals.         |
| 16 | Check acoustic targets (Rw/CTR) vs system performance; method: compare lab reports; acceptance: rated values meet or exceed specification; evidence: accredited test reports attached.                                             |

### Structural and Fixing Checks

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| 17 | Verify anchor edge distances and embedment depths; tool: manufacturer calc and typical detail; acceptance: dimensions within $\pm 5$ mm of design; evidence: signed calc extract and detail callouts.                |
| 18 | Confirm bracket spacing along mullions; method: compare layout to structural design; acceptance: centres $\leq$ calculated maximum (e.g., 600–1200 mm as designed); evidence: layout drawing with check marks.       |
| 19 | Check allowance for differential vertical and horizontal movements; method: slot length and shim review; acceptance: $\pm 15$ mm capacity or per calculation; evidence: photo of slotted holes and detail markup.    |
| 20 | Verify fastener and bracket metallurgy to avoid galvanic corrosion; method: materials pairing table; acceptance: compatible pairings per approved project specifications; evidence: material certificates and table. |
| 21 | Confirm serviceability deflection limits under design loads; method: engineering check; acceptance: L/240 or stricter as specified; evidence: calculation page signed by responsible engineer.                       |

### Drainage and Moisture Management

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| 22 | Verify rainscreen cavity continuity and depth; tool: detail review and ruler at mock-up; acceptance: $\geq 25$ mm clear, unobstructed top and bottom vents; evidence: mock-up photos with measurements. |
| 23 | Check weep/pressure moderation openings; method: detail and prototype inspection; acceptance: slot width $\geq 8$ mm and spacing per design; evidence: prototype test notes and images.                 |
| 24 | Confirm head, sill, jamb waterproofing with end dams and laps; tool: detail audit; acceptance: laps $\geq 100$ mm with positive fall; evidence: water test report or annotated photos.                  |
| 25 | Review vapor control strategy for climate; method: hygrothermal assessment; acceptance: no interstitial condensation under design conditions; evidence: model outputs and narrative.                    |

| Documentation and Approvals |                                                                                                                                                                                                   |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 26                          | Obtain manufacturer selection matrix mapping elevations to systems and variants; acceptance: matrix signed by designer and supplier; evidence: uploaded PDF with signatures.                      |
| 27                          | Record design assumptions: loads, movements, tolerances; method: controlled register; acceptance: versioned entry with date and responsible person; evidence: issue log export.                   |
| 28                          | Capture 360° photos of critical interfaces and upload; tool: site camera; acceptance: links embedded in checklist with captions; evidence: QR-linked gallery.                                     |
| 29                          | Verify maintenance access and replacement logistics; method: BMU reach study and handling plan; acceptance: safe access and panel handling strategy documented; evidence: O&M; note and drawings. |
| 30                          | Hold final approval review with stakeholders; method: meeting minutes; acceptance: actions closed and digital signatures captured; evidence: signed meeting record stored.                        |

### Comments:

Filled by:

Signature:

| Introduction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | How to use this checklist                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <p>Review façade system selection against project geometry and exposure conditions is a critical early-stage verification for design managers, façade engineers, and contractors. This focused review aligns facade system selection, cladding compatibility, and curtain wall strategy with real geometry, wind-driven rain, and environmental loads. The checklist clarifies where as-built tolerances, interstory drift, and substrate variability may exceed a system's tested range, preventing expensive redesigns, water ingress, galvanic corrosion, or acoustic underperformance. It limits scope to system suitability and interface detailing, not installation sequencing or structural frame design. Outcomes include a documented decision trail, validated fixing strategies, and demonstrable compliance with project performance requirements. Users capture measurements, attach reports, and log approvals so choices remain traceable through procurement and mock-up testing. Start in interactive mode to tick items, add comments with photos and datasheets, and export as PDF/Excel with a QR code for authentication.</p> | <p>1. Preparation: gather BIM/as-built surveys, wind/rain studies, structural movement outputs, manufacturer datasheets, and mock-up results. Equip with laser tools, measurement logs, and PPE. Align roles and acceptance criteria per approved project specifications and authority requirements. 2. Using the Interactive Checklist: start interactive mode, assign owners and due dates, tick items as verified, attach photos, calculations, and letters, and add threaded comments to resolve queries. 3. Geometry Review: input measured spans, heights, tolerances, and drift values into item fields, compare to system limits, and record reserves or required adjustments. 4. Exposure Review: enter wind pressures, rain severity, temperature range, and corrosion context; map zones to drainage strategy, materials, and fixings; attach supporting studies. 5. Coordination Workshop: convene designer, façade supplier, and structural engineer to resolve gaps; update the selection matrix and interface details; log decisions and actions. 6. Export and Circulate: generate PDF/Excel outputs with embedded QR code, distribute to stakeholders, and request written comments within the review period. 7. Sign-Off: capture digital signatures from responsible parties, archive the approved package, and link it to procurement and mock-up submittals for traceability.</p> |