



Generated file by QChecklists  
<https://quollnet.com>

# Review dynamic façade control intent, environmental response

Review dynamic façade control intent and environmental response logic with an interactive checklist that is commentable and export as PDF/Excel, ensuring verifiable, safe, calibrated performance.

Project:

Date:

Filled by:

## Control Intent Documentation

|   |                                                                                                                                                                                                                                                 |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Confirm the approved control intent and sequence of operations match shop drawings and I/O schedules; cross-check revision dates and approvals; acceptance: no discrepancies; evidence: annotated comparison, document numbers, and signatures. |
| 2 | Verify façade zones, devices, and groupings align with floor plans; method: mark up as-built drawings; acceptance: 100% device-to-zone mapping; evidence: redlined PDFs and zone index.                                                         |
| 3 | Review time schedules for occupied/unoccupied and cleaning modes; method: controller/GUI screenshots; acceptance: schedules reflect approved occupancy calendar; evidence: dated screenshots and calendar reference.                            |
| 4 | Validate naming conventions and BACnet object IDs; method: export point list; acceptance: unique names, correct units (lx, W/m <sup>2</sup> , m/s, °C), and writable flags per intent; evidence: CSV export.                                    |

## Sensor Inputs and Calibration

|   |                                                                                                                                                                                                                                                      |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5 | Calibrate exterior vertical illuminance sensor beside a calibrated lux meter under stable sky; acceptance: $\pm 10\%$ over 5-minute average; evidence: side-by-side photo and time-stamped readings.                                                 |
| 6 | Verify pyranometer/solar sensor orientation; method: compass and inclinometer; acceptance: azimuth due south $\pm 5^\circ$ , tilt within latitude $\pm 5^\circ$ ; evidence: photos with readings and as-built note.                                  |
| 7 | Check interior daylight sensor placement; method: measure horizontal offset from glazing and ceiling obstructions; acceptance: clear of luminaires $\geq 0.6$ m, representative zone, mounting height per design; evidence: measurements and photos. |
| 8 | Function-test wind and temperature sensors via BMS simulation/inject; acceptance: wind alarm triggers at $\geq 15$ m/s and clears with 2 m/s hysteresis; evidence: trend log and alarm screenshot.                                                   |

### Response Logic and Setpoints

|    |                                                                                                                                                                                                                                      |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9  | Glare control test: raise vertical illuminance at eye to ~2000 lx; acceptance: blinds/louvers move to glare setpoint within 60 s without hunting; evidence: lux trend and actuator status timeline.                                  |
| 10 | Sun-tracking verification: compare controller-calculated louver angle to astronomical model; method: angle gauge; acceptance: angle error $\leq \pm 3^\circ$ ; evidence: timestamped photos and computed vs actual table.            |
| 11 | Solar gain mode: inject irradiance $\geq 300 \text{ W/m}^2$ for 5 min; acceptance: partial close to heat-reduction setpoint within 90 s and deadband prevents oscillation; evidence: irradiance and position trends.                 |
| 12 | Night/sunrise transitions: simulate sunrise via sensor override; acceptance: single transition with deadband $\geq 10\%$ irradiance and minimum position dwell $\geq 10 \text{ min}$ ; evidence: trend plot showing stable behavior. |

### Overrides, Fail-safes, and Modes

|    |                                                                                                                                                                                                                                                                  |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13 | Local manual override: activate wall switch or app; acceptance: local control for $120 \pm 5 \text{ min}$ , then auto-resume with visual status; evidence: event log and GUI indicator screenshot.                                                               |
| 14 | High-wind safety: simulate 20 m/s input; acceptance: all shades stow to safe position $\leq 30 \text{ s}$ and alarm raised; evidence: video clip, alarm record, and restored-normal confirmation.                                                                |
| 15 | Fire alarm interlock: trigger from FAS test key; acceptance: move to specified safe state $\leq 60 \text{ s}$ , manual control locked out until reset; evidence: FAS printout and joint sign-off per approved project specifications and authority requirements. |
| 16 | Power loss recovery: de-energize controller circuit; acceptance: system returns to last safe/default state within 2 min after power-up; evidence: video, UPS runtime record, and post-restore trend.                                                             |

### Integration, Alarms, and Trending

|    |                                                                                                                                                                                                                                                  |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 17 | BACnet mapping review: network scan vs I/O schedule; acceptance: 100% points exposed with correct units, COV settings, and write priorities; evidence: scan report and approved point list.                                                      |
| 18 | Alarm text and priorities: force sensor fault and actuator stall; acceptance: clear, unique messages, priority per approved project specifications and authority requirements; evidence: screenshots with timestamps and acknowledgment records. |
| 19 | Trend configuration: enable 1 min intervals for key sensors and positions; acceptance: $\geq 7$ days retention and exportable CSV; evidence: downloaded sample file and storage setting screenshot.                                              |
| 20 | Occupied/unoccupied logic: simulate occupancy sensor and schedule; acceptance: unoccupied daytime opens shades unless solar/glare protection active; evidence: position trend and occupancy state log.                                           |

| Commissioning Evidence and Handover |                                                                                                                                                                                                                     |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 21                                  | As-built control diagrams: update schematics to reflect final wiring and logic; acceptance: issued revision with approvals; evidence: uploaded PDF/DWG to CDE and transmittal record.                               |
| 22                                  | Setpoint and deadband register: compile table with rationale; acceptance: reviewed by design engineer; evidence: signed register and controller backup file.                                                        |
| 23                                  | Operator training: deliver 60 min session covering tuning and alarms; acceptance: attendance sheet and quiz $\geq 80\%$ pass rate; evidence: slides, recording link, and signed roster.                             |
| 24                                  | Seasonal performance plan: define KPIs (glare complaints/month, kWh cooling, override hours); acceptance: quarterly review schedule with responsible party assigned; evidence: monitoring plan and meeting minutes. |

### Comments:

Filled by:

Signature:

| Introduction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | How to use this checklist                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Review dynamic façade control intent and environmental response logic to ensure automated shading and louver systems behave exactly as the design narrative specifies. This checklist focuses on control sequence verification, daylight and solar gain response, sensor calibration, and integration with building management systems. By aligning the sequence of operations to real environmental inputs—illuminance, irradiance, wind speed, temperature—and occupant states, teams prevent glare, hunting, and energy waste. We keep the scope tightly on dynamic façade automation, covering louvers, blinds, and their control logic; envelope performance modeling, structural glazing, or static shading details are out of scope. The outcome is predictable comfort, reduced cooling loads, and resilient safety responses to wind and fire events. The checklist emphasizes acceptance criteria, response times, and documented evidence so owners can trust seasonal performance and operators can tune confidently without breaking safeguards. Start the interactive checklist to tick items, add comments, and export PDF/Excel with a secure QR.</p> | <p>1. Preparation: Gather approved control narrative, I/O schedules, point lists, and as-built drawings. Bring calibrated lux meter, inclinometer, compass, angle gauge, and a device for BMS/FAS access. Coordinate safe access for façade zones, confirm weather conditions, and ensure stakeholders are available for witnessing and sign-off. 2. Using the Interactive Checklist: Start interactive mode, select your project and zone, and tick items as you verify them. Attach photos, screenshots, and trend exports. Add time-stamped comments for deviations and owner decisions. When complete, export to PDF/Excel; a QR code secures links to source evidence. 3. Sign-Off: Capture digital signatures from commissioning, controls, and owner representatives. Distribute the exported report to the CDE and archive the QR-authenticated package. Record open items with owners, due dates, and planned seasonal re-tests for continuous improvement.</p> |