

## 9.00 Windows

### 9.01 Generally

The amount of glazing in the building façade shall be determined to satisfy aesthetic and functional needs but shall also take into consideration all of the factors which impact on the total life cycle of the proposed building including capital cost of building elements, services and operating costs, the cost of glare reduction, maintenance, cleaning and energy.

Care shall be taken to minimise the impact of solar load and internal glare through windows by carefully considering the options of sunshading, the use of solar or tinted glass or a combination of these measures. An analysis of the life cycle costs of the proposed solution shall be submitted for consideration by CLF before a final design solution is adopted.

Windows shall be of commercial quality designed in accordance with all relevant codes and shall be suitable for the specific application taking into account the requirements for security, cleaning, ventilation, maintenance and operability.

### 9.02 Design Criteria

For the purposes of design, Terrain Category 2.5 shall be used as a minimum.

In air conditioned buildings, not less than 10% of the window area shall be openable so as to provide for ventilation in the event of a system breakdown. Every room and every bay of windows on the perimeter must have at least one openable window. This requirement may be waived if alternative means of achieving this outcome can be provided.

In general, the following energy targets shall be used for the window design:

- Window Transmission <math><5.8 \text{ W/2m}^2\text{K}</math>
- Window Shading Coefficient <math><0.45</math> or shaded
- Wall Insulation >math>>R1.5 \text{ m}^2\text{K/W}</math>

The design of the walls at windows and doors shall ensure that the cavities between the inner and outer walls are suitably flashed and the cavities are closed with the wall material and not aluminium angles.

### 9.03 Window Styles

Louvres shall be avoided except for special approved applications.

Pivot hinge windows can open outwards or inwards but must be able to be cleaned from within the building. Where an external pathway, link bridge or staircase abuts the external wall of the building, any windows in that wall are not to protrude beyond the face of the wall at that level when opened.

### 9.04 Window Framing

Windows and doors shall have anodised aluminium frames of an approved colour, consistent with other buildings in the vicinity.

The minimum thickness of anodising shall be not less than 20 microns. All exposed screw fixings, rivets and cut edges etc, shall be coloured to match the frames.

Where windows or glazed panels have a common jamb with a door unit, provide strengthening to ensure that the window/door jamb does not twist and prevent the door lock from latching.

### **9.05 Glazing**

All glass to windows in external walls shall be G James Glass TS30 laminated glass or an alternative of equal or greater performance to be approved by the Superintendent. A Thermal Safety Assessment using the Pilkington Method must be undertaken to determine if the glass is required to be heat strengthened.

Applied reflective film to glass shall not be used unless specifically approved by the Deputy Director (PD&C) CLF.

Windows to toilet areas shall be provided with obscure glass.

Full height glass to external walls is to be safety glass to requirements of relevant Australian Code.

Where no mid-rail exists, install an adhesive tape 75mm wide similar to 3M 'Frosted Crystal Clear' on the inside of the glass at a height of 950mm to base of tape above floor level.

### **9.06 Window Locks**

All openable window sashes shall be fitted with a lock equivalent to Lockwood 780 or 880. All locks shall be keyed alike, and keys shall be handed to the Superintendent only at Practical Completion. The locking requirement shall be confirmed with the CLF Property Services Manager.

### **9.07 Window Cleaning**

All external surfaces of glass must be easily accessible for cleaning from the inside. If this is not possible, a proposed methodology for cleaning shall be submitted to CLF for consideration and approval.

All provision shall be made in the design for the approved cleaning methodology including providing safe access to the external glass surface and all safety anchors, tracks, hoisting equipment, harnesses etc.

### **9.08 Window Curtains & Blinds**

Curtains and blinds shall not be used a substitute for external sun shading or screening of windows, or general glare control where TS 30 glass is used.

Where blinds may be required for privacy or other reasons, they shall be 'Verosol' or equal manually operated roller blinds. Blind fabric shall be a type to suit the application of a colour approved by CLF.

Where curtains are requested, they shall be 1200mm wide with headings double pinch pleated (1.5 fullness). Curtain tracks shall be series 2000 hand operated roller.

Seminar rooms, computer teaching rooms, meeting rooms and any other teaching spaces require 'black out' conditions to enable the effective use of audio visual facilities. This shall be achieved by fitting windows with effective 'black out' roller blinds.

'Black out' roller blinds shall be equal to the 'FABER Multistop' roller blind system with cover profile mounted within the aluminium window frame. The blind frame shall be finished to match the window framing and the blind material shall be 'Mermet Flocke Code 11201' of an approved colour.

### **9.09 Video Conferencing Rooms**

Video conferencing rooms shall have no windows, and therefore should not be located on external walls if possible.

If an existing room with windows is to be converted to a video conferencing facility, then the windows shall be obscured by an applied film to the rear of the glass and then infilled with a solid panel fitted within the framing and sealed all round to ensure no light penetration.