SUPPORT FRAMING

The window's perimeter frame members (head, sill and jambs) and the perimeter of the wall panel opening are supported by the window's support framing. The support framing design and material is not by Metl-Span.

When subjected to the project's design load, the window's support framing must be capable of supporting the window assembly without exceeding a deflection of L/175 or 3/4", whichever is less. Refer to the project's specifications and code requirements for the applicable safety factor.

The window support framing must provide a minimum 2" bearing width for the bearing and attachment of the window frame members and the wall panels.

Note: when a window jamb coincides with a vertical panel joint, and/or when the window intersects intermediate wall support members, the respective wall support members must be offset or set back 2-1/4" to clear the window unit's 4" depth. To support the adjacent side panels and above and below window panels, these off-set or set back members must be built up to provide wall panel support flanges at the wall plane above and below the window opening.

Window Muntins - on multiple lite windows, the horizontal and vertical muntins are not directly supported by the window's support framing. When subjected to the project's design wind load and the gravity load of the glazing, the deflection of the window muntins must not exceed L/175 or 3/4", whichever is less.

The vertical muntins span between the window's head and sill. The horizontal muntins span between the window jambs and/or the vertical muntins. Vertical muntins must be capable of spanning the full window height without exceeding the allowable deflection. Horizontal muntins must be capable of spanning the width of the respective lite without exceeding the allowable deflection.

The horizontal muntins must also be capable of supporting the weight of the glazing above the muntin without exceeding the allowable deflection.

STRUCTURAL ANALYSIS
For the specific window applications, a structural analysis will be required to determine the maximum allowable muntin spans. Following are the window muntin section properties:

Horizontal Muntin "I" factor -X: 2.9149   Vertical Muntin "I" factor -X: 2.5313
                    -Y: 1.4691   -Y: 0.6745

Note: the X values may be used for determining allowable horizontal and vertical muntin spans relative to wind loads. The Y values may be for determining the allowable horizontal muntin span relative to gravity loads.

Following is an example calculation for determining the allowable muntin span relative to wind loads.

       W = tributary load x tributary area width (psf)
       L = muntin span or tributary area height (ft.)
       D = allowable deflection (lesser of 3/4" or L/175)
       E = modulus of elasticity (1.0×10^{7})

       Required "I" = $\dfrac{W \times L3}{76.8\ E \times D}$

The required "I" must be equal or less than the muntin's "I" factor.