1. Facade Information

Profile system:

Facade major mullion:

Major mullion weight:

Facade minor mullion:

Minor mullion weight:

Facade transom:

Transom weight:

Insulating glass

Block distance:

Glass ID	Weight	Makeup

2. Applied Load

Peak velocity pressure (q_p): *kN/m²*

Horizontal live load (q_H): *kN/m*

Horizontal live load height: *mm*

2. Materials

	Young's modulus (E)	Poisson's ratio (υ)	0.2% apparent limit of elasticity ($\beta_{0.2}$)	Partial ratio for material (γ_M)
Extrusion	70 GPa	0.33		1.1
Reinforcement (Aluminum)	70 GPa	0.33		1.1
Reinforcement (Steel)	210 GPa	0.30		1.1

4. Allowable Deflection

In out-of-plane direction (horizontal), allowable deflection δ follows

In in-plane direction (vertical), allowable deflection is

5. Results

Mullion load and reaction

Mullion ID	Tributary area (m^2)	Pressure coefficient (c_p)	Applied wind load (kN/m^2)	Reaction force (kN) (unfavorable load combination for ULS)									
				A_k	A_d	B_k	B_d	C_k	C_d	D_k	D_d	E_k	E_d

Mullion section and deflection check

Mullion ID	Status	Wx (cm^3)				Ix (cm^4)				Deflection (mm)	
		Profile extrusion		Reinforcement (Al)		Available			Required	Horizontal	
		Available	Required	Available	Required	Extrusion	Reinf.	Total		Existing	Allowable

5. Results

Transom load and reaction

Transom ID	Tributary area (m^2)	Pressure coefficient (c_p)	Applied wind load (kN/m^2)	Reaction force (kN) (unfavorable load combination)			
				A_k	A_d	B_k	B_d

5. Results

Transom section and deflection check

ID	Status	Profile extrusion										Deflection (mm)			
		Wx (cm^3)		Ix (cm^4)		Wy (cm^3)		Iy (cm^4)		σ_{total} (N/mm^2)		Horizontal		Vertical	
		Avail.	Req.	Avail.	Req.	Avail.	Req.	Avail.	Req.	Avail.	Req.	δ_h	$\delta_{h\text{-allow}}$	δ_v	$\delta_{v\text{-allow}}$