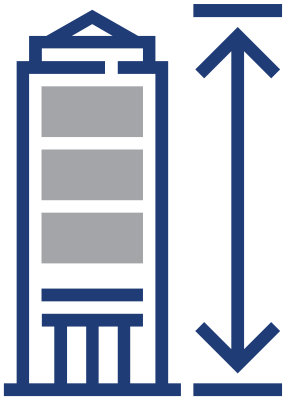
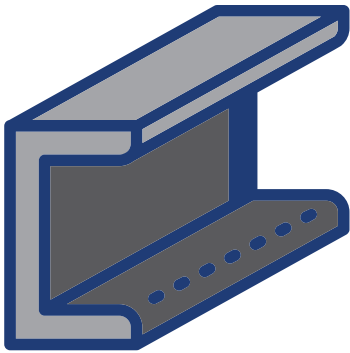


FAQ | STRENGTH



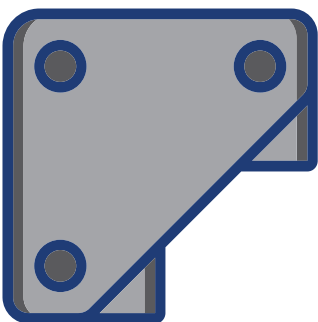
LATERAL LOAD RESISTANCE

Steel behaves in a highly predictable manner when subjected to the structural loads and movements imposed by high wind and seismic events. This is because steel is an inherently stable, manufactured material with consistent chemical and mechanical properties: once a steel stud has been formed, it will remain straight with virtually no change to the thickness, width or other dimensions, as well as strength and stiffness. Likewise, fasteners used to join steel framing members retain their strength and reliability over time.



STRENGTH-TO-WEIGHT RATIO

A key characteristic of resilient building materials is the strength-to-weight ratio. This relatively easy way to compare the merits of several different materials is determined by dividing the maximum imposed load by the weight of the material. Of all commonly used construction materials, steel has the highest strength-to-weight ratio. When cold-formed steel sheet is formed into a C-shape, like a stud, the bends act as stiffeners and increase the strength of the steel sheet dramatically, providing a strength-to-weight ratio that is up to seven times greater than that of dimensional lumber.



CONNECTION STRENGTH

Steel framing typically uses screws that provide a mechanical locking connection where the load is carried in shear. This is in direct contrast to wood, where connection strength is often Limited - not by the strength of the fastener, but by the resistance of the wood in bearing or withdrawal. This unique combination of material characteristics enable buildings framed with cold-formed steel to withstand some of the most devastating natural events, and even remain in service after a disaster.