MG McGrath

PROJECT SOLUTIONS ABSTRACT

SPECIFIED INTERIOR GLASS & GLAZING SYSTEMS

Specialty & Decorative Architectural Art Glass

Specialty architectural glass blends structural integrity with architectural aesthetics. Bent glass (curved facades) and decorative art glass are frequently specified on McGrath projects to add depth, color, and dynamic geometry. These solutions utilize engineering innovation with custom design, creating visually distinct and high-performing building envelopes.

McGrath collaborates, project manages, and installs these specified specialty glass features into McGrath's project scope and award. Being part of the project scope ensures all installation details, transitions to other systems and features are detailed within McGrath's VDC and pre-construction drawings prior to McGrath's installation. McGrath coordinates with the specialty glass manufacturer's engineering teams during the pre-bidding analysis, the formal bid, the pre-award interview, in the project kickoff and throughout all design assist, VDC, pre-construction project detailing and installation processes.

TYPICAL FEATURES & CONSIDERATIONS

BENT / CURVED GLASS:

Bent glass is created by carefully heating flat glass until it softens and conforms to a precise mold, then cooling it under controlled conditions. It unlocks complex design geometries while maintaining clarity and safety.

- **Design Freedom:** Replaces standard flat surfaces with sweeping, seamless curves for unique exterior glazing and facades.
- **Fabrication Options:** Can be combined with laminated interlayers, insulating units, custom tints, and ceramic-based printed patterns for added strength and solar control.
- **Applications:** Ideal for exterior facades, sweeping canopies, glass elevators, revolving doors, and panoramic viewing areas.

SPECIALTY & ART GLASS:

Art glass and specialty treatments introduce texture, depth, and color. These bespoke designs act as focal points while delivering functional benefits like privacy and light diffusion.

- **Custom Textures:** Techniques such as deep carving, acid-etching, and kiln-casting create unique, tactile surfaces on the glass.
- **Colored & Patterned Glass:** Stained, laminated, and digitally printed (fritted) art glass allows for vivid installations that interact dynamically with natural sunlight.
- **Applications:** Entryways, feature walls, religious facades, lobby partitions, and decorative skylights.

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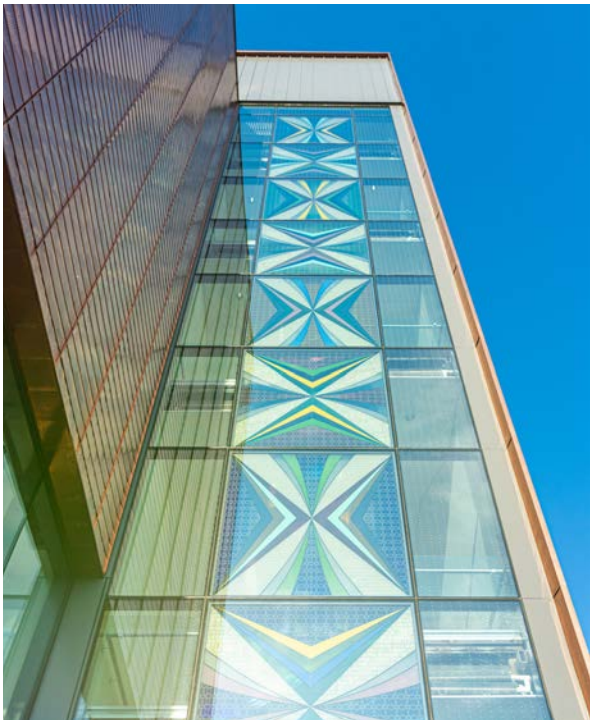
FUNCTIONAL INTEGRATION:

Specialty glass may significantly improve a building's performance when specified properly:

- **Acoustics:** Utilizing laminated interlayers and insulating glass units (IGUs) greatly reduces exterior noise transmission.
- **Thermal Performance:** Bent and specialty IGUs enhance energy efficiency by controlling heat gain and loss.
- **Safety:** Curved and decorative glass must meet building safety standards, typically utilizing tempered or heat-strengthened materials laminated for impact resistance.

INSTALLATION CONSIDERATIONS:

These specialty glass elements require careful handling and installation by McGrath's team since in many cases they are produced as a singular project or by an artist:

- **Structural Requirements:** These glass systems must be matched to the façade system (whether unitized curtain wall, storefront or point-supported) and engineered to handle wind loads and thermal expansion.
- **Weatherproofing:** High-quality silicone or polyurethane sealants must be applied to all edges for a watertight barrier.
- **Safety Glass Codes:** Tempered or laminated glass is required for safety. Laminated glass is typically utilized for security and sound reduction.
- **Handling and Accuracy:** Large, heavy panels require specialized handling equipment to avoid damage during installation.
- **Setting Blocks:** Proper placement of setting blocks is critical to prevent pressure cracks and ensure proper drainage, keeping the glass off the metal framing.
- **Thermal Performance:** The specialty and decorative art glass must still meet thermal performance requirements (U-factor and solar heat gain coefficient) to ensure energy efficiency.
- **Site Surveys:** Detailed, often laser-based, site measurements are necessary to avoid structural issues with custom-cut, specialty heavy glass panels.