WE CHANGE THE FACE OF EVERY BUILDING

INSIGHT™ ENGINEERED STRUCTURAL GLASS SYSTEM SOLUTIONS

W&W GLASS | INSIGHT™ SYSTEM

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GLASS ENGINEERED SOLUTIONS FOR ENHANCED PERFORMANCE

We know glass because we work with glass every day. From design to delivery to installation, our attention to detail and field expertise means we complete every job with the highest quality to match every architect's desired aesthetic with accuracy and integrity.

YOU HAVE A VISION, WE MAKE IT REAL.

From project concept to completion, our bottom-up approach brings your vision to life. With unlimited customization, specification accuracy, and validation through testing, we help set your work apart.

PRECISION = PRODUCTIVITY

Keep projects on time and on budget with glass systems that minimize on-site assembly time, improve quality control, and include W&W's signature in-field support—providing the most efficient installation.

WE CHOOSE PARTNERS WHO CHOOSE QUALITY.

We forge relationships with best-in-class-suppliers around the globe to deliver the most trusted glass engineered solutions to owners, architects and contractors—solutions based on complete, long-term value and not solely on price.

INTEGRITY STARTS WITH YOUR WORD.

When you offer products and services that lead the industry, you back it up with your word. Our warranty gives you peace of mind that your custom solutions will continue to perform for years to come.

WE WORK WHERE WE PLAY.

As the largest employer of union ironworkers and glaziers in the New York City metropolitan area, we walk by projects we've completed with our partners every day. We're proud of the quality work we've contributed to our city with the trust of our clients.

EMPLOYEE-OWNED MEANS FAMILY-OWNED.

Employees are family. And as a family-owned business for over 70 years, our word is as strong as our glass structures and our honesty is just as transparent.

ONE MANHATTAN WEST
New York, NY | 2021 | Commercial Office — Lobby

CLEAR VIEWS

Glass fin mullion systems use tempered laminated glass to provide support for wind load resistance. They can span over 60-feet tall and be suspended or base loaded. As performance levels have increased to require more complicated, heavier make-ups, most architects now desire greater transparency without fittings on the exterior of the systems and no metal splices between glass fins.

ONE MANHATTAN WEST
New York, NY | 2021 | Commercial Office — Lobby

CHALLENGE
Design and install a 50+ foot tall base loaded structural glass fin wall enclosure with 10-foot wide bays without point-supported fittings.

SOLUTION
In partnership with our engineer of record Eckersley O'Callaghan, W&W's team worked to develop a system that could allow for a custom, full-height stainless steel reveal profile and dead load shelf system to be factory bonded to a multi-ply laminated fin to support the laminated face glass. The system was fully tested for structural, air and water performance with a three-panel wide, full height mock-up that included a most challenging curved corner condition. Logistics were controlled by W&W Glass based on extensive site experience, moving the materials safely and efficiently over land and sea to be staged onsite just in time for installation each day. The installation required multiple aerial lifts, jumbo vacuum cup assemblies, and experienced union ironworkers and glaziers on site to be able to carefully lift the glass and secure it with extreme precision to complete the sleek, streamlined design.

RESULT
The completed transparent glass wall acts as a weathertight enclosure to help showcase the expansive, column-less lobby perimeter, providing a direct connection to the bustling city outside.

ALL THE SUPPORT YOU NEED

Increased production capabilities now allow for insulating laminated glass single units to reach 65 feet tall from some global manufacturers. Systems have become much heavier, requiring thicker, larger lites to be base loaded to the ground for support. Free-span unsupported systems with insulating or monolithic laminated glass can be engineered to utilize the combined strength of multi-ply glass lamination technology to limit deflection without the use of additional support behind the vertical joints.

JUMBO GLASS

USA | Confidential Project | Commercial Office/Manufacturing Facility

CHALLENGE

To create a transparent, 32-foot tall open office space using unsupported structural insulating glass units with only silicone joints between panels for uninterrupted views.

SOLUTION

W&W Glass furnished and installed a custom glass engineered solution on a design-build basis for over 975 low-iron insulated laminated glass units for 160,000 square feet of openings to achieve an ultimate level of clarity. Ultraclear jumbo low-iron insulated laminated glass panels with a solar control coating were required to be over 4” thick overall. Each 9’2” wide by 32-foot tall panel weighed in at over 12,000 lbs.

It was crucial for W&W to coordinate the project fabrication and logistics schedule closely with the manufacturer, ensuring the specially-run float glass from Europe was available in advance. This monumental glass system was set into two-piece, thermally-broken aluminum perimeter channels with special counterweighted manipulation equipment from a mobile crane to safely set such heavy material.

RESULT

W&W Glass successfully engineered, detailed and constructed this iconic fast-track project on time and on time and on budget for the 40,000 square foot first phase to keep pace with the precast structure that was being built as the project was being designed. After this portion was completed, W&W was contracted to install another 120,000 square feet, engineered to be two lites tall across the facade with only 12” of metal between the jumbo units in lieu of a precast support.

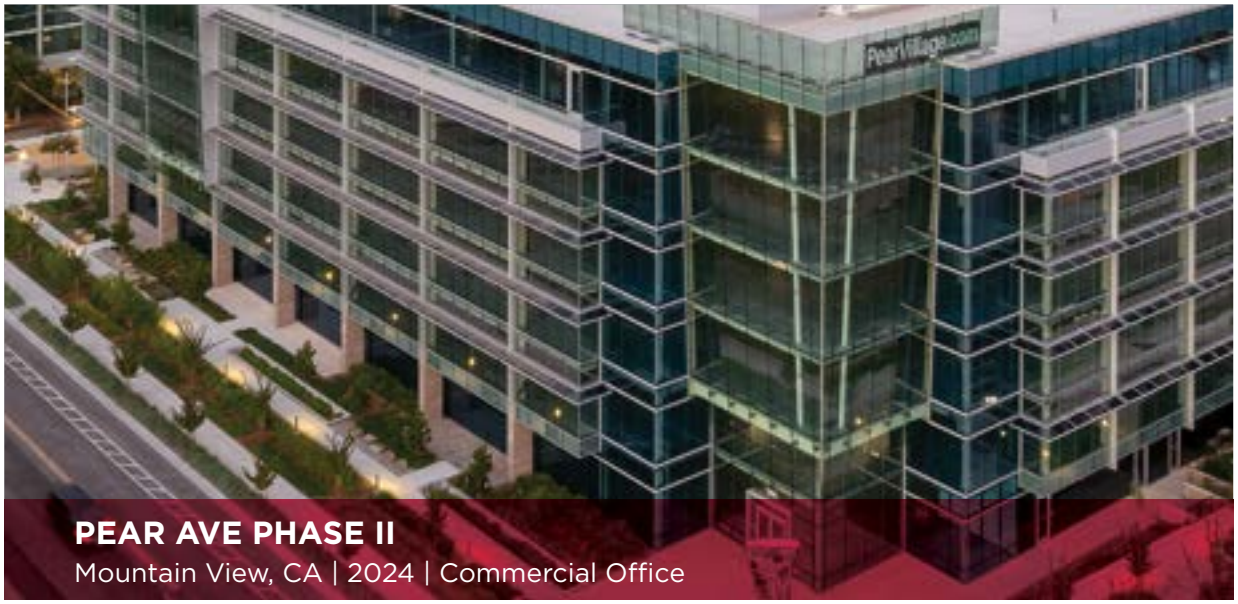
JUMBO GLASS
USA | Confidential Project | 2025

MAKING THE CONNECTION

Point-supported structural glass systems utilize a series of visible stainless steel mechanical fitting connections to transfer loads back to a support structure. Face glass can be either drilled, with bolts going through the units, or clamped in place at edges with patch plates without putting holes in the glass. Bolted fittings or rotules can be capped or flush countersunk on the exterior. The interior of the fitting assemblies can be CNC-machined stainless steel parts, spider castings, or flat/bent plates. Loads will determine size and spacing of support fittings based on module height and width of glass panels. W&W can supply various back-up support structures that can be engineered to work with point-supported glazing: glass fins, AESS steel plates/tubes, horizontal beams with vertical rods, and tension cables.

THE QUAD
Dallas, TX | 2024 | Commercial Office

Point-supported low-iron laminated glass lobby enclosure bonded to full-height laminated glass fins for high transparency. Both entrance areas feature large all glass vestibules between clad tube steel portal frames.



PEAR AVE PHASE II
Mountain View, CA | 2024 | Commercial Office

Two large-scale, point-supported glass fin wall areas, designed for a high seismic zone, that lean out from the building. This project features drilled low-iron, low-e coated insulating glass units with unique cantilevered “fly-by” glass fin support conditions.

NEWARK BETH ISRAEL MEDICAL CENTER EMERGENCY DEPARTMENT
Newark, NJ | 2024 | Heathcare — Lobby

STRUCTURE OF DURABILITY

Steel supports behind structural glass can take the form of tubes, pipes, plates (blades), or trusses. They can be vertical or horizontal to transfer the dead load and wind load of the glass through fittings or dead load shelf and silicone systems. Steel can also be utilized in combination with suspended rod/cable systems to pick up the weight of the glass and sag of beams, allowing the horizontal steel to span greater distances to transfer wind load directly to the building columns.

ONE VANDERBILT
New York, NY | 2021 | Commercial Office — Podium Lobby

CHALLENGE
To create a high-span, unbraced 45-foot tall Architecturally Exposed Structural Steel (AESS) facade with wide modules and no exposed fittings.

SOLUTION
W&W Glass engineers developed a base loaded, vertical AESS 3-inch wide by 14-inch deep bronze painted steel blade profile with a flange to accept a custom aluminum extrusion with enough silicone bite at the back of the glass to transfer wind load. This design also provided a connection for the statuary bronze exterior cap profile and a place to attach the concealed stainless steel dead load shelves to transfer the dead load of the ultraclear, low-iron laminated glass panels.

RESULT
The overall system with free-span steel blades helped eliminate the need for additional support bracing and splicing of mullions while the jumbo laminated glass also provided clear lines of sight to Grand Central Terminal and the Chrysler Building without horizontal interruption.

INTEGRITY THROUGH TENSION

Cable tension walls utilize a thin pre-stressed cable or rod element to connect to a boundary structure. They can run vertically only (one-way) or both vertically and horizontally to form a cable net. These systems provide maximum transparency while requiring close coordination to strike a delicate balance between glass thicknesses, connections, and tension loading. There are also alternative hybrid tension and steel support systems that allow for reduced loading on the boundary structure and use suspended stainless steel rods/cables to transfer dead load and horizontal steel beams/plates to transfer wind load, providing clear views across wide or tall spans with minimal visual interruption.

TWO MANHATTAN WEST
New York, NY | 2022 | Commercial Office — Lobby

CHALLENGE
To design a 50-foot tall “cousin” to One Manhattan West’s structural glass fin lobby next door with similar modules, but a completely different back-up structure.

SOLUTION
W&W Glass partnered again with Eckersley O’Callaghan (EOC) to create a one-of-a-kind system based on similar cable tension technology previously provided by W&W—but with a twist. Each fitting and support was to be fully concealed from view. This new system required an extensive full-size mock-up and comprehensive testing to ensure it could perform under extreme loading conditions. It was rigorously tested for air and water performance along with over 1,000 cycles in each direction (with positive and negative wind loading) to simulate long-term fatigue, thereby providing the utmost confidence in the design. The design includes suspended, low-iron laminated face glass panels with concealed cables by custom curved bent stainless steel shrouds to appear as a consistent geometric profile around each opening bay from top to bottom.

RESULT
We installed a bespoke design that mechanically secures the face glass discreetly, without the use of traditional cable wall fixing methods that would have otherwise taken away from the exterior similarity to One Manhattan West.

TWO MANHATTAN WEST
New York, NY | 2022 | Commercial Office — Lobby

DRILLED BOLTED FITTINGS

Drilled bolted glass units with stainless steel fittings require special spacers in the units to allow load transfer while still maintaining a hermetic airseal to prevent any interior condensation and fogging. These structural glass units require very tight tolerances and a high degree of skill and specialized equipment to manufacture. Silicone is used between panels to allow flexibility and thermal and structural building movements. This system is commonly used with monolithic, laminated, insulating, and insulated laminated glass systems in suspended and base loaded wall systems with backup structures of steel, glass fins, tension rods, and cables. Typical sizing maximums can be limited to widths of approximately 7 feet, and heights under 15 feet due to the amount of fittings required to secure the panels and manufacturing capabilities.

NON-DRILLED PATCH CLAMP FITTINGS

Non-drilled patch clamp fittings allow mechanical fastening without drilling holes. No special inserts, spacers, or tooling equipment is required. The patch clamps holding the glass in place from the front can be connected to any back-up structure. Heavier make-ups can be supported in patches rather than using drilled bolted glass. Patches can be designed and fabricated in many shapes and sizes based on specific loading criteria with multiple finishes to meet aesthetic preference. Patch fittings can be used to support dead load of the glazing or wind load only.

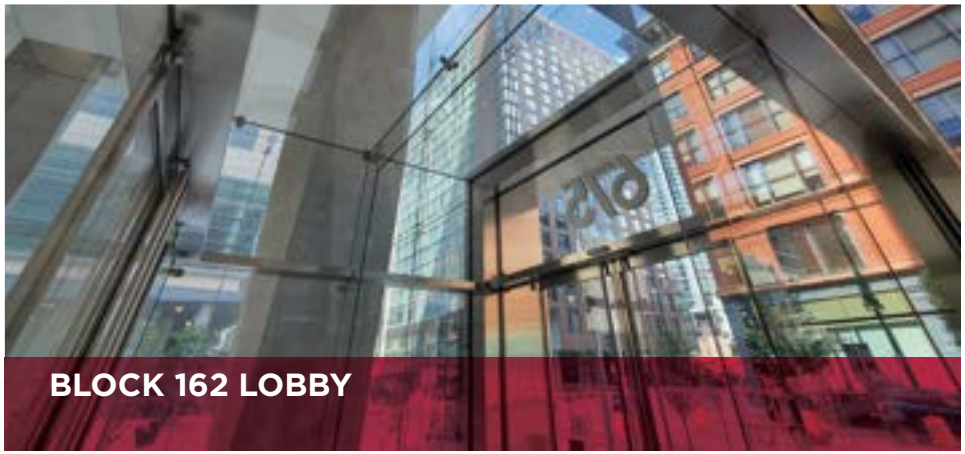
CONCEALED DEAD LOAD SHELF FITTINGS AND SILICONE BONDING

Concealed dead load shelf fittings and silicone bonding is ideal for higher transparency levels and large vertical spans with a beam support behind the structural glass. Virtually any glass makeup can be supported for dead load weight via a mechanically fastened shelf support; glass is then bonded back with structural silicone to a laminated glass fin or metal beam support. This method works great for base loaded or suspended walls that are multiple lites tall and can achieve spans of 60-feet plus.

READY TO FIND THE RIGHT CONNECTION? GET IN TOUCH. →

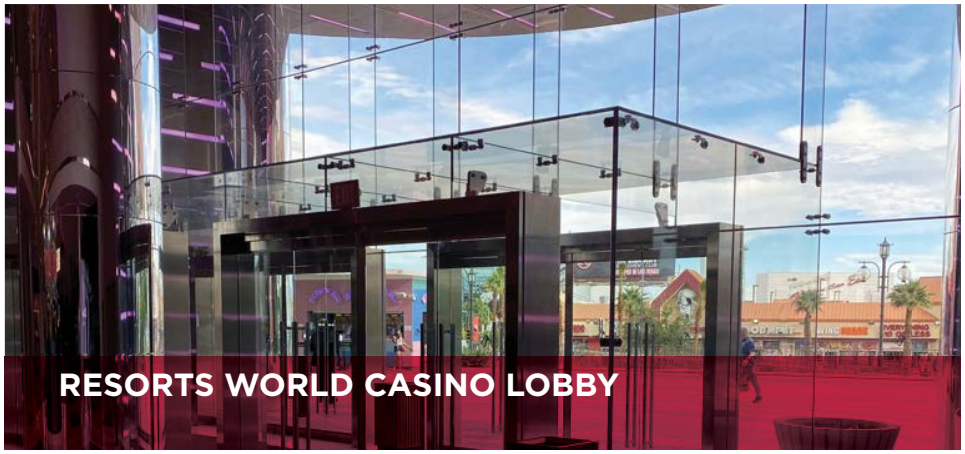
MARIST COLLEGE LOWELL THOMAS COMMUNICATIONS CENTER

We achieved an almost entirely transparent structural glass look with this wide, four-entrance vestibule. With slim, custom stainless steel header bars and all glass fin beams, it achieved the look the architectural team desired. The glass cube entrance works hand-in-hand with the base loaded glass fin wall to provide rigid support for the interior walls. Point-supported glass fins and stainless steel fittings allow for the headers to connect to the laminated roof glass—tying everything together.



BLOCK 162 LOBBY

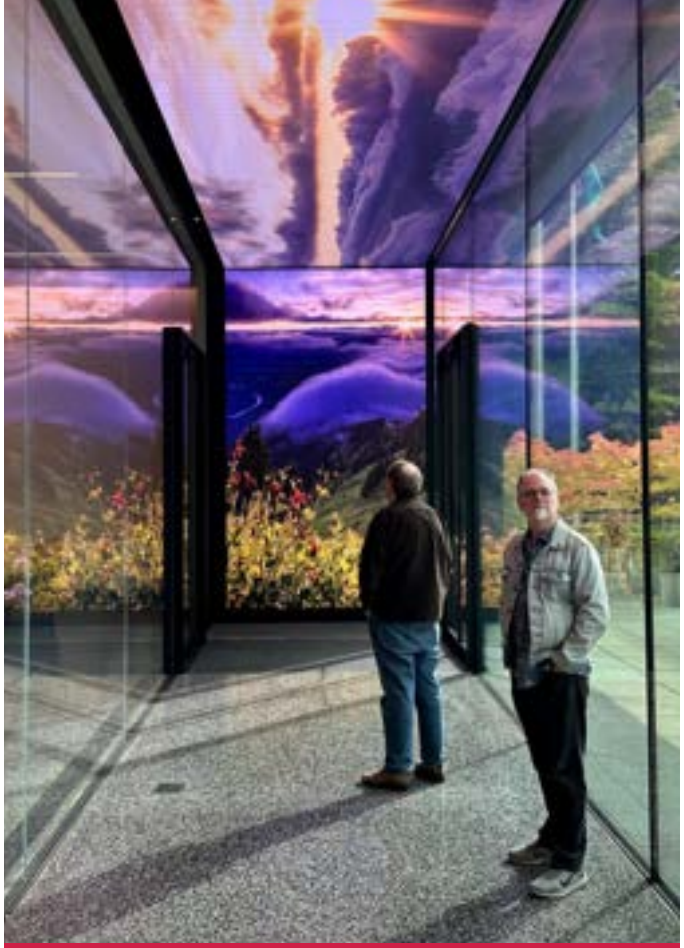
This portal application displays how a cable wall imparting heavy tension loading can be integrated with a tall exterior structural steel vestibule while still keeping the interior enclosure free of portal steel obstructions. The vestibule combines laminated glass fin beam supports and an interior stainless steel-clad floating header “brow” to connect door operation hardware to combine aesthetic appeal with functionality.



RESORTS WORLD CASINO LOBBY

Here, our engineered structural steel tube portal frames with stainless cladding were integrated into a glass fin wall system. The all-glass laminated roof and side walls are connected together with point-supported fittings. These types of portals are often used to house entrances where wayfinding is paramount and large amounts of electrical or mechanical systems are required to be hidden inside the portal from view. It is a cost-effective solution, showcasing how your next design can be accomplished.

READY TO FIND THE RIGHT CONNECTION? GET IN TOUCH. →



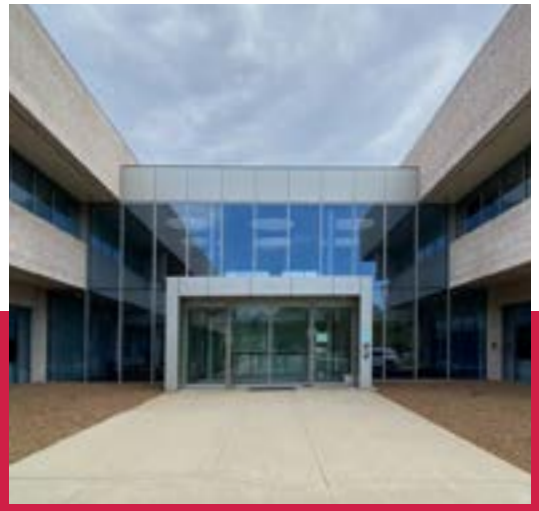
SEEING MORE CLEARLY

Lobby repositioning in older office buildings has become a popular transformative architectural strategy to increase property values and attract new tenants in major cities across the country. These renovations aim to revitalize aging commercial properties by reimagining their ground-level presence, making them more inviting, modern, energy-efficient, and aligned with contemporary workplace expectations.

LOBBY REPOSITIONING

Beyond aesthetics, these repositioned lobbies serve functional and psychological purposes. They can accommodate new amenities such as lounges, cafés, or co-working areas, turning what was once a pass-through space into a vibrant social hub. The infusion of daylight and visual clarity contributes to occupant well-being and can even enhance security through improved sightlines. In essence, lobby repositioning with structural glass is not just a facelift—it's a strategic reinvention that bridges the past and future of urban office architecture.

This approach often involves removing heavy, opaque materials and low-performing, non-thermally-broken curtain wall that once defined mid-century or late-modernist lobbies and replacing them with sleek, minimalist structural glass façades. The use of expansive high-performance insulating glass panels, thin support members (if any) and open layouts not only enhances natural light penetration but also creates a visual connection between the interior and the urban streetscape, fostering a sense of openness and accessibility. Structural glass systems—capable of bearing loads without traditional aluminum-backed framing—allow for uninterrupted transparency. These interventions can dramatically alter the perception of a building, making it feel more dynamic and relevant in a competitive real estate market. We offer many INSIGHT™ glass system options to help set these featured lobbies apart from the rest.



BEFORE

AFTER

BMW HEADQUARTERS PAVILION

Woodcliff Lake, NJ | 2025 | Commercial Office — Lobby

THE SKY'S THE LIMIT

Overhead structural glazing supported and suspended from above or below is an excellent way to let more light into a large space without the divisions traditional aluminum skylights create. W&W Glass completed a large-scale renovation and expansion of the Westfield Valley Fair Mall with over 41,600 sq. ft. of point-supported structural glass for concourse and atrium skylights, two exterior structural glass fin entry walls, and one interior glass wall for a movie theater.

WESTFIELD VALLEY FAIR MALL
Santa Clara/San Jose, CA | 2021 | Shopping Center

CHALLENGE
Engineer and supply structural glass skylight systems that could be easily installed from below onto the bottom of steel tube structures to allow for varied steel tolerances with built-in fitting adjustability.

SOLUTION
W&W Glass engineered a custom capped, cast spider connection armature that was easily positioned at various angles to lock the glass units in place. The team performed mock-up testing to ensure that should the glass break, a worker would not fall through. In concert with the design team, W&W Glass determined that a black diagonal ceramic fritted silk-screened line from corner-to-corner, along with a dot silk-screen pattern for optimal solar shading, was the ideal choice to maintain the best aesthetic. Installing custom cradles to stud-welded plates on the underside of the steel helped the glazier account for tolerances and deviations in structure. This elevation layout and installation sequencing was especially important for speed of installation, as the renovation portion was set during the overnight hours to allow the mall to be open each day.

RESULT
W&W Glass devised innovative connections for easier adjustments and positioning for layout, saving time and money—while also meeting aesthetic requirements.

SOUTHDALE MALL CANOPY
Edina, MN | 2025 | Glass Canopy

THE WIND IN OUR SAILS

Laminated glass wind screens located on upper levels of building terraces typically have extremely high wind loads to overcome. In this instance, there were wind loads of over 130 psf on an 8-foot tall barrier. This required a set from the interior side only since there was no access to the exterior side during installation and caulking.

66 HUDSON
New York, NY | 2022 | Commercial Office

CHALLENGE
Setting multi-ply laminated glass panels efficiently on a series of upper floor terraces wrapping around the exterior of the skyscraper with corner wind loads in excess of 130 psf.

SOLUTION
W&W developed a fully tested custom glass barrier windscreen assembly to mechanically fasten the panels into the “shoe” without the need for a glass manipulator lifting machine or worker platform on the outside of the building. W&W also developed a patented custom rigging solution. The equipment can position panels in their base assemblies using a steel and aluminum chain fall gantry system to be put up and taken down within hours to safely and effectively set glass panels on each terrace from the floor side, without the need of a lifting device or worker platform on the outside of the building.

RESULT
With fast and efficient installation and less complicated rigging, the wind screen systems were installed with great success. The interior set of the W&W wind screen system also allows for easier and safer glass replacements in the future as well.

CUSTOM ELEVATOR ENCLOSURE
One Times Square | New York, NY | Opening in 2026

ONE VANDERBILT
New York, NY | 2022 | Commercial Office — Atrium Restaurant

OUR FORMULA IS SIMPLE: ENGINEER. TEST. APPROVE. INSTALL.

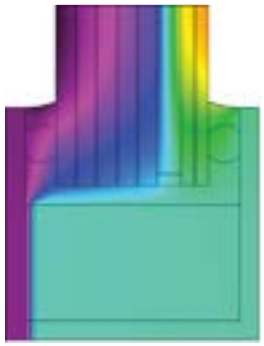
Our designs are rigorously tested to their very limits and beyond to prove efficacy. Over and over again.

OUR APPROACH:

From full-height air and water performance testing to visual performance mock-ups and concealed dead load shelf system testing, we make sure that our designs perform, succeed, and impress the occupants of every building.

Our architect, engineering, and consultant partners are continually demanding the highest performance systems to create newer, more complex and innovative designs. That's why the testing never stops with W&W INSIGHT® Systems. With over 50 years of structural glass systems experience, we work hard to verify design efficacy of all components to assure that they will meet or exceed every project's requirements. From fail-safe redundancy to air, water and thermal performance, W&W Glass has you covered. W&W performs in-house testing and third-party mock-up testing to assure your solution performs for decades to come.

System Component Testing



Thermal Modeling Analysis

DESIGN ASSIST — AND THE W&W GLASS EXPERIENCE

With W&W Glass, you always get a trusted partner providing biddable, buildable systems with specifications for smart, cost-effective solutions—to achieve the best possible results.

WHAT WE PROMISE:

- Design pre-engineering with proposals (design assistance)
- Close collaboration with architectural vision, details and specifications to respect the design integrity
- On-time budgeting and estimating for full cost transparency
- Procurement of precision components from global vendors we know and trust
- Structural glass supply from high-quality fabricators around the world
- Best-in-class metal fabricators for AESS steel elements, tension cables, door portals, steel clips, custom stainless steel fittings, aluminum perimeter channels, cladding, and more
- Detail collaboration and shop drawings with P.E. stamped calculations for expert coordination and communication between all teams
- In-house drafting of glass and hardware fabrication sheets for release to factories for single-source responsibility
- Ordering and delivery schedule management, eliminating costly delays
- Logistics for material distribution, so customers get their exact order based on project specific requirements
- Installation supervision and in-field support (along with in-house direct installation available in New York City and select markets on a project basis) to help assure assure a quality install every time
- Dedicated service after the sale. We don’t just design, furnish and install glass structures we build relationships

COLLABORATION—THE W&W GLASS WAY

Facilitating energy, focus and teamwork to spark creativity

We start by asking questions. We want to know exactly how the design team envisions the project—from structural glass aesthetics to thermal performance, all the way down to every little detail. Then we dig deeper, discussing specific design parameters, taking into account wind load, snow load, seismic conditions, and support structure for the opening. We then coordinate with our in-house engineering team and develop the system proposal and make calculations—to help you make informed decisions. Our transparent process means you can see the solutions as we deliver them. **Let us show you how.**

W&W GLASS | INSIGHT™ SYSTEM

Almost 50 years ago, W&W Glass began as a small, family-owned installer of ornamented metal and glass systems in New York City. Through decades of experience and strategic partnerships, we have grown to be the first name associated with glass building facades throughout the country.

W&W Glass is committed to delivering the level of consistency our customers expect while tailoring systems to their project needs with more innovative, customized solutions that satisfy every unique challenge. From aesthetics to functionality, our greatest strength is the depth of knowledge and expertise our team brings to every project to provide the architecture of clarity—we're reinventing how we change the face of every building.

WE ARE INNOVATORS OF INVISIBILITY.

GET IN TOUCH. →

845.425.4000
insight@wwglass.com

W&W Glass
300 Airport Executive Park
Nanuet, New York 10954

Photo: Jacob K. Javits Convention Center Expansion

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