



# GUARDIAN 275<sup>®</sup>

TRANSLUCENT SKYLIGHTS, CANOPIES & WALL SYSTEMS



CREATING ENVIRONMENTS WHERE PEOPLE CAN SHINE<sup>™</sup>



# ABOUT

## MAJOR INDUSTRIES, INC.



### HIGH-PERFORMANCE CUSTOM SKYLIGHTS, CANOPIES & TRANSLUCENT WALL SYSTEMS THAT FIT YOUR NEEDS & BUDGET

With nearly four decades of experience, we know that architects, designers and owners are looking for tough, versatile, dependable and cost-effective daylighting systems, and we've created a wide range of solutions to fit every need—all backed by industry-best warranties and an excellent on-time delivery record. Plus we offer:

- A knowledgeable sales team that will help you determine the right solution for the space you're designing
- Structural engineering capabilities to help you conquer the toughest design challenges
- Light-controlling translucent panel systems eliminate glare and block damaging UV
- Translucent systems that can be insulated for enhanced thermal performance

Your decision to use Major Industries is a sign of trust we take seriously, and we're committed to working with you to create the optimal system for your next project.



**ON THE COVER:** University of the Incarnate Word - Student Center, San Antonio, TX, McChesney/Bianco Architecture  
**Bottom Left:** Carver Elementary School, Carver, MA HMFH Architects, Inc. (Image © Ed Worsak)  
**Bottom Center:** Buffalo General Medical Center, Buffalo, NY, C & S Companies  
**Bottom Right:** CASA Centre, Edmonton, AB, IBI Group



Let Major make your daylighting vision a reality...

888-759-2678 / [www.majorskylights.com](http://www.majorskylights.com)

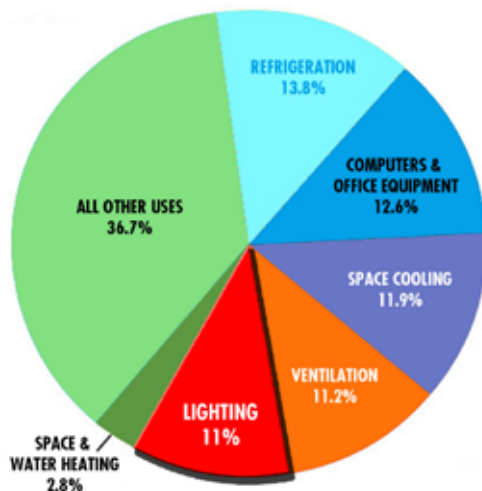
# BENEFITS & BEAUTY OF DAYLIGHTING



Tres Volcanes Community Collaborative School,  
Albuquerque, NM, Jan Anderson Architecture  
(Image © Kirk Gittings Photography)

Natural light is a key ingredient in building design, and for good reason. Access to natural light has been shown to increase retail sales and improve worker productivity in manufacturing settings. In education facilities, teachers and staff have long known that access to natural light can improve test scores, long-term retention, and concentration – plus it gives everyone a more comfortable place to work and learn.

U.S. COMMERCIAL BUILDING  
ELECTRICITY CONSUMPTION



Source: US Energy Information Administration,  
Annual Energy Outlook 2017, Table 5, January 2017

While utilizing natural light can have economic benefits, choosing the wrong system can also have a significant impact. Too much uncontrolled light can have a negative effect, causing eye strain and increased solar heat gain (also leading to additional cooling costs). Guardian 275® systems allow for controlled natural light to illuminate interior spaces while eliminating glare and hot spots that can be a distraction, especially in areas where occupants are using computer screens, cell phones and other electronic devices.

Adding daylighting to interior spaces also has an impact on the environment. Using natural light reduces the need for artificial light sources, thereby reducing the building's overall energy use. HVAC systems can also be positively affected by translucent panel systems as they offer a variety of insulation options that provide low U-factors and significantly reduced solar heat gain.

...and give building occupants the natural light they deserve.

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# GUARDIAN 275<sup>®</sup>

## TRANSLUCENT DAYLIGHTING SYSTEMS



New York State Fairground Expo Building  
Syracuse, NY, QPK Design

Guardian 275<sup>®</sup> translucent panel daylighting systems are a unique combination of high-performance materials, and offer a versatile and energy-saving option for wall systems, skylights and canopies. Their sandwich panel construction consists of an aluminum grid core and two fiberglass reinforced polymer (FRP) face sheets. These sheets allow light to pass through while reducing glare and blocking harmful UV rays, and can also eliminate the need for costly interior or exterior shading devices. Our Ultimate Series<sup>™</sup> FRP face sheet goes beyond industry standards by incorporating an enhanced resin system that withstands wide temperature fluctuations, acid rain, smog, and seismic vibration up to your specified structural limit without cracking, crazing, or shattering.

Ultimate Series<sup>™</sup> face sheet also offers:

- Longer lasting exterior FRP – with an available industry-best 20 year color change warranty
- Erosion veil for extreme environments – backed by a 25 year fiberbloom warranty
- High-impact options, color options and more!



LANta Bus Facility, Allentown, PA, Gannett Fleming Inc.



Neurosurgery & Spine Consultants, San Antonio, TX, JMS Arch. / Insite Arch.



Ft. Richardson MTC, Anchorage, AK, US Army Corp. of Engineers



*It's a unique combination of high-performance materials...*

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# MAJOR DIFFERENCES

## HOW DO WE STACK UP TO THE COMPETITION?

Beyond our Ultimate Series™ face sheet technology, Guardian 275® systems also carry some other unique features.

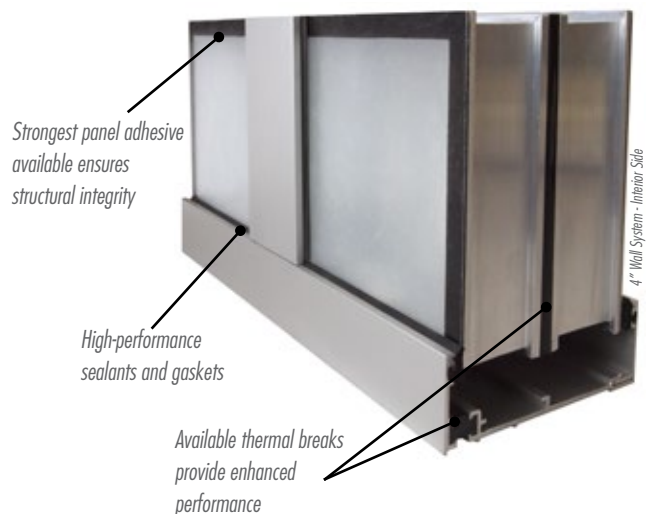
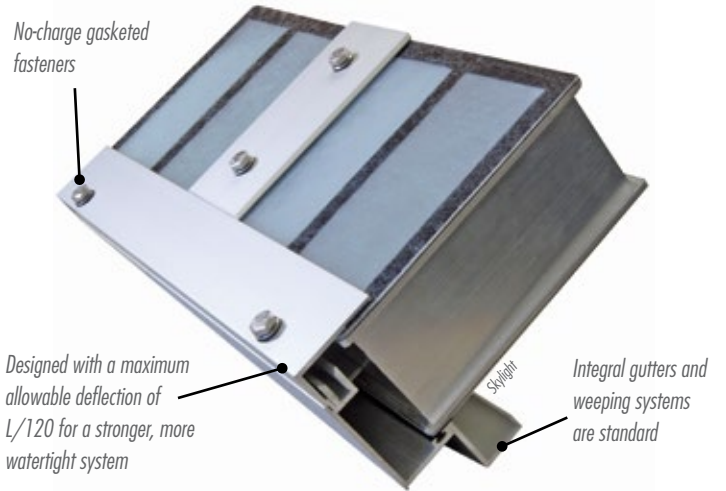
All Guardian 275® daylighting systems come standard with internal gutters and weep holes in both the framing and panels, allowing condensation and other moisture that may get into the building to escape to the exterior. EPDM gasketing and high-performance sealants also help eliminate leaks and are designed to create a strong and watertight system. Major also provides a standard fastener cover for its wall systems, creating a clean and fastener-free look.

Our finishing partners, including the country's largest independent high-performance architectural metals finishing company, offer everything from advanced, industry-leading Kynar® paint to eco-friendly anodize finishes. We also offer a unique Trim Tones™ option - color-coordinated trim that adds a splash of vibrant color to your design. Need a custom color match? We can do that!

### ADDITIONAL FEATURES & BENEFITS:

- Standard 2-3/4" panels available up to 5' x 20' (1" and 4" panels available in select configurations)
- Grid layouts include In-line Shoji, Staggered Shoji, and Tuckerman patterns (see inside back cover for illustration), in sizes from 6" x 6" up to 12" x 24" (Verti-Lite™ grid pattern available for wall systems)
- Insulation and thermal break options available for enhanced performance in tough climates
- Numerous sheet colors available: White, Crystal, Ice Blue, Aqua, Tan and Desert Rose (see inside back cover for samples)
- Mixed glazing options available
- Full range of long-lasting AAMA 2604/2605 Kynar® coatings or AAMA 611 anodize finishes
- Quick Ship™ pre-engineered standard sizes with reduced lead times for tight deadlines

*If you're looking for a custom solution but aren't sure where to start, contact us for more information (call 888-759-2678 or email [sales@majorskylights.com](mailto:sales@majorskylights.com)) and we'll work with you to find the solution that best fits your needs and budget.*



*...that create a system far beyond 'standard'.*

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# WALL SYSTEMS

## VERSATILITY REDEFINED



Tulsa State Fair Bronco Barn and Ranger Arena  
Tulsa, OK, GH2 Equine Architects, A Specialty  
Practice of GH2 Architects, LLC,  
(Image Courtesy of Yellow Dog Design Works)

From new construction to retrofit applications, Guardian 275® wall systems are a dependable and cost-effective way to bring glare-free natural light into any space. They're engineered and built to be long-lasting, lightweight, structurally strong and provide great thermal performance.

Guardian 275® wall systems virtually eliminate UV damage, reduce HVAC loads, and provide energy savings by reducing the need for continuous artificial lighting. Guardian 275® wall systems can also eliminate the need for costly interior or exterior shading devices. They are designed for rapid and secure installation, with standard fastener covers for a clean look, and their combination of EPDM gasketing and integral guttering provide worry-free performance.

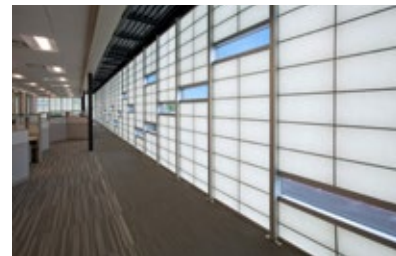
For retrofit applications, Guardian 275® wall systems can be configured with mixed glazing adapters that allow for easy window integration. And if you're replacing glass glazing, our Translucent Adapter Panel configuration lets you install our 2.75" panels into standard 1" curtainwall framing. Looking for a unique interior partition or translucent divider wall? Our 1" panels are also great for interior uses!



Barrette Outdoor Living, Galloway, NJ, SOSH Architects



Bennett Event Center, Oklahoma City, OK, Frankfurt Short & Bruza




Neurosurgery & Spine Consultants, San Antonio, TX, JMS Arch. / Insite Arch.



*Translucent wall systems engineered to be long-lasting...*

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## FEATURES & BENEFITS:

- Framing is designed for rapid and secure installation, keeping panels in place without visible fasteners
- Standard 2-3/4" panels are available up to 5' x 20' (1" and 4" panels also available)
- A variety of grid sizes and patterns are available (see inside back cover for illustration), including Verti-Lite™ that has a similar look to channel glass
- Insulation and thermal breaks available
- Built-in moisture management
- Mixed glazed systems available – combining translucent panels with operable or fixed windows
- Industry-best warranties – 25 year fiberbloom and up to 20 year color change
- Translucent Adapter Panel™ (TAP) converts 2.75" panels into standard 1" framing for retrofit applications
- Hurricane and blast protection configurations available

Image on this page:  
Carver Elementary School, Carver, MA, HMFH Architects, Inc.  
(Image ©Ed Warsek)

... and provide excellent thermal performance.

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# SKYLIGHTS & CANOPIES

## BETTER BY DESIGN



CASA Centre,  
Edmonton, AB, IBI Group

Skylights are one of the most effective and versatile daylighting options available, and they're made even more purposeful when you utilize a Guardian 275® translucent panel system. The same is true for canopies - from a small single slope canopy over a doorway to a complex curved system over a parking ramp, Guardian 275® delivers value and performance.

The lightweight design of Guardian 275® skylights and canopies allows designers to take daylighting to a new level by providing nearly unlimited design versatility. Their built-in light control also eliminates glare and hot spots that are common with standard glass systems, all while also eliminating damaging UV. If thermal performance in your skylight design is key, Guardian 275® systems can be configured with a number of different insulation options, as well as thermally enhanced framing and grid core.

Guardian 275® skylights and canopies are a cost-effective and field-proven solution. Whether it's a complex polygon or a custom grid pattern, Major Industries will work with you to create the best system for your needs.



Fitzsimmons Hyatt Hotel, Aurora, CO, TAAG Architects



Southwest Airlines Credit Union, Dallas, TX



Bernard A. Greenheck Education Center, Schofield, WI, Ellis Stone Construction



*Guardian 275® controls glare and hot spots...*

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## FEATURES & BENEFITS:

- Numerous configurations available—Ridges, Pyramids, Single Slopes, Polygons and Barrel Vaults
- Light weight allows for greater design flexibility
- Eliminates hot-spots and glare that are common with traditional glass systems
- Standard 2-3/4" panels are available up to 5' x 20'
- A variety of grid patterns and sizes are available (see inside back cover for illustration)
- Insulation and thermal breaks available
- Built-in moisture management
- Mixed glazed systems available — combining translucent panels with glass glazing
- Industry-best warranties — 25 year fiberbloom and up to 20 year color change

Image on this page:  
Texas A&M Commons Building, College Station, TX, Barnes Gromatzky Kosarek Architects

*...by diffusing the sun's rays throughout interior spaces.*

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# TRANS *CURVE*™

## BEYOND ORDINARY



Buffalo General Medical Center Entryway,  
Buffalo, NY, C & S Companies

Trans*CURVE*™ systems are an eye-catching curved version of our Guardian 275® translucent panels, and provide exceptional strength and glare-free daylighting that adds a distinctive design element to skylights, wall systems and canopies.

In wall applications, Trans*CURVE*™ adds design emphasis to corners, alcoves and also provides a unique alternative to standard interior partitions. Trans*CURVE*™ skylights and canopies, while visually eye-catching, are also self-supporting in many applications – with larger spans are achievable with multiple panels and suitable structural support. As with our standard Guardian 275® wall and skylight systems, a variety of insulation options are also available for enhanced thermal performance.

While the striking appearance of our Trans*CURVE*™ system enhances design freedom, it also offers building occupants UV protection and high-quality, controlled natural light. Guardian 275® systems also eliminate the need for costly interior or exterior shading devices.



Parking Garage Entry, Ann Arbor, MI, Walker Parking Consulting



Mandel Jewish Community Center, Beachwood, OH, Bialosky and Partners

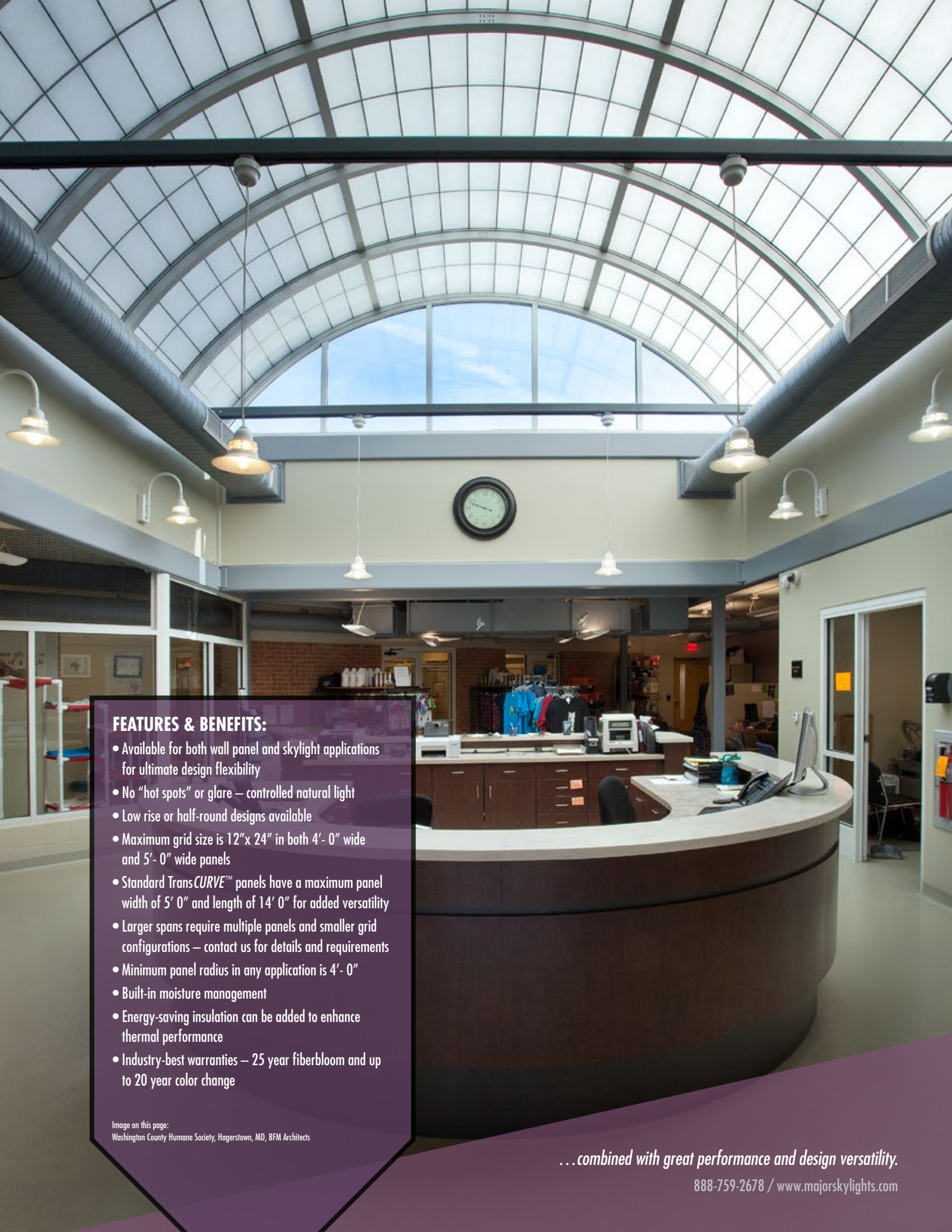


St. Mina & St. Abanoub Church, Miamisburg, OH, Bruns General Contracting



Trans*CURVE*™ offers a striking appearance...

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## FEATURES & BENEFITS:

- Available for both wall panel and skylight applications for ultimate design flexibility
- No "hot spots" or glare – controlled natural light
- Low rise or half-round designs available
- Maximum grid size is 12" x 24" in both 4' - 0" wide and 5' - 0" wide panels
- Standard TransCURVE™ panels have a maximum panel width of 5' 0" and length of 14' 0" for added versatility
- Larger spans require multiple panels and smaller grid configurations – contact us for details and requirements
- Minimum panel radius in any application is 4' - 0"
- Built-in moisture management
- Energy-saving insulation can be added to enhance thermal performance
- Industry-best warranties – 25 year fiberbloom and up to 20 year color change

Image on this page:  
Washington County Humane Society, Hagerstown, MD, BFM Architects

...combined with great performance and design versatility.

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# SPECIALTY SYSTEMS

## FOR DIFFICULT DESIGN CHALLENGES



Moorhead Recreation Center,  
Aurora, CO, BRS Architecture

Guardian 275® is a versatile and dynamic daylighting solution. No matter what your application, it delivers soft, controlled natural light to interior spaces, plus durability and visual interest to any exterior.

Guardian 275® is available in a variety of specialty configurations, and can be custom-made to conquer whatever challenges your next project might bring. From our vast array of color and finish options to removable systems and integrated operable windows, Major's ability to flex with your design needs is just one of the many reasons to choose a Guardian 275® system for your next project. From blast and hurricane protection to removable skylights that allow for easy access to machinery and equipment, we have the systems that meet your building's performance needs.

If you don't see the right daylighting solution here, please contact us at 888-759-2678 or [sales@majorskylights.com](mailto:sales@majorskylights.com) to see if one of our other lines of translucent panel systems – including LightBasic™ and Clima-Tite™ – might be a fit, or if we can work with you to create a fully custom solution. Additional information on Guardian 275® and all of the specialty applications shown here can be found at [majorskylights.com](http://majorskylights.com).



Dept. of Motor Vehicles, Waukesha, WI, Architects Group Ltd



CASA Centre, Edmonton, AB, IBI Group



Chart Industries, LaCrosse, WI, Fowler & Hammer, Inc.



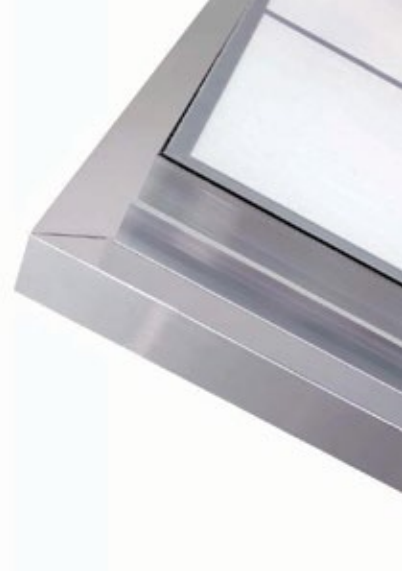
*New or retrofit, simple or complex...*

888-759-2678 / [www.majorskylights.com](http://www.majorskylights.com)

## Renovate Existing Windows/Storefronts

Are you looking to replace outdated or worn glazing with something more energy saving? Our Guardian 275® Translucent Adapter Panels are specially designed to allow a 2.75" panel to fit industry standard 1" glazing pockets, making for an easy installation - and ultimately saving time and money.

We also manufacture 1" daylighting panels that provide quality natural light with greater energy efficiency and enhanced security over traditional insulated glass.



## Hurricane Systems

Guardian 275® hurricane systems can be safely used in 95% of the hurricane zones in North America, including most Florida counties and the Texas gulf coast, and are configured to withstand winds up to 140 miles per hour. Extensive impact testing has also been conducted in conformance with ASTM E1886 and ASTM E1996 to ensure the highest level of performance in the roughest situations.



## Blast Protection

After going through the most punishing blast tests in the translucent daylighting industry (up to 10psi with an applied impulse of 90 psi-msec), Guardian 275® systems were found to meet or exceed the following anti-terrorism performance requirements:

- Department of Defense (DoD) - UFC 4-010-01 and ISC Security Design Criteria Level C loading
- US General Services Administration (GSA) – Condition "1", Hazard Level "None"
- ASTM F1642-04 - Glazing/Glazing Systems Subject to Airblast Loading
- AAMA 510-06 - Blast Hazard Mitigation for Fenestration Systems

*\*For more details and high-speed video of the blast testing, visit [majorskylights.com](http://majorskylights.com).*



Armed Forces Reserve Center, Madison, WI, HSR Associates, Inc.

## Pressure Release

Guardian 275® wall panels can also be fitted with third-party certified fasteners that "relieve" sudden pressure surges by releasing the panels before structural damage occurs. Stainless steel safety lanyards keep panels attached to the framing, minimizing the risk to people and property.



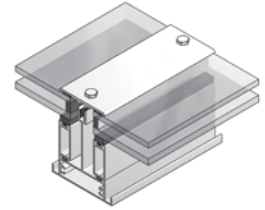
*... we have solutions for your toughest design challenges.*

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# SPECIALTY *continued...*

## Mixed Glazed & Modular Systems

Guardian 275® panels can be used with a wide range of commercial window systems. Our system adapters allow us to accommodate all types of 2" to 2.75" windows and louvers, and provide seamless integration of energy-efficient Guardian 275® panels with 1" glass or 25mm polycarbonate multi-wall. Modular systems can also be custom engineered and built to meet your design needs. Contact us for additional information.

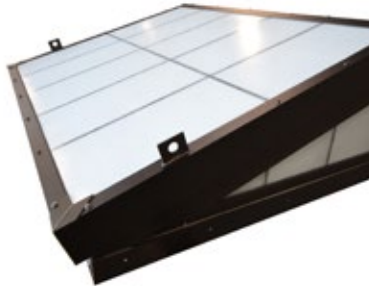


## Removable Skylights

Guardian 275® skylights can be configured with lifting hooks for drop-on installation or future building access (available in stainless steel for long-term durability). Mixed glazed packages can also be designed to combine energy efficient translucent panels with a removable top section using clear or colored glazing panels. Typical applications include MRI centers, water treatment plants and daylighting over large machinery.



Above: Zemmer Middle School, Lapeer, MI, French Associates / Battalion HQ, Ft. Richardson, AK.



Above: Jim Krzyshak Jewelers, Wausau, WI, Struct. Sys. of Wausau / Bennett Event Ctr, OKC, OK, Frankfurt Short & Bruza

## Create a Unique Look with Nighttime Illumination

No special lighting necessary (though you can experiment all you want!). The night sky becomes the perfect backdrop for the soft, illuminated glow of a back-lit Guardian 275® panel. This distinctive design element allows for the highlighting of logos or signage and adds unique visual impact.

## Spectra-Grid™ Colored Insulation Options

Our translucent insulation can be custom-colored to create dynamic visual impact or a subtle, understated tones. It's the perfect low-cost color solution for church designs that need an inexpensive stained glass look, restaurant plans that include incorporate logo colors or learning facilities that need the excitement of school colors!

## Custom Overlays

Unique designs can be added to enhance the standard grid patterns (shown on the next page), adding a decorative element to your daylighting project. Contact Major for additional details and options.



Above: Meadowlark School, Sheridan, WY, TSP, Inc.



Mix your glazing materials and add color...

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# PERFORMANCE & DESIGN OPTIONS

PROPERTY	TEST METHOD
Air / Water Infiltration	ASTM E283 / E331 / E547
Anti-terrorism / Blast	UFC 4-010-01/ ISC Level C / GSA TS01-2003 Condition "1", Hazard Level "None" / ASTM F1642-04 / AAMA 510-06
Average Burn Rate	ASTM D635
Barcol Hardness	ASTM D2583
Bond Strength – Tensile / Shear	ASTM C297 / ASTM D1002
Building Code Classification	ASTM D635 / CC1, CC2
Certified System U-Values	NFRC 100-2014
Class "A" Skylight System	ASTM E108
Coefficient of Linear Expansion	ASTM D696
Concentrated Load Test	ASTM E661
Condensation Resistance Factor	AAMA 1503.1
Finishes	Kynar® (AAMA 2604 / 2605), Class I/II anodized (AAMA 611)
Flame Spread & Smoke Development	ASTM E84 / ASTM D635
Flash / Spontaneous Ignition Temperature	ASTM D1929
Flexural Strength / Modulus	ASTM D790
Hurricane Resistance	ASTM E1886/E1996
ICC-ES Evaluation Report	ESR-2855
Impact Resistance	ASTM D3841 (high-impact sheet available)
Impact Strength	UL972
IZOD Impact	ASTM D256
Solar Heat Gain	NFRC 200-2014
Taber Abrasion	ASTM D4060
Tensile Strength / Modulus	ASTM D638
Thermal Conductivity	ASTM C518-98
Visible Light Transmittance	ASTM E972
Weatherability	ASTM D2244

\*Test standards and results may change with periodic procedure changes and product updates.

## Test Standards & Methods

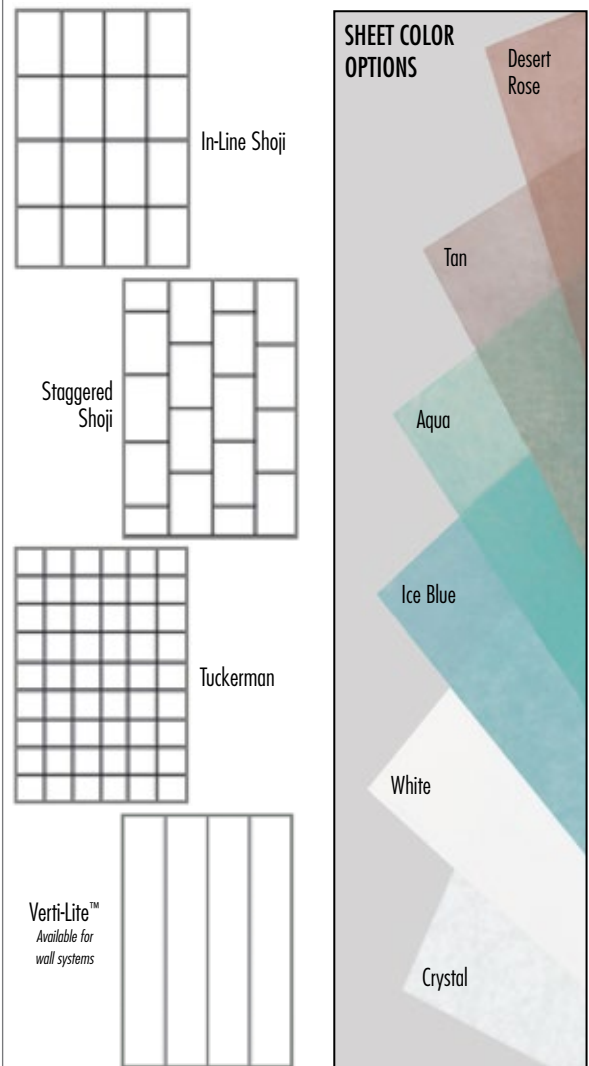
Guardian 275® translucent systems have passed the rigorous testing required to meet standards set by Underwriters Laboratories (UL), the International Code Council (ICC-ES Evaluation Report ESR-2855), and have also been certified by the National Fenestration Rating Council (NFRC). Current NFRC testing evaluates fenestration as a complete system, including the glazing and framing. NFRC certified system values can be found at [nfrc.org](http://nfrc.org) and are easily matched to common Guardian 275® skylight and wall configurations.

Listed above are just some of the tests conducted to verify Guardian 275® system performance. For more detailed information please visit [www.majorskylights.com](http://www.majorskylights.com).

## Grid Patterns & Sheet Colors

Guardian 275® panels offer a wide range of design flexibility, and are available in three standard grid patterns (In-line Shoji, Staggered Shoji, and Tuckerman), while wall systems can also be designed with our Verti-Lite™ grid pattern (see illustrations below - custom grid patterns also available).

A variety of sheet color options are also available (shown below - Crystal, White, Ice Blue, Aqua, Tan and Desert Rose) for even more visual impact.



\*Colors shown for comparative use only and may differ slightly from actual product. Contact Major for sheet color samples.

... we're here to help make your design ideas a reality!

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# GUARDIAN 275<sup>®</sup> QUICK SHIP<sup>™</sup> SKYLIGHTS - READY WHEN YOU NEED THEM

- Pricing within 1 business day
- 50% shorter lead times on standard size and finish options
- Pyramid sizes between 4' and 10'
- Pyramid slope dimensions of 18.5°, 26.5° and 30°
- Single slope dimensions of 4' and 5' upslope and widths of 4' to 12'
- Standard finishes: Bone White 50% Kynar<sup>®</sup>, Dark Bronze Anodize, and Clear Anodize
- Ready-to-install option available

Above: Whitefish Emergency Services, Whitefish, MT, Grover and Co. Architects / Below: Hillcrest Hospital, Tulsa, OK



## FAST ONLINE QUOTE REQUESTS

Visit [majorskylights.com](http://majorskylights.com), click on the "quote" tab towards the top of the page, choose your options and complete the electronic form. It's just that quick and easy!



Major Industries provides nationwide continuing education to Architects with its training sessions. Contact us today to find out more!

Warnock Hersey  
**WH**



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SKYLIGHTS, CANOPIES & TRANSLUCENT WALL SYSTEMS

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