

Detroit Opera House – Elevator Tower  
Historic District Commission Proposal  
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**Completed Building Permit Application**

Attached to email

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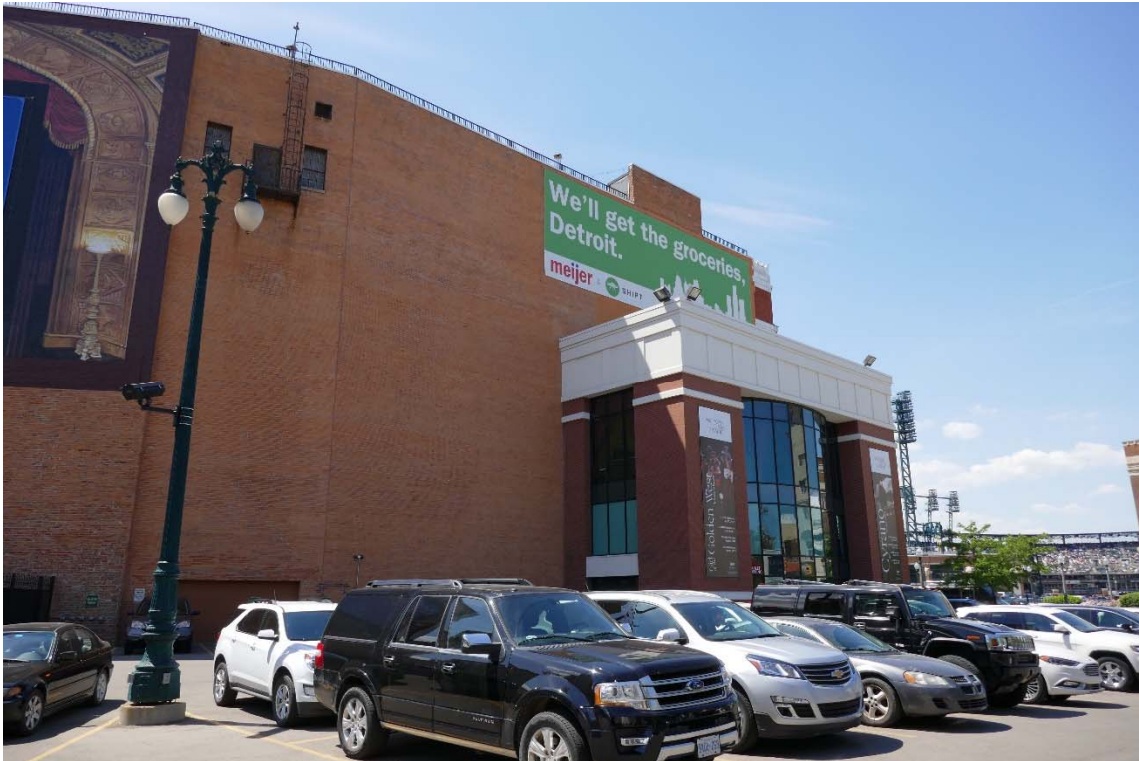
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Elevator Tower - Photographs  
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08022-D0 Detroit Opera House  
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2/5/2021

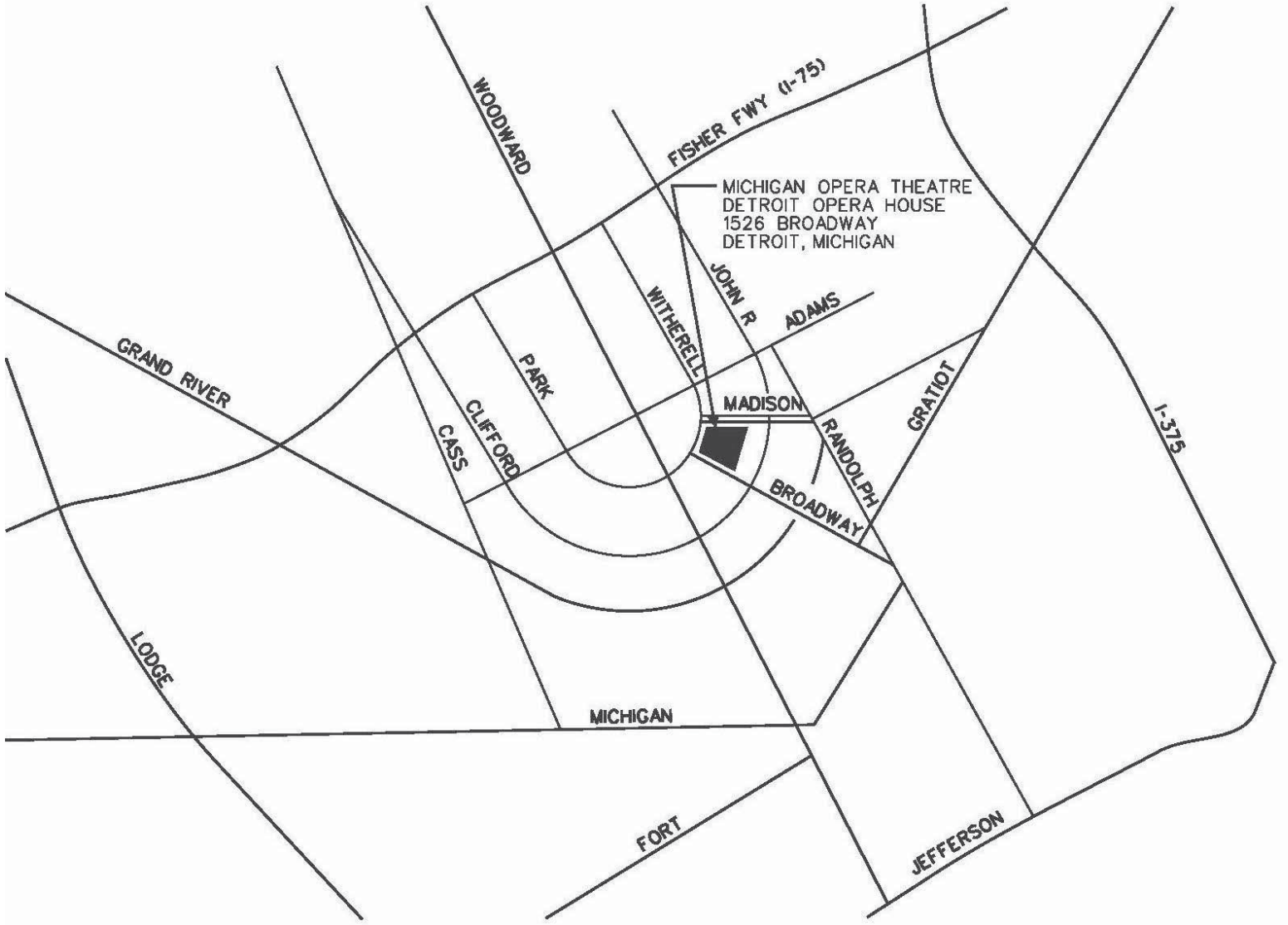


08022-D0 Detroit Opera House  
Elevator Tower - Photographs  
2/5/2021



08022-D0 Detroit Opera House  
Elevator Tower - Photographs  
2/5/2021





# SITE LOCATION PLAN

NO SCALE



# Detroit Opera House Historic District Commission Proposal Project Narrative

## **Historic and Building information**

This building site is located at 1526 Broadway Street in downtown Detroit. This building is also located within the Grand Circus Park Local Historic District (H Sec. 25-2-143). In addition, the property for this site is zoned B5 Major Business District. As one can see on the site location map, the site street boundaries are Randolph, Witherell, Madison Avenue and John R.

The theatre was originally designed by C. Howard Crane, who created other prominent theatres in Detroit including the Fillmore that is next door to the Fox Theater also design by Crane, Detroit Symphony and Orchestra Hall all within the Detroit Theater District. It opened on January 22, 1922 as the Capital Theater. When it opened it was reportedly the fifth largest movie theater in the world, seating about 3,500 people. In 1929, the Capitol Theater became the Paramount Theater, and in 1934, the Broadway Capitol Theater.

The Michigan Opera Theater purchased the building in 1988. The facility was expanded toward Grand Circus Park including an extensive restoration and stage expansion. Also, a new Smith Tower and lobby with one split level access elevator and donor lounge expansion was constructed on the southeast side of the facility. The building underwent an extensive interior restoration which took place under the control of Detroit-based architectural design firm, Albert Kahn Associates, Inc. It reopened in 1996 and celebrated with a gala event featuring Luciano Pavarotti.

## **Proposed Addition**

An elevator tower is being proposed to be added to this historic building. The proposed tower is to be located on the east side of the building and adjacent to a recent Smith Lobby addition.

The proposed expansion's primary goal incorporates an elevator core tower providing all level access to the performance space that is not currently provided. The proposed tower, containing two elevators, is placed on the site to meet this provision providing for patron, employee and ADA access. Especially at the upper theater balcony levels currently without ADA access.

The design utilizes materials and colors that draw from the existing building and architecture. The glass is selected to enhance visibility and complement the existing building. The metal panel color and texture drawn from the existing building color pallet, will enhance the building and provide for additional wayfinding ques. The tower stone base matches the existing. The top of the tower includes a glass elevator lobby providing access to a garden roof terrace. The lobby includes a lighted feature metal ceiling that will act as a beacon to the theater and the theater district.

This proposed addition will provide the following:

- More direct access to the Rooftop Activities Space.
- A more convenient accessible means for reaching the rooftop and an accessible means of egress from the rooftop.
- Convenience for reaching the theatre balcony level.
- Access to the Smith Lobby.
- Provides more capacity for vertical transportation.



# Detroit Opera House

## Historic District Commission Proposal

### Project Narrative

There will be minimum disruption to the historic building and the Smith Lobby. Some demolition will be required, but it will be primarily limited to areas that connects to the adjacent building. The primary impact to the Smith Lobby will be the removal of south entry door, side lites and glazed curtain wall for levels 1 to 3; and minor removal at the parapet. Exterior changes to the Smith Lobby will not be noticeable. On the historic building side (west side of addition); there will be interior connections on two floors (Levels 4 & 5); and minimal impact at the parapet. Exterior changes to the historic building will not be visible by the public. The historic building of this area features multiple wythe brick wall with no enhancements. There are no decorative elements on this side of the building. Please refer to photographs of these existing conditions.

Building materials can be seen on the drawings and images included. Exterior building materials consist of the following:

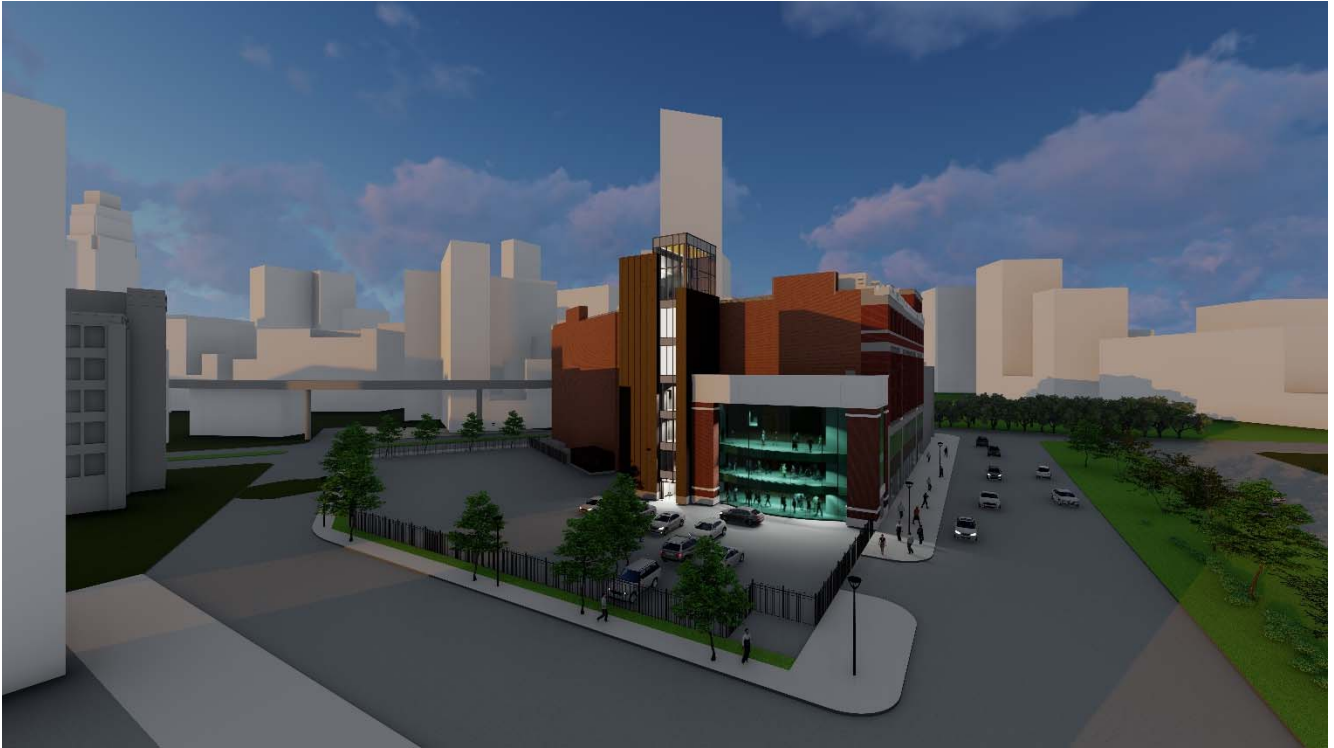
- The bottom portion of the exterior wall will be precast concrete panels. The finish will match the adjacent Smith Lobby.
- On the south side - The material above the precast concrete panels will be staggered vertical insulated metal panels as indicated on drawings. Also refer to product literature. This material continues to the top and is capped with metal coping.
- On the east side - Materials continue to be the same as the south, until it reaches the entry/ exit portion. That portion will be glazed curtain wall that continues up to the top at a higher elevation, capped with metal coping. The finish for the curtain wall framing will be dark bronze, matching the Smith Lobby. Glazing will have a similar appearance as the in the Smith Lobby. Additional insulated metal panel will appear on this elevation, but will terminate at a lower elevation. Refer to product information on the curtain wall.
- On the north side – Only a portion is visible, due to the adjacent Smith Lobby. This too is a continuation of the other side (east elevation) for both the insulated metal panel and glazed curtain wall.
- On the west side – Only the top level is visible. This as well is a continuation of the other sides (north & south). The glazed curtain wall continues up to a higher elevation such as the north, south and east. There will be a door to enter/ exit the Elevator Lobby.
- There will be visible expansion joints, primarily on the south and east elevations. The product will be an expandable foam expansion joint between the existing buildings. The color selected will be as appropriate for the adjacent buildings and insulated metal panels.



08022-D0 Detroit Opera House  
Elevator Tower –Proposed Project  
2/5/2021



08022-D0 Detroit Opera House  
Elevator Tower –Proposed Project  
2/5/2021



# 08022-D0 Detroit Opera House Elevator Tower – Scope of Work 2/5/2021

## Site work & Utilities

- Demo existing pavement
- Install new emergency power generator
- Reroute existing natural gas line
- Excavation for foundations
- Install Foundations
- Demo abutting Smith Lobby materials & provide temporary plywood/protection from elements
- Run storm & fire sprinkler lines from existing basement lines into tower

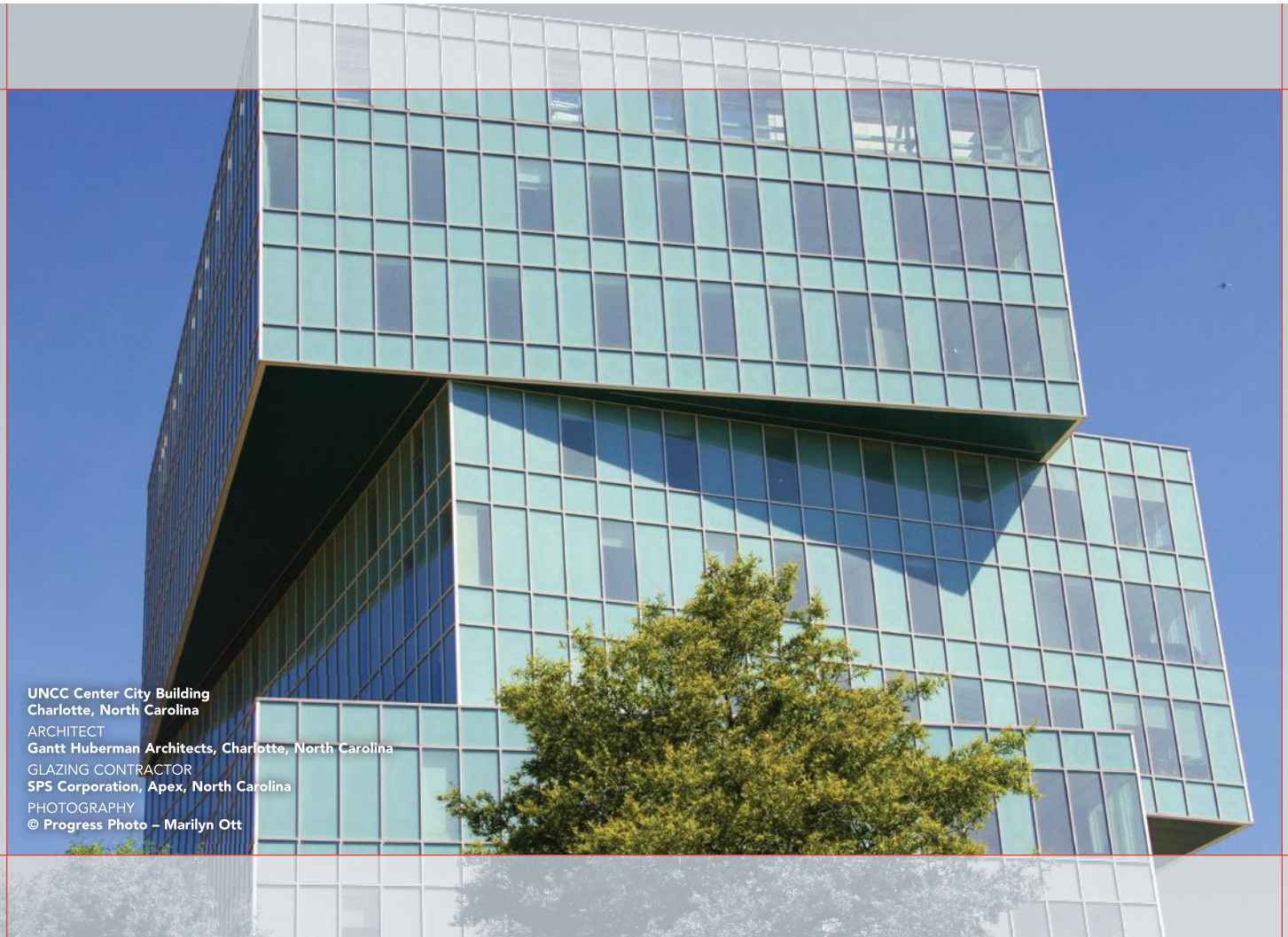
## Core & Shell

- Erect Steel
- Place concrete slab on decks
- Create openings into existing theatre
- Apply fireproofing to steel
- Install Roofing
- Install exterior framing & sheathing
- Install exterior metal panels
- Install glass curtainwall
- Remove temporary plywood from abutting Smith Lobby
- Install elevators

## Interiors

- Interior framing
- Rough MEP
- Insulation
- Drywall
- Install entrances
- Interior prime & paint
- Finish MEP
- Install flooring
- Install trim & final finishes

# Design with Innovation, Imagination and Inside/Outside Glazing



UNCC Center City Building  
Charlotte, North Carolina

ARCHITECT  
Gantt Huberman Architects, Charlotte, North Carolina

GLAZING CONTRACTOR  
SPS Corporation, Apex, North Carolina

PHOTOGRAPHY  
© Progress Photo – Marilyn Ott

Inside/outside-glazed 1600 Wall System™3 Curtain Wall from yesterday's pioneer and today's leader provides everything you ever wanted in curtain wall systems. 1600 Wall System™3 Curtain Wall incorporates inside glazing and the patented IsoStrut™ Thermal Break to provide first-rate structural capability, outstanding thermal performance and installation economies. And it's versatile enough for low-rise, high-rise and monumental curtain wall applications – from offices to hospitals and government buildings to art centers.

## PERFORMANCE

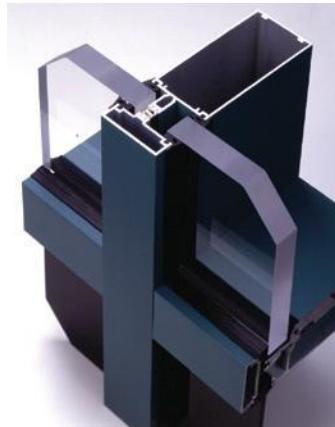
Thermal and wind-load requirements are increasing at both federal and state levels. 1600 Wall System™3 Curtain Wall has been developed in response to the need for a true thermally broken system with greater structural performance. The patented IsoStrut™ Thermal Break method is used within the mullions of the inside or outside glazed curtain wall system to create a continuous thermal barrier, which substantially reduces thermal transmission and improves condensation resistance

and structural performance. IsoStrut™ Thermal Breaks achieve a high-strength bond between the interior and exterior aluminum and the thermal isolator, which creates a composite assembly for increased structural performance. 1600 Wall System™3 Curtain Wall has been tested in accordance with all major standards for curtain wall:

Air Infiltration	ASTM E283
Static Water Penetration	ASTM E331
Dynamic Water Penetration	AAMA 501.1
Thermal Transmittance	AAMA 1503.1
Structural Performance	ASTM E330
Seismic Performance	UBC Section No. 2334, (H) 2 (Phase I, Phase II)

**ECONOMY**

Inside-glazed 1600 Wall System™3 Curtain Wall provides a major reduction in installation costs, and re-glazing is much easier and less costly. 1600 Wall System™3 Curtain Wall is part of Kawneer’s 1600 Wall series and is fully compatible and interchangeable with 1600 Wall System™1 Curtain Wall and 1600 Wall System™2 Curtain Wall. Standardization of overall depths to 6" (152.4 mm) and 7-1/2" (190.5 mm) means fewer parts to inventory and simplified work for architects.



In addition, the vertical mullion with the IsoStrut™ Thermal Break reduces labor costs because the mullion, cover and thermal isolator are integral. There are no vertical pressure plates, screws, thermal separators or snap-on covers to install. Further labor savings can be gained by pre-installing horizontal pressure plates. Outside glazing can easily be achieved by installing the pressure plates from the outside after the glass is in place. This option is often used in spandrel areas, and re-glazing can be done from the outside without disrupting building occupants.



One Ballantyne, Ballantyne Corporate Park  
Charlotte, North Carolina  
ARCHITECT  
TBA2 Architects, Charlotte, North Carolina  
GLAZING CONTRACTOR  
Cabarrus Glass Company, Inc., Concord, North Carolina

**AESTHETICS**

1600 Wall System™3 Curtain Wall gives designers the greater flexibility of a true inside/outside glazed system, which allows for different exterior and interior finishes, and creates unlimited design possibilities with associated cost savings. Construction flexibility allows a structural silicone glazing option. 1600 Wall System™3 Curtain Wall has no exposed fasteners, and a GLASSvent™ Window option offers designers a concealed ventilator with uninterrupted sightlines.

**FOR THE FINISHING TOUCH**

Permanodic™ anodized finishes are available in Class I and Class II in seven different color choices.

Painted finishes, including fluoropolymer, that meet or exceed AAMA 2605 are offered in many standard choices and an unlimited number of specially designed colors.

Solvent-free powder coatings add the “green” element with high performance, durability and scratch resistance that meet the standards of AAMA 2604.



A SIKA COMPANY

# PRODUCT DATA Seismic Colorseal®

**Watertight primary seal in wall expansion joints**



Seismic Colorseal sample shown here is displayed in substrate mock-up

## Product Description

**Seismic Colorseal** provides watertightness, thermal insulation, 100% movement capability, UV stability, and color coordination with substrates. It performs these multiple functions while incorporating no metals and no invasive anchoring.

In contrast to liquid-applied sealants, Seismic Colorseal is free of tensile stresses at the bond line and virtually free of tensile stresses in its low-modulus silicone facing. It is capable of movements up to  $\pm 50\%$  (total 100%) of mean temperature joint size and provides a cost-effective, long-term, watertight seal.

Seismic Colorseal combines factory-applied, low-modulus silicone with an open-cell polyurethane foam infused with a water-based, non-drying acrylic dispersion. The external-colored silicone facing is factory applied while the foam is partially precompressed to a width greater than maximum anticipated joint extension and is cured before final compression. When fully compressed, a bellows is created in the coating. The bellows folds and unfolds during movement virtually free of tensile stresses.

Supplied precompressed to slightly less than its nominal size for ease of installation, it is packaged in shrink-wrapped lengths (sticks) with a mounting adhesive on one side. The shrink-wrap and hardboard packaging are removed, as is the release liner covering the mounting adhesive. The product is inserted into the joint and adhered to one joint face. It then expands to seal the joint.

Sealing against the substrate is achieved through a combination of the pressure-sensitive adhesive acrylic in the foam, the back-pressure of the expanding foam and the field installation of a corner bead of silicone at the substrate-to-bellows interface.

## Uses

- For all joints 1/2-inch (12mm) to 10-inches (250mm).
- For small joints where a lasting alternative to liquid sealant and backer-rod is desired.
- **Facades** – Seismic Colorseal can be used in joints in building facades of masonry, precast concrete, brick, natural stone, metal curtainwall, window mullions, GFRP and most other substrates.
- **Inside Corners and Additions** – Seismic Colorseal is uniquely suited to filling expansion joints at additions and particularly at inside corners. “Rubber-and-rail” alternatives cannot be properly installed at inside corners due to lack of access for drilling equipment. Seismic Colorseal uses no invasive anchoring and can be readily installed without violation of the substrates.

- **Panelized Systems** – Seismic Colorseal is ideally suited to sealing many panelized cladding systems that rely on “barrier-wall” sealing principles including metal cladding, window-wall systems, skylights, precast panels, etc.
- **Transitions from Wall to Deck Joints** – Transitions from vertical to horizontal-plane joints in parapets, walls, split columns, etc. are critical to watertightness and can be properly addressed using Seismic Colorseal. Transitions into other products by EMSEAL for waterproofing joints in decks, as well as into roof-joints, etc., are readily possible — consult EMSEAL.
- **Masonry Cavity Walls** – As the visible seal in a cavity wall facade, Seismic Colorseal can in addition be installed in the structural backup to ensure continuity of the wall’s R-value and of the air/vapor barrier.
- **Varying Joint Sizes, Curves, & Plane Changes** – Joints vary in size due to construction tolerance buildup and because of substrate changes. Supplied to field-measurements, Seismic Colorseal accommodates joint size variations. It is pliable and can be conformed in the field to radii, and changes in plane and direction at soffits, and other architectural features.

## Features

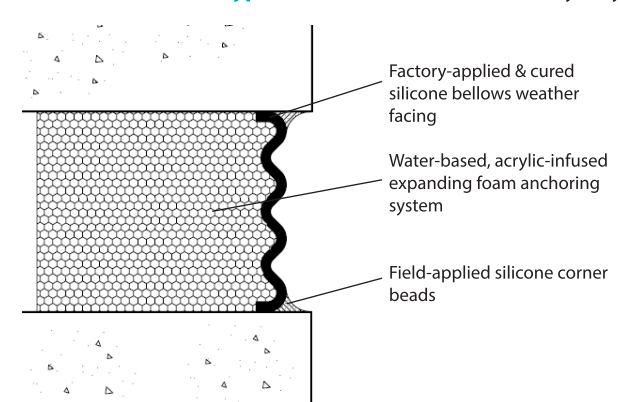
Features the UV resistance, durability and impermeability of silicone. Eliminates tensile stresses at bond line and adverse effects of movement occurring before liquid sealant cure.

Reduces installation labor and materials such as priming, accurate positioning of backer-rod, site mixing and tooling etc, and is less reliant on meticulous substrate-preparation.

Joint movement capability is  $\pm 50\%$  (100% total) of nominal material size.

Seismic Colorseal is anchored by back-pressure inherent in the elastic open-cell foam backing. In addition, it is adhered to the substrate by the pressure-sensitive-adhesive acrylic in the foam and finally by the field-applied corner beads.

### Seismic Colorseal in Typical Installation (substrates may vary)



Seismic Colorseal Sizing			
Nominal Material Size (Joint Size at Mean T°F)		Depth of Seal	
1/2 in	(13mm)	1 3/4 in	(45mm)
3/4	(19)	1 3/4	(45)
1	(25)	1 3/4	(45)
1 1/4	(30)	1 3/4	(45)
1 1/2	(40)	2 1/4	(55)
1 3/4	(45)	2 1/2	(65)
2	(50)	2 1/2	(65)
2 1/4	(55)	2 1/2	(65)
2 1/2	(65)	2 3/4	(70)
2 3/4	(70)	3	(75)
3	(75)	3 1/2	(90)
3 1/4	(85)	3 3/4	(95)
3 1/2	(90)	3 3/4	(95)
3 3/4	(95)	4 1/4	(105)
4	(100)	4 1/2	(115)
4 1/4	(110)	4 1/2	(115)
4 1/2	(115)	5	(125)
4 3/4	(120)	5 1/4	(135)
5	(125)	5 1/2	(140)
5 1/4	(135)	5 3/4	(145)
5 1/2	(140)	5 3/4	(145)
5 3/4	(145)	5 3/4	(145)
6	(150)	6	(150)
6 1/2	(165)	6 1/2	(165)
7	(175)	7	(175)
7 1/2	(190)	7 1/2	(190)
8	(200)	8	(200)
8 1/2	(215)	8	(200)
9	(225)	8	(200)
9 1/2	(240)	8	(200)
10	(250)	8	(200)

*Features, continued*

Unlike screwed-in “rubber-and-rail” products, Seismic Colorseal requires no drilling or invasion of the substrate for its anchoring. It is uniquely suited for curtain walls and applications at inside corners where access for installation is obstructed and where violation of the mullions or other substrates is not advisable.

Available in a wide range of standard and custom colors (consult EMSEAL)

Supplied precompressed to less than joint size — no field compression required.

Standard sizes from 1/2-inch (12mm) to 10-inch (250mm). Other sizes available subject to review of application — consult EMSEAL.

**NOTE** – sizes 3/4-inch (20mm) and smaller will have a convex single-bellows surface.

Performance and Physical Properties		
Property / Test	Value	Test Method
Durometer Hardness (as cured)	Silicone coating — not to exceed 25 pts (± 5), Shore AI	ASTM C661
Weatherometer	Xenon Arc Weatherometer 2000 hrs — No visible deterioration	ASTM C510 ASTM G26-77
Primary Surface Weathering	Atlas Weatherometer 6000 hrs – minimal hardness change	ASTM G26-77
Temperature Range High Permanent Low Permanent	185°F (85°C) -40°F (40°C)	
Temperature Stability, Bleeding, Staining and Recovery Under Field Conditions Material will not bleed or stain after withstanding 150°F (65°C) for 3 hours while compressed down to the minimum of movement capability (-50% of nominal material size). After cooling to room temperature, 68°F (20°C), the material will self-expand to the maximum of movement capability (+50% of nominal material size) within 24 hours.		
R-Value	2.15 per 1-inch (25mm) depth at as-installed nominal joint size compression	ASTM C518-04
STC Rating (Sound Transmission Class)	STC 52 (in a STC 56 wall)	ASTM E90-09
OITC Rating (Outdoor Indoor Transmission Class)	OITC 38 (in a OITC 38 wall)	ASTM E90-09
Air Permeability ABAA air leakage limit for materials — not to exceed .02 L/(s·m <sup>2</sup> ) @75 DP(Pa)	ABAA Compliant 0.0078 L/(s·m <sup>2</sup> ) @75 DP(Pa) 0.0118 L/(s·m <sup>2</sup> ) @ 250 DP(Pa)	ASTM E283-04
Water Penetration	No water penetration after consecutive 15 minute soak durations under pressures of: 500 ΔP(Pa), 65 mph equivalent wind driven rain 1000 ΔP(Pa), 92 mph equivalent wind driven rain 5000 ΔP(Pa), 205 mph equivalent wind driven rain	ASTM E331-00
Wind Loading  Hurricane Standard Miami-Dade County, FL = 150 mph	-0.1mm Net Deflection of Span @ +2730 ΔP(Pa), 150 mph equivalent +0.1mm Net Deflection of Span @ -2730 ΔP(Pa), 150 mph equivalent -0.6mm Net Deflection of Span @ +4854 ΔP(Pa), 200 mph equivalent +0.5mm Net Deflection of Span @ -4854 ΔP(Pa), 200 mph equivalent	ASTM E330

*IMPORTANT: It is critical in ensuring building and wall system performance, and when comparing pre-compressed foam sealant materials, to use performance data from materials as would be supplied to the jobsite. R-Values, temperature resistance and other properties of uncompressed foam or “foam-core” are irrelevant as materials are not installed uncompressed. The above-stated properties and performance results are derived from tests conducted on materials at compression levels and configurations of the as-supplied product. Furthermore they are tested to the same standards of typical wall systems into which they will be installed.*

## Installation Overview

**IMPORTANT:** This instruction-summary is generic. Refer to Install Data and, if applicable, to job-specific instructions of an EMSEAL technician.

- Store at room temperature. Expansion is quicker when warm, slower when cold.
- Ensure nominal size of material matches joint size adjusted from mean temperature.
- Remove shrink-wrap packaging, hardboard, and mounting adhesive release paper.
- Wipe factory-applied release agent off silicone facing using damp, clean, lint-free rag
- Apply thin bead of silicone sealant along edge of bellows at end where the material will join with next length.
- Insert material into joint with at least a 1/4-inch (6mm) recess and adhere to one joint face. Allow material to expand against other joint face. (Wedge larger-sizes in place while it expands.)
- At joints blend silicone into the silicone bellows to create a consistent finished appearance being sure not to restrict the folds of the bellows.
- Once material has equalized its expansion across the joint, gun and tool fillet bead of the supplied liquid silicone at the substrate-to-bellows interface.

**NOTE** – unpainted metal surfaces and some natural stone surfaces may require priming — consult EMSEAL.)

## CAD & Guide Specs

Guide specifications and CAD details are available online at [emseal.com](http://emseal.com) or by contacting EMSEAL.

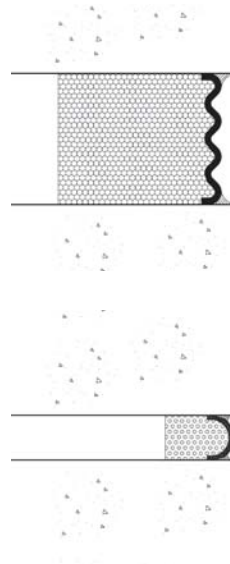
## Warranty

Standard or project-specific warranties are available from EMSEAL on request.

## Availability & Price

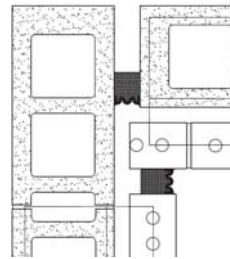
Seismic Colorseal is available for shipment internationally. Prices are available from local distributors and representatives or direct from the manufacturer. Product range is continually being updated, and accordingly EMSEAL reserves the right to modify or withdraw any product without prior notice.

## Typical Seismic Colorseal Usage

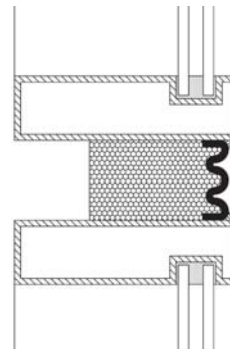


Seismic Colorseal is held in place by the back-pressure of the expanding foam in conjunction with a field-installed bead of silicone caulk at the substrate-to-bellows interface.

Sizes from 1/2-inch (12mm) to 1 1/4-inch (30mm) are manufactured with a single bellows silicone face. Larger sizes up to 8-inches (200mm) are manufactured with multiple bellows.



Seismic Colorseal is an excellent, simple sealing solution at inside corner conditions where it is impossible to install mechanically fastened 'strip-seal' systems. In cavity-wall conditions, installation of Seismic Colorseal in the structural backup maintains integrity of thermal insulation as well as the air barrier while preventing passage of cavity moisture into the structure.



Seismic Colorseal is uniquely suited to sealing structural joints in curtain walls. Non-invasive anchoring means that mullions are not violated by screwing through them as occurs with "strip-seal" systems.





## PRODUCT OVERVIEW

# FORMAWALL<sup>®</sup> High Performance Building Envelope System

## The Complete Wall System

CENTRIA's premier Formawall High Performance Building Envelope System is stronger and safer than ever before with the introduction of halogen-free enhanced fire protection, thanks to the removal of red-list halogens from the product's insulating foam core. CENTRIA has always offered the most reliable, efficient and comprehensive wall system in the industry. Now, Formawall delivers an improved level of fire performance, while maintaining the industry's leading aesthetic and performance features.

### Halogen-Free Foam

CENTRIA has eliminated all halogens from the Formawall foam insulation and has become red-list compliant. This voluntary product enhancement presents an unmatched health, safety and sustainability standard while increasing the wall system's fire performance without any harmful additives. In addition, the reformulated insulating core proves equal to its predecessor in every performance category, including structural, impact and blast resistance and CENTRIA's legendary Advanced Thermal and Moisture Performance (ATMP<sup>®</sup>) technology. Halogen-free foam not only immediately benefits the overall environmental footprint and sustainability, but fire

performance as well. CENTRIA's Formawall passes the new NFPA 285 complete wall assembly test regardless of panel application or design parameters and meets the most stringent requirements of FM 4882 certification. The result is enhanced fire protection for smoke-sensitive environments and unparalleled safety.



# FORMAWALL Dimension Series®

The Formawall product line, including Formawall Graphix®, DS58, DS59 and DS60, allows for a unique level of design versatility that will inspire unlimited possibilities. Numerous profiles, panel lengths, panel widths, reveals and integrated components, including Formavue® Windows and CS Sunshades and Louvers, combine to create your unique architectural vision. Additionally, the advanced panel joinery system allows for easy installation and exceptional performance.



**HORIZONTAL  
PROFILE**

**FWDS**

**DS58**

**DS59**

**DS60**

**FWGX**



**VERTICAL  
PROFILE**

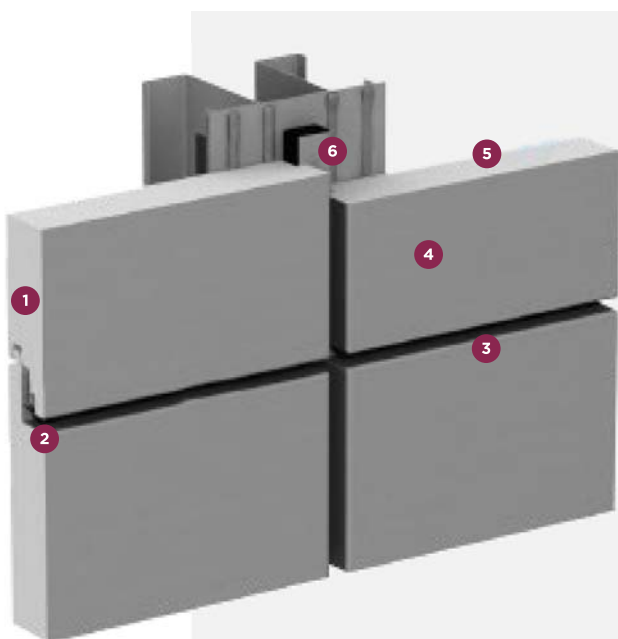
**FWDS**

**DS58**

**DS59**

**DS60**

**FWGX**



- 1 Halogen-free foam promotes fire safety and sustainability while providing the same structural integrity of the panel in either 2" [51mm], 2-1/2" [64mm], or 3"-T [76mm] thicknesses
- 2 Pressure-equalized side joint with concealed sealant protects against water penetration
- 3 Variable reveal sizes, 1/2" [13mm] to 6" [152mm]
- 4 High performance coatings offer long-term coverage, minimal maintenance and excellent color selection for your building's exterior
- 5 Durable metal skins provide impact resistance, strength for increased span capability and a built-in vapor barrier on the interior liner. Continuity of the liner side seals during installation process provides the ultimate barrier
- 6 Unique Insulated Metal Vertical joint (IMV) providing all-metal aesthetics

## Panel Attributes

PANEL TYPE	APPLICATION	THICKNESS [MILLIMETERS]	R-VALUE ASTM 1363	MODULES [MILLIMETERS]	SIDE JOINT REVEALS [MILLIMETERS]	OPTIONAL REVEALS [MILLIMETERS]
FWDS	Horizontal or Vertical	2" [51] 2.5" [64] 3"-T [76]	R-14 (U=0.072) R-17 (U=0.060) R-21 (U=0.049)	10" - 40" [254-1016]	1/2" [13] Side Joint Standard 1/8" Vertical Joint	1/4" [6], & 1" [6] to 6" [152] in 1/2" [13] increments
FWGX*	Horizontal or Vertical	2.5" [64] 3"-T [76]	R-17 (U=0.060) R-22 (U=0.046)	10" - 40" [254-1016]	1/2" [13] Side Joint Standard 1/8" Vertical Joint	1/4" [6], & 1" [6] to 6" [152] in 1/2" [13] increments
DS58	Horizontal or Vertical	2" [51] 2.5" [64] 3"-T [76]	R-14 (U=0.072) R-17 (U=0.060) R-21 (U=0.049)	12" - 40" [305-1016]	2-1/4" [57] Side Joint Standard	1-1/4" [32], 1-1/2" [38], 1-3/4" [44], & 2-1/2" [64], to 6" [9152] in 1/2" [913] increments
DS59 DS60	Horizontal or Vertical	2" [51] 2.5" [64] 3"-T [76]	R-10 (U=0.10) R-13 (U=0.080) R-16 (U=0.062)	12" [305]	2-1/4" [57] Side Joint Standard	Not applicable

R-Values are based on ASTM C1363<sup>1</sup> testing.

\* For additional information on FWGX reveals and segment lengths, refer to the Graphix Tech Data Sheets or consult [centria.com](http://centria.com)

## Advanced Panel Joinery

Producing architectural foam panels using foamed-in-place construction that provides protection from air, vapor, thermal and moisture properties is critical to the science behind CENTRIA's Formawall Dimension Series panels. Advanced Thermal and Moisture Protection (ATMP) technology ultimately propels CENTRIA to the forefront of IMP Wall Systems.

- 1 Efficient thermal performance is achieved by void-free panel joinery. Completely filling the space between the panel and joint prevents condensation and cold spots and increases thermal performance.
- 2 Halogen-free foam chemically reacts with the metal causing a stronger and increased air-tight bond.
- 3 Environmental exposure is reduced because the foam is encapsulated in metal, protecting the panel from long-term reduction of the thermal value.



## Performance Assets

Exceptional performance, versatility and design creativity are only a few of the features Formawall Dimension Series delivers consistently:

### Aesthetics

- Horizontal or vertical installation
- Numerous lengths, widths, reveals and profiles
- Inspired color combinations, coatings and finishes

### Performance

- Halogen-free foamed-in-place insulation
- Excellent thermal performance
- Pressure-equalized side joint prevents water infiltration
- Building code tested and approved
- Advance Thermal and Moisture Protection (ATMP) provides superior thermal, air, vapor and moisture control

### Sustainability

- Health Product Declaration (HPD)
- LEED Certification
- Environmental Product Declaration (EPD)
- Reduces job site waste

### Value

- Reduce HVAC requirements and heating and cooling costs
- Minimizes freight to job site
- In-house technical and customer service staff provides exemplary service from start to finish
- Dealer Network exclusivity guarantees intimate knowledge of products, saves time and money



**CENTRIA**

[www.CENTRIA.com](http://www.CENTRIA.com)

1.800.759.7474

1005 Beaver Grade Road  
Moon Township  
PA 15108-2944  
Phone: 412.299.8000  
Fax: 412.299.8317



CENTRIA, the world's leading provider of high-performance building envelopes, is committed to advancing building science, sustainability, and aesthetics through rigorous R&D, innovation and world-class service and support to the building community.

To learn more about CENTRIA's Formawall insulated metal panel system and the vast possibilities it provides for architects, building owners and general contractors, visit [www.CENTRIA.com](http://www.CENTRIA.com) or contact your local CENTRIA sales representative.

