



MICHAEL K. SMITH, RA, RRC, RCI

Design Consultant | Building Envelope Consulting Group

Michael Smith provides extensive building envelope consulting services, using expertise in building sciences and over 33 years of industry experience to provide owners, architects, contractors, manufacturers, and like clients with expert design, consultation and required technical resources.

Working from a Cincinnati, OH base and market, Mike can service projects and clients in any of the WS Branch Office regions through the US and around the globe.

PROFESSIONAL BACKGROUND

Design Consultant, Senior Architect, Waterproofing & Roofing Consultant, Construction Administrator and Specifier

Michael Smith has worked on a wide variety of buildings and facilities including academic & university campus buildings, office buildings, industrial and manufacturing facilities, churches, municipal buildings, public works facilities, and corrections facilities.

Mike has a unique professional background as a specialist architect and construction specifier, and has contributed on building envelope designs, provided building enclosure assessments, forensic investigations, building envelope system failure analysis, and designs for historic preservation of building facades and roofs.

In 2009, Mike achieved the distinction of Registered Roof Consultant, a highly respected registration earned through a rigorous program of qualifications and testing through Roofing Consultants International, Inc.

EXPERIENCE

2015 - Present	Wheaton Sprague Building Envelope
1993 - 2015	KZF Design, Inc.
1988 - 1993	Hixson, Architects and Engineers
1987 - 1988	Cincinnati Metropolitan Housing Authority
1982 - 1987	KZF Incorporated

PROFESSIONAL REGISTRATION

Architect | OH 1994 | #10859
Registered Roof Consultant | RCI, Inc. | #0634

PROFESSIONAL AFFILIATIONS

RCI, Professional Member | USGBC, Professional Member | CSI, Professional Member | GANA, Professional Member

EDUCATION

Bachelor of Science | 1987 | Industrial Education | Northern Kentucky University
Associate | 1982 | Construction Technology | Northern Kentucky University

PROJECT EXPERIENCE

Wheaton Sprague – Confidential Litigation | Chicago, IL

Assisted in defending the Architect of Record against claims by the building owner regarding causation of roofing related problems; countering claims by a forensic investigator; determining actual causation.

GE Aviation Building 700 Wall and Façade Study | Evendale, OH

Managed team of architects, designers and cost estimator to provide assessment and multi-leveled options to repair or replace entire west wall facade for this 1.3 million sf jet engine plant, built in 1941.

GE Aviation Boatyard | Engine Canning Buildings | Evendale, OH

Led the design effort of this design-build competition to help secure the project with Cintech Construction. The Boatyard building is a 52,000 sf building that ships jet engines manufactured for marine uses. The 10,400 sf Canning Engines building packages military jet engines in hermetically sealed metal containers prior to shipping. Both buildings are heavy industrial structures with multiple bridge and jib cranes.

Gate of Heaven Cemetery | Cincinnati, OH

Building and roofing assessment of Chapel

Deerfield Township Firehouse | Loveland, OH

Roof Inspection; Assessment of conditions of metal roof under construction. Investigation and report of findings caused corrective actions with the roof installation to ensure Owner was granted the extended warranty specified by the Criteria Architect performance requirements.

GE Aviation Skylight Replacements | Evendale, OH

Skylight and roofing replacement over northeast corner of Building 700 where a new lab and office was under construction. Project included day-lighting the spaces with a managed approach for daylighting from the south facing windows. Limiting losses and lowering risk of business interruptions was an important consideration and FM Global Insurance guidelines had to be considered.

DePaul Center; Roofing Replacement | Dayton, OH

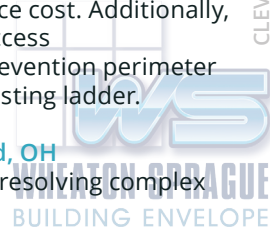
Sub-Consultant to Roofing Solutions, Inc. Verified field conditions; produced drawings and details for new EPDM roofing system.

University of Cincinnati Fifth Third Bank Arena Roof | Cincinnati, OH

Prepared an investigation of the roof of the 100,600 sf Fifth Third Bank arena building. On-site inspection, review of roof test cuts, development of roofing plans and details, and a detailed condition assessment with specific recommendations which included an innovative solution that would salvage and extend the life of portions of the roof, save construction time and reduce cost. Additionally, specific recommendations were made for improving roof access safety - including a roof hatch guardrail-gate system, fall prevention perimeter guardrails, ladder safety device, and a safety cage for an existing ladder.

Wheaton Sprague – Cleveland State University | Cleveland, OH

Review of drainage design; Assisted Wheaton Sprague with resolving complex



roof drainage layout for the roofs of several building unique building canopy designs for Center for the Innovation in Health Professions.

The Ohio State University – Hale Hall Exterior Restoration | Columbus OH

Criteria Architect and roof consultant services for the repair and renovation of the exterior envelope of Hale Hall, formerly known as Enarson Hall, on Ohio State University's main campus. Project includes roof repair/replacement, replacement of all copper downspouts and gutters, masonry tuck-pointing, exterior stucco repair, and repair/replace all exterior metal work. Built in 1911, the building is listed on the National Register of Historic Places.

City of Monroe – Urban Center Exterior Restoration and Roofing Replacement | Monroe, OH

Built in 1998, this building has experienced water leakage problems since construction. Provided a two-step approach that included a preliminary building assessment, recommendations, and budgetary cost. Once scope was established, provided construction documents for bidding and construction plans for the roof and wall systems. During the construction phase, provided on-site construction observation and administration. The 25,000 sf facility houses a sally port, police department, jail, courtroom, and various city/administrative offices, including Monroe City Council. Total roof area is approximately 12,463 SF.

Cary Cottage - Clovernook Center for the Blind | Cincinnati, OH

Historic Preservation. In the harsh winter of 2013-14 water lines froze and burst in this unoccupied historic museum farm house. The walls were covered with ice and the building was saturated with moisture. Damage was very extensive and the building owner needed to make a decision to restore or demolish the building. Provided guidance for immediate temporary protections and drying and ventilation procedures. Assisted owner with recommendations and pricing for restoration. Provided specific advice and direction for the complete restoration of the building. Built in 1832, the building is listed on the National Register of Historic Places.

Metropolitan Sewer District of Greater Cincinnati, Mill Creek Wastewater Treatment Plant | Cincinnati, OH

Sub-consultant to Brown & Caldwell for the construction phase of the replacement of existing skylights with new insulated metal panels and complete restoration to aluminum curtain wall system.

Ohio National Guard Armory; Roof Replacement | Wooster, OH

Replacement of a 20 year-old single ply roof system with a new, fully adhered 60 mil PVC thermoplastic membrane for an 11,630 sf armory building. A fully-adhered assembly was selected to eliminate damage to the existing concrete roof deck and associated disruption of ongoing training operations at the armory. Enhancements included a higher R-value assembly for reduced energy consumption, improved slope and drainage, and a new roof access ladder.

Mercy Health, West Park Nursing Home Roof Access Modifications | Cincinnati, OH

Condition assessment of a roof access hatch and ladder and subsequent design modifications to provide an OSHA-compliant arrangement. A fatality was associated with the prior arrangement. Developed drawings and details of modifications as needed for permit and construction.

Liberty Savings Bank Building, Roofing Assessment, Wilmington, OH

Inspection of 20 year old single-ply EPDM roof system of 30,000 SF call center building for potential buyer. Assessment included membrane condition, roof insulation anomalies, drainage and water ponding issues, and mechanical condensate management. Report included short and long term recommendations and costs for planning purposes.

Cincinnati Country Day School, Lower School Entryway and Commons | Indian Hill, OH

Technical architectural and specifications consultant to Michael McInturf Architects on this elementary school building renovation and addition. Services included technical review of drawings, detail development and construction specifications for the building envelope and roofing assembly.

The Ohio State University, OARDC Roof Replacements | Wooster, OH

Criteria Architect/Engineer services to replace tornado-damaged roofs of five buildings on the Ohio Agricultural Research and Development Center Campus in Wooster. Roof system was designed as a mechanically fastened 45 mil KEE membrane.

The Ohio State University, Martha Morehouse Medical Plaza Pavilion Roof Replacement | Columbus, OH

Architectural design for 72,300 SF roof replacement system and fall protection. Project involved design of an economical 60 mil EPDM roofing system that addresses current conditions; assistance in budget development; evaluation of options; and planning for phased development of Bid Packages. Enhancements included a comprehensive fall protection plan including perimeter guardrails, roof hatch protection, warning lines and tie-off stanchions.

Ohio Dept. of Administrative Services, Assessment for Properties & Facilities Buildings | Multiple Locations, OH

Architecture, engineering, interior design and cost estimating for a comprehensive, all-inclusive, architectural and engineering analysis survey (i.e., building exterior, building interior, building structural systems, HVAC systems, fire and security protection systems, plumbing systems, IT infrastructure systems, etc.) of the following DAS-owned and/or managed buildings: James A. Rhodes State Office Tower, Columbus; Oliver R. Ocasek Bldg., Akron; Michael V. DiSalle Government Center, Toledo; Frank J. Lausche State Office Bldg., Cleveland; Vern Riffe Center for Government and the Arts, Columbus; 4200 Surface Road GSD Bldg., Columbus; 25 S. Front

Street, Columbus; North High Complex, Columbus; and Governor's Residence, Bexley. Managed over 20 design professionals including four sub-consultants.

The Cloisters Condominiums, Roof Analysis | Cincinnati, OH

The 42-year-old condominiums, designed by Hardy Holzman Pfeiffer Associates, and nestled in the hills of the historic Cincinnati neighborhood Mt. Adams, were showing signs of aging. Examined a variety of structural issues; performed a roof analysis. Determined the causes of roof deflection and checked for allowable load limits. Provided a series of viable options to replace the weathered batten seam metal roof, including written descriptions of each option, advantages/disadvantages of each and cost estimates. This enabled the condo association to develop a long range solution and fiscal plan.

Northern Kentucky University, Ceramics and Sculpture Building | Highland Heights, KY

Replacement of a single ply, stone ballasted EPDM membrane with a new white thermoplastic membrane, fully adhered. Special consideration was given to the large amount of roof penetrations for the various HVAC equipment, vents and exhaust fans. The building is sited on the ridge of a high-wind zone coming out of the Licking River valley.

Indian Hill Episcopal Presbyterian Church, Narthex Addition | Cincinnati OH

Designed a 540 SF narthex addition for this church built in 1952. The addition was designed to match existing structure, including new slate, copper box gutters and downspouts. Attic ventilation included vented soffit boards and a continuous insect proof copper ridge vent.

The Cincinnati Country Day School, Lower School | Cincinnati, OH

The Lower School, built in 1957 and designed by renowned Cincinnati architect Carl Strauss, was in need of a new roof system. Originally having a dead flat, built up roof with minimal roof drains, the second roof system, a 45 mil fully adhered EPDM single ply membrane, was vulnerable to ponding water, UV exposure and maintenance worker foot traffic. Designed a new white thermoplastic single ply system with strategically placed tapered insulation and overflow provisions. This solution is lightweight, economical and energy-efficient.

Metropolitan Sewer District of Greater Cincinnati, Mill Creek Wastewater Treatment Plant | Cincinnati, OH

Complete inspection, assessment report, recommendations and cost estimating for 35+ year old skylights and curtain wall system of the compressor building. Once repair/replacement work was determined, prepared drawings, details and specifications.

Metropolitan Sewer District of Greater Cincinnati, Mill Creek Wastewater Treatment Plant | Cincinnati, OH.

Design for roof replacement of five buildings at the Mill Creek and Sycamore Creek Wastewater Treatment Plants. Mill Creek: 12,120 SF Compressor Building, 1,260 SF RAS Building and 29,700 SF Gravity Thickener Building. Sycamore facility: Digesters A and B (400 SF each). Roof systems included both hot mopped and torch applied two ply SBS modified Bitumen. PMMA (Polymethyl Methacrylate) roofing technology was used on some unique conditions. Roof system enhancements included perimeter fall protection, improved slope to drains and enhanced traffic protection. On Compressor building, added a low parapet along east and west sides to eliminate chronic problems along the roof edge.

National Park Service, Tallgrass Prairie National Preserve, New Visitor Center and Administration Building | Strong City, KS.

This 6,600 SF facility features an intensive vegetated roof assembly designed to relate to the views of the surrounding Kansas prairie, composed of native vegetation, growing media, filter fabric, drainage mat, insulation, roof barrier and an asphalt-based waterproofing.

Kenton County Courthouse | Covington, KY.

Expert witness in a lawsuit filed by Kenton County over alleged roofing problems on the 12-year-old building. Technical assessment of the conditions, roof system and review of records of repairs and damage from outside sources helped successfully defend the Architect of Record against this claim.