



Spectra Tech Ltd Retained to Assure Privacy & Control HVAC Equipment Noise in Executive Offices

PROJECT PROFILE

September 12, 2011

The **Great American Insurance Building** now stands as Cincinnati, Ohio's tallest building. The insurance company's Executive Offices are located high above the din of street noise on three floors immediately underneath the building's signature rooftop "tiara." Besides serving as a distinctive architectural element of the design, the metal tiara serves to conceal massive rooftop HVAC system cooling towers and fan systems. Large mechanical equipment of this type is known to generate considerable noise and vibration, which could easily find its way into the executive office areas. In addition, storm water drain pipes from the roof pass through the ceiling plenums above executive offices and through plumbing chases on the way to the ground level. The noise of running water in the roof drains was another source of potential distraction within the planned serenity of the executive suites, Board Room, and various meeting rooms.

KZF Design, Inc., a prestigious Cincinnati-based architecture and interior design firm, was commissioned by Great American Insurance Company to design the interior office space for the executive floors. The interior finishing portion of the work began where the base building design concluded. The entire space within the building shell had to be designed to suit the requirements of the floors' occupants. Michael Kelley, KZF's Workplace Interior Design Leader, recognized that significant attention to potential noise and vibration was warranted in order to optimize the interior space for executive occupancy. The client had also expressed a concern for achievement of speech privacy between adjacent office, conference rooms, and public spaces.

KZF concluded that a complete review of the base building design and equipment installation, in addition to the proposed interior space design, was warranted to address the potential noise, vibration, and privacy concerns. Spectra Tech Ltd, a consulting firm specializing in optimization of acoustics, noise and vibration control, and achievement of speech privacy, was retained by KZF to perform the design review and provide input on the interior space design.

Spectra Tech identified dozens of opportunities to supplement the "base building" design and the rooftop mechanical systems installations. Spectra Tech collaborated with KZF interior designers to incorporate additional sound insulating materials, vibration isolation measures, and supplemental duct and pipe wraps. Scores of opportunities to enhance the acoustics of rooms and optimize privacy between rooms within the context of the interior design were also identified. The specifications for all partition types, all interior doors, and all ceiling systems were also reviewed and enhancements were recommended by Spectra Tech where appropriate. Special attention was given to detailing the intersection of interior walls at the building's glass curtain walls. Spectra Tech worked with KZF's mechanical engineers, led by Joe Nader, to optimize the design of the local HVAC distribution systems. VAV boxes and ductwork were specified to limit noise and vibration emissions, and fitted with noise control wraps and vibration isolators.

The use of special design practices and techniques to optimize the design of executive areas of the Great American Insurance Building is typical of methods employed by Spectra Tech to optimize the design of every facility. Each project is unique and deserving of construction techniques selected to address the specific concerns on that particular project.

Call (513) 419-9169 or visit the company website at www.SpectraTechLtd.com to add Spectra Tech to your project design team.