



For immediate release:

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### **Spectra Tech Addresses Noise & Vibration Control Issues at the new Mercy Hospital West**

Citing its commitment to serving the evolving health care needs of community residents, Cincinnati, Ohio based Mercy Health Partners has begun construction on a new 250 bed multi-story hospital on the city's west side. The \$200M facility, scheduled to open in 2013, will be known as Mercy Hospital West, and will eventually incorporate and replace operations currently conducted at nearby Mercy Hospital Mount Airy and Mercy Hospital Western Hills. A full range of medical services, including emergency care, open heart surgery, cancer treatment, orthopedics, OB/GYN, and neurology will be available to patients ranging from newborns to the elderly.

A modern hospital must comply with a myriad of health care facility design standards, in addition to building codes and zoning regulations. An experienced design team was assembled to address the requirements, led by architects at Ellerbe Becket based in Minneapolis, MN, Champlin Architecture based in Cincinnati, M/E engineers at Heapy Engineering, Dayton, OH, structural engineers at THP Ltd, located in Cincinnati, and other consultants including Spectra Tech Ltd. – a firm specializing in noise and vibration control.

The new facility is being constructed in a suburban area, on property surrounded by existing residences, a church, a school, and an interstate highway. The building's HVAC system cooling towers and emergency generators are designed to operate 24 hours a day 7 days a week (as needed), and were considered major potential sources of noise emissions. In order to assure that the equipment would not produce objectionable noise at nearby property, Spectra Tech conducted on-site testing at various locations to document noise levels prior to commencement of construction. Based on the test data, Spectra Tech provided design recommendations for limiting noise produced by the hospital's new exterior equipment to a level at or below existing neighborhood ambient noise levels.

Another paramount concern was the creation of an environment in which the health of patients and the work of health care providers would be nurtured. Assuring low noise and vibration levels inside of the hospital building was therefore another major project design requirement. The hospital will utilize 18 HVAC systems, and over 100 assorted pumps, chillers, boilers, and hospital-specific systems, all located in mechanical rooms on the lower level. Installation of this equipment required special attention. Working with project engineers, Spectra Tech reviewed the preliminary mechanical and electrical systems designs, and recommended specific noise and vibration control measures for each piece of equipment. Spectra Tech also worked with project architects and structural engineers, and assisted in the development of specific measures to limit noise and vibration transmission from mechanical equipment rooms to adjacent spaces.

The quality of medical services and the delivery of these services in a positive rehabilitative environment will be assured at Mercy Hospital West. The hospital will also be a "good neighbor" as a result of intensive design-stage planning, including measures to control noise and vibration.

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