



PRESS RELEASE

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FOR MORE INFORMATION

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Project: Cathedral of Our Lady of the Angels, Los Angeles
Design Architect: José Rafael Moneo, Madrid
Executive Architect: Leo A. Daly, Los Angeles
Acoustics and Sound System Design: Shen Milsom & Wilke/Paoletti, San Francisco

New Cathedral Offers Acoustical as well as Aesthetic Quality “Cathedral Sound” for Music is Balanced with Clarity of the Spoken Word

San Francisco, CA – The spoken and musical liturgy are equally intelligible in the new 3,000 seat Cathedral of Our Lady of the Angels in Los Angeles – despite the cathedral’s enormous size, its location beside a major freeway, and its exposed concrete construction.

SM&W/P’s Dennis A. Paoletti, FAIA and John Prohs worked with architects José Rafael Moneo and Leo A. Daly to create this exceptional acoustical atmosphere. Left untreated, the cathedral’s excessive reverberation would have been unsuited to both intelligible speech and musical performances.

“It was a tremendous balancing act,” Paoletti says. “We wanted a highly reverberant ‘cathedral sound’ for choir, organ, and instrumental music, but also acoustics that allowed for clear, articulate speech for sermons and voice projection.”

SM&W/P started with a computer model auralization study early in the design process to identify acoustically detrimental echo paths and long-delayed sound reflections. Other problems included the cathedral’s location beside a major highway (and the large bank of windows); and the lack of close-in sound-reflecting surfaces for the choir loft, which is located immediately below the organ pipes.

SM&W/P also investigated speaker systems to magnify and clarify speech. The aesthetic desire to not have any loudspeakers visible had a significant impact on the final design.



Together, the architects and SM&W/P developed a window system of alabaster and double-glazing to minimize exterior traffic noise while allowing natural light to enter the space. An overhead sound-reflecting canopy has been designed to be located over the choir loft, enveloping sound energy within the loft and projecting it to the congregation below.

Additional acoustic features include custom designed fabric tapestries strategically located along the sidewalls, sound-absorbing material above a portion of the wood-slat ceiling, and angled concrete wall surfaces to diffuse sound energy. The original solid-concrete rear wall was also modified so that it opens onto the baptistry, where there are sound-absorbing materials.

A series of distributed, full range, overhead loudspeakers provide speech clarity and amplification within the cathedral. The loudspeakers are integrated with the light fixtures and concealed within specially designed trumpet-shaped enclosures.

About Shen Milsom & Wilke + Paoletti

Shen Milsom & Wilke is an international technology consulting practice founded in 1986, with offices in New York, Princeton, Washington DC, Chicago, Houston, Denver, San Francisco, Las Vegas, London and Hong Kong, and a staff of more than 140 professionals. SM&W offers comprehensive services in the areas of telecommunications, audiovisual/multimedia, trading floor technologies, and acoustics. The firm provides design, engineering and project management for projects anywhere in the world. SM&W has been in business since 1986 and was named one of the 100 fastest growing A/E/P and environmental consulting firms in the nation by Zweig White & Associates for the years 2001 and 2002. In 2000, SM&W acquired Paoletti Associates, forming the regional entity Shen Milsom & Wilke/Paoletti.

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