St. James's Episcopal Church
Richmond, VA

LOCATION: 1205 West Franklin Street, Richmond, VA 23220

SCOPE OF CONSULTING: Speech-reinforcement sound system design

COMPLETION DATE: Designed 1996 / Installed 1997

ARCHITECT: Marcellus Wright Cox & Smith, Architects P.C. (restoration architect)

ASSOCIATED ACOUSTIC CONSULTANT: Marshall/kmk Acoustics, Chappaqua, NY

REFERENCES:
Fred Cox, church member & project architect (804-780-9067)
Bobby Garland, church member & general contractor (Taylor & Parrish Inc.: 804-233-9856)
Mark Whitmire, music director (church office: 804-355-1779)

DESCRIPTION: Restoration of this architecturally-significant, early-20th century sanctuary in the Georgian style—patterned after St. Martin-in-the-Fields, London—was completed in 1997 after a disastrous fire in 1994. The former sanctuary’s good natural acoustics were further enhanced to support a new pipe organ by C.B. Fisk (1998) and the church’s excellent choral program, resulting in the clear need for a completely new approach to the church’s previous low-quality sound system.

Digitally-controlled, steerable line-array loudspeakers were recommended as the better of two possible loudspeaker designs, and selected by the church as the only realistic solution for retro-fitting this 18th century-style sanctuary with modern-day audio equipment. Two 9’-tall medium-resolution line-array loudspeakers are surface-mounted on pilasters on the front nave wall, each unit having separate “sound lobes” aimed down to the main floor and up to the wrap-around balcony. The line-arrays are decorated to match surrounding architectural details, and are so well integrated into the architectural fabric of the sanctuary that many members of the congregation could not identify the actual loudspeaker cabinets, yet the spoken word reaches every listener. This was only the second “steerable line-array” loudspeaker system installed in the United States. Other sound system features include a “hands-free” mixing system for most worship services, supplementary loudspeaker systems for the chancel & under-balcony areas, program monitor loudspeakers for ancillary & support areas, assisted-listening system for the hearing impaired, semi-professional speech & music recording system for archive use or cassette tape distribution to the home-bound, permanent wiring for future professional recording, and permanent wiring for a temporary live-event mixing console in the balcony.

A simple video monitor system was designed for the organist, as well as an usher-organist-clergy signal-light system. A separate meeting room sound system was also included in the project.
Nave, Side Balconies and Chancel – View from Rear Balcony