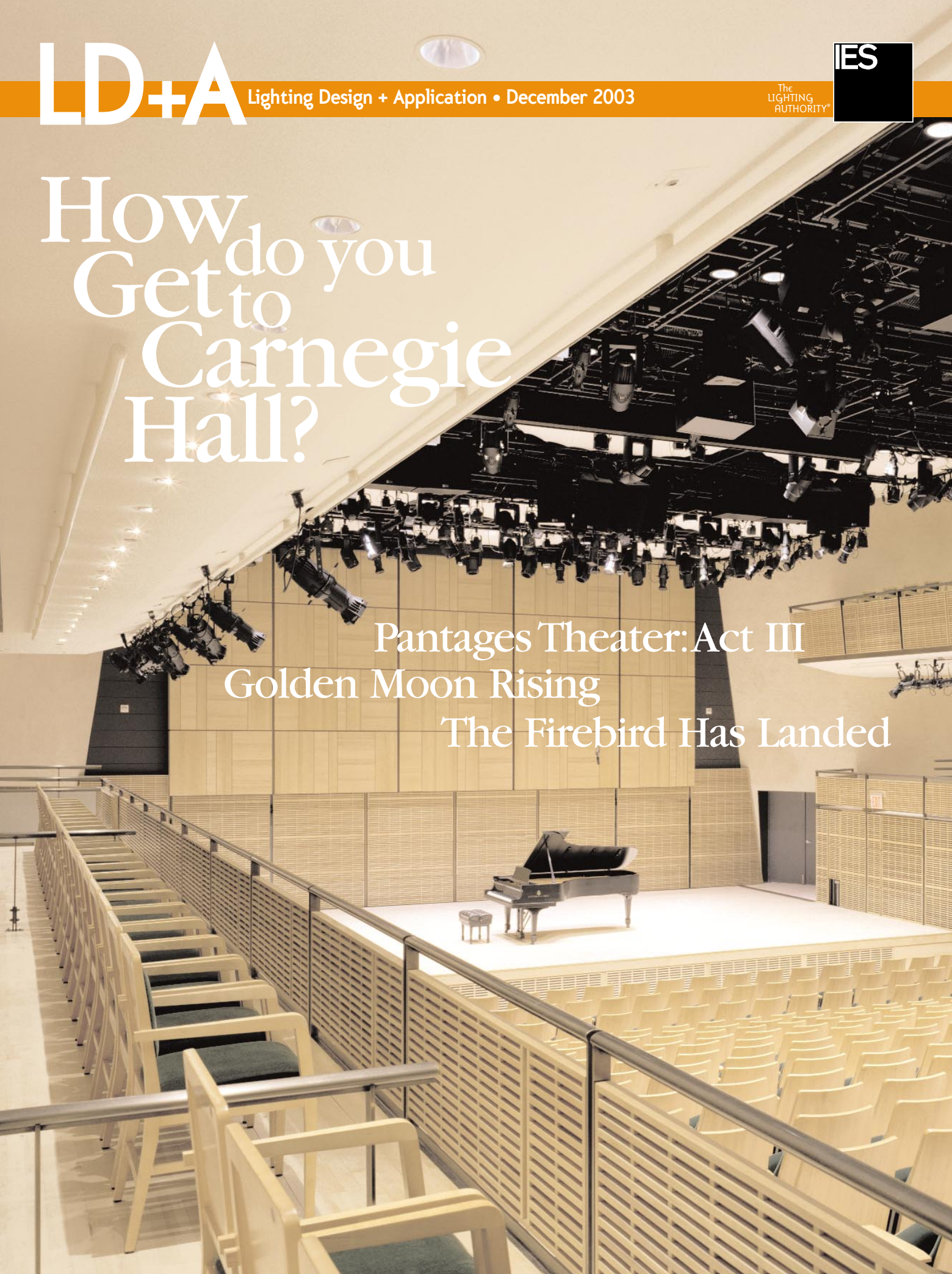


How do you Get to Carnegie Hall?

Pantages Theater: Act III
Golden Moon Rising
The Firebird Has Landed





PHOTOS OF PERFORMERS: CHRIS LEE

Back to the Future

ORIGINALLY A RECITAL HALL WHEN CARNEGIE HALL OPENED IN 1891, ZANKEL HALL HAS GONE THROUGH SEVERAL METAMORPHOSES OVER THE YEARS, ONLY TO COME FULL CIRCLE TWO CENTURIES LATER

By Roslyn Lowe

Two circuit tracks with MR16 low voltage cylinder heads and recessed MR16 downlights are used for general distribution lighting under the balcony. Meanwhile, the ceiling is composed of remote controlled steel trusses used to position lighting and other equipment.



PHOTOS OF ZANKEL HALL: JEFF GOLDBERG/ESTO

When Andrew Carnegie envisioned what has become a world-renowned performance space for notable musicians from all over the planet, he pictured a building that would house three outstanding and distinct venues. So, comprised of three auditoriums—the Main Hall (now the Isaac Stern Auditorium), the Chamber Music Hall (now the Weill Recital Hall) and the Recital Hall (now Zankel Hall)—New York's Carnegie Hall opened its doors in 1891.

Since then, the Recital Hall has traveled the most unusual path. Located directly underneath the Main Hall, it was leased to the American Academy of Dramatic Arts in



Zankel Hall's "end stage" configuration: the 55 ft wide by 96 ft long by 30 ft high auditorium seats 540-644, depending on the configuration.

1898 and was used as a theater by various off-Broadway theater groups. The hall underwent several architectural revisions until the early 1960s, when it was transformed into an art cinema. Then, in 1987 it was leased by Cineplex Odeon and continued showing independent and foreign films. However, as part of the chain of Cineplex Odeon movie theaters, it was divided into two small theaters and the balcony was removed to make room for a projection booth.

Needless to say, none of these manifestations had anything to do with music. Until now, that is.

In its latest incarnation, the hall has gone back to its roots, reinvented as the Judy and Arthur Zankel Hall, New York's first concert hall of the 21st century. The auditorium is named in honor of Carnegie Hall Vice Chairman and his wife, whose \$10 million contribution set in motion fundraising from other contributors, including New York City and State and the federal government. The \$72 million facility debuted in September and is set to play host to more than 80 concerts during the 2003-2004 season.

The process of reclaiming the space for its original and intended purpose as a musical auditorium began in 1997. Polshek Partnership Architects, which has had an ongoing relationship with Carnegie Hall for the past 25 years, called in Auerbach Pollock Friedlander Theater Consultants and Auerbach Glasow Architectural Lighting Design Consultants during the early planning stages. They were joined by Jaffe Holden Acoustics Consultants and the Carnegie Hall staff.

The design of the theater and lighting center around one theme: flexibility. To begin, Auerbach Pollock Friedlander developed a mechanized theatrical system comprised of three subsystems that enabled the 55 ft wide by 96 ft long by 30 ft high auditorium to accommodate a varying number of seats (from 644 to 540) depending on the stage configuration for each specified event. The three systems work together to create seating arrangements, stage arrangements and to calculate



the precise technical support for the lighting, acoustics, movement, etc. for each event. This indeed called for skilled orchestration (no pun intended) on the part of the theater designers.

The configurations result in three primary structural arrangements: end stage (three different sizes with optional orchestra pit); center stage; and flat floor (accomplished by use of nine floor lifts and 12 chair wagons). (See diagram.)

Meanwhile, the ceiling of the auditorium is composed of remote controlled steel trusses that move up and down, allowing theatrical equipment to be readily repositioned to accommodate the different stage positions, and to fulfill production requirements for a diversity of events. Embedded in the infrastructure of the floor and ceiling are conduit and wiring to allow lighting, sound, video, communications and recording equipment to be placed virtually anywhere as needed.

“The architectural lighting over the main floor is zoned to accommodate the many different stage and seating configurations. For example, in the center stage configu-

look at the lighting approach for each phase of the project:

Zankel Hall: The performance lighting system is an Ethernet-based control system with the ability to control conventional, intelligent and architectural lighting fixtures. This dual network allows for the use of two different microprocessor based control consoles or a combination of both to operate as one large network. An integrated architectural control system functions along side the performance system and allows lighting preset recall for operation by a single stagehand when full console function is not required.

In addition, designers developed a concert downlighting system that provides base illumination for each stage configuration. Bringing it all together is the series of moveable overhead lighting trusses. The auditorium also includes:

- T4 halogen cylinder downlights (made by Kurt Verson) mounted in the trusses, which can be dimmed in selected groups for stage and floor configurations.
- A secondary system of PAR 38 ceramic metal halide fixtures (also made by Kurt Verson) mounted in the trusses



The architectural lighting over the main floor is zoned to accommodate the various stage and seating configurations

ration, only those lighting zones over the seating will be on. All circuits in the theater are dimmable as well, allowing for a wide range of moods and environments to be set,” says principal designer, Larry French of Auerbach Glasgow.

Lighting Approach

Auerbach Glasgow was responsible for not only the lighting within Zankel Hall itself, but also exterior/street level lighting and mezzanine/lobby lighting. What follows is a

es and designed for use as rehearsal and general work lighting.

- MR16 wall washers used to wash the wood walls at the rear and sides of the balcony and side seating areas.
- Recessed MR16 downlights for general distribution lighting in and under the balconies by Prescolite.
- A low voltage incandescent accent hidden in the toe rail at the base of the curving elliptical interior walls.

• Custom designed wall sconces on the front of the balcony featuring edge lit glass blades, fabricated by Shaper Lighting. The sconces created a jewel tone to the surface on the balcony edge. The glass edge is lit by dimmable white LEDs slightly color corrected through the use of a custom dichroic filter.

The lighting consultants focused on integrating the architecture with an array of technical systems that function as building blocks instrumental to the adaptability of the room’s design. The rich architectural finishes are revealed through careful illumination of the surfaces.

All architectural lighting sources, both in the lobby and the auditorium, are dimmed through a control system that can be linked to the theatrical lighting system or



T4 halogen cylinders and ceramic metal halide downlights are built into movable trusses overhead.

Mezzanine and Parterre Lobbies: The mezzanine level lobby is located one floor below street level. Exiting the escalator at this level the patron views a curving elliptical canted wall, a major feature of both lobby spaces. The mezzanine floor is pierced with openings to the parterre level below, accentuating the overall height of the space. At the entry to the upper level of the theater, a rear illuminated glowing glass wall rises from the

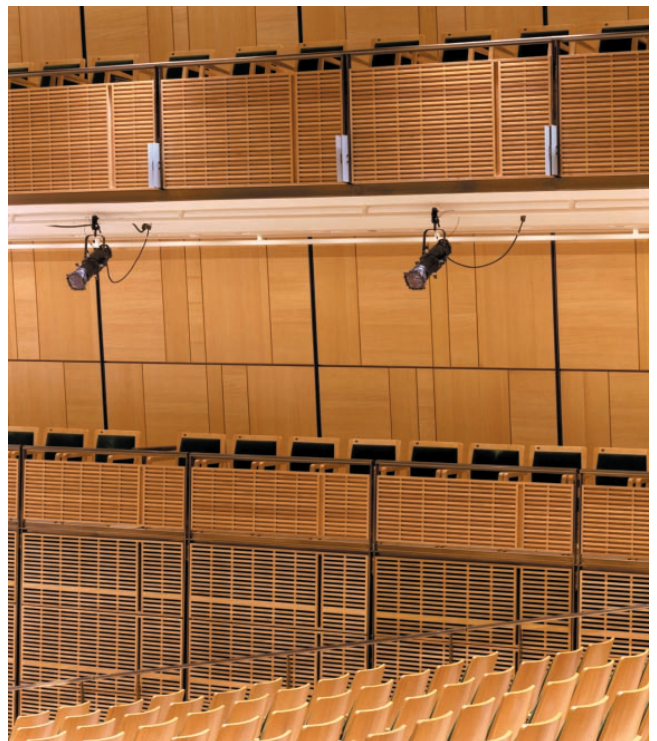
Embedded in the
infrastructure of the
auditorium floor and ceiling
are conduit and wiring to
allow lighting, sound, video,
communications and
recording equipment to be
placed virtually anywhere
as needed

operated independently. Architectural light settings are fully automated and move from one configuration to the next with the push of a button or as a preprogrammed time event. The overall flexibility of the lighting and controls allows for different moods to be achieved in both the audience and the lobby.

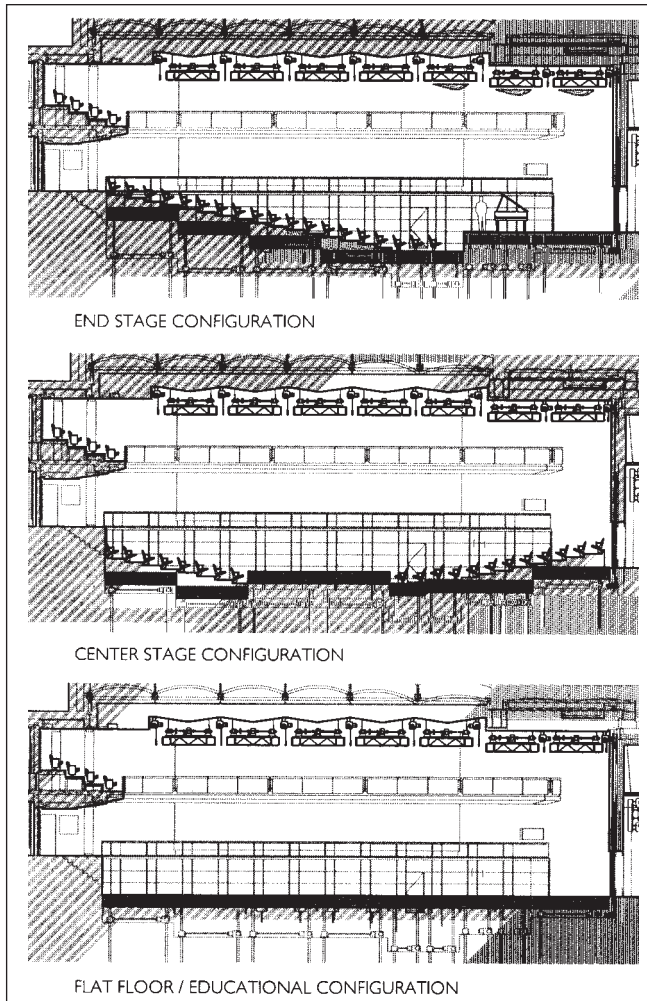
Exterior Canopy and Street Level Entrance: For the new entry on 7th Avenue, an exterior canopy has been fabricated to replicate the look of the existing historic canopies for the main hall. The lighting approach includes:

- Recessed downlights incorporated into the canopy "ceiling," in addition to a backlit glass edge detail. Asymmetric throw halogen uplights by Insight, are located on the top of the canopy to gently wash the historic façade above.
- Recessed pin hole MR16 low voltage downlights, Eyelid wall washers and pinholes by Precolite were used to illuminate the street level 7th Avenue entry lobby. All circuits are dimmed on a central dimming system.
- As there is little or no ceiling depth anywhere in the lower lobbies, most of the illumination of the space comes from the walls. Traveling down the escalator, illumination glows from dimmable fluorescent striplight fixtures, by Crownlite with Hi-Lume dimmable ballasts by Lutron and low voltage Xenon striplights (Starfire) with frosted glass lenses that are recessed into the finely detailed wood wall.

parterre level below through the mezzanine floor and onward to the ceiling. A feature bar is enclosed by the curving elliptical wall at the end of the ellipse on the mezzanine level and a larger main bar is located outside of the wall on the parterre level. Lighting design includes:



The American Sycamore wood-paneled auditorium features fluorescent strip lights and custom designed sconces on the balcony.



- A double height illuminated glass wall opposite the escalator. The wall is inaccessible for most of its height and is backlit with TIR Light Pipe. The dimmable light source is an ETC Source Four ellipsoidal spotlights located behind an access panel at the floor. This glowing wall is mirrored in the east lobby.

- Continuous PAR38 spot lamps equipped with spread lenses graze the curving elliptical wall from the mezzanine ceiling. This custom curved housing with parabolic baffles by Edison Price is dimmed in sections to allow complete control over the illumination of wall surfaces.

- Recessed accent lighting, where ceiling depth allows, is accomplished with MR16 small aperture downlights and adjustable accent lights.

- An exception to this is the east wall of the east lobbies. These walls are designated for special art exhibits and the ceiling houses a very shallow custom MR16 adjustable slot made by Lite Lab.

- Where wood walls are featured, they are illuminated from dimmed MR16 wall wash fixtures recessed in the ceilings.

- Wall mounted, low-voltage, sleek picture lights by Nessen illuminate historic photographs of past performers at Carnegie Hall.

Curtain Up

The versatile Zankel Hall was christened with an opening concert featuring Pulitzer Prize-winning composer John Adams, with music by Charles Ives, Lou Harrison, Thomas Ades and Esa-Pekka Salonen. The concerts planned for the 2003-2004 season run the gamut from chamber music to jazz, popular music and recitals. In addition, 30 educational events are planned including family concerts, school programs and professional training workshops.

Judging by this astounding variety of events, the lighting system's flexibility will surely be put to the test.



About the Designers:

(left) S. Leonard Auerbach, IALD, LC, Member, IESNA (1980) is senior design principal. As founder and president of Auerbach Pollack Friedlander Theater Consultants and Auerbach•Glasow Architectural

Lighting Design, his work has included theatrical lighting design, architectural lighting for museums, corporate facilities, large civic projects and monumental public spaces. He is the recipient of numerous IESNA IIDA Awards.

Larry French, (right) IALD, LC, Member, IESNA (1987), principal designer/principal in charge, Auerbach•Glasow. His design assignments include the historic renovations of Temple Emanu-El and the War Memorial Opera House in San Francisco. French is a frequent guest speaker at industry conferences and seminars, and has received numerous lighting design awards, including top honors from the IESNA IIDA and IALD award programs.

Lighting designer, Sherry Weller, project management through detail documentation.

Lily Tom, technical designer, joined the lighting design team at Auerbach•Glasow in 1998. She provides CAD management, graphic presentation layouts and computer lighting calculations on most projects.

Kristin Tilley, lighting designer, IALD, joined Auerbach•Glasow in 2000 after earning a Bachelor's of Science degree in Architectural Engineering with an emphasis in Lighting Design from the University of Kansas.



Architects: James S. Polshek, (left) FAIA, is the founding partner at Polshek Partnership Architects. He has served the academic community for more than 30 years, including 15 years as dean of the Columbia University Graduate School of

Architecture, Planning and Preservation. He co-founded the Temple Hoyne Buell Center for the Study of American Architecture.

Richard M. Olcott, (right) FAIA, design partner at Polshek Partnership Architects. Since 1996, he has been a Commissioner on the New York City Landmarks Preservation Commission. He is the recipient of the 2003-2004 Founders Rome Prize Fellowship awarded by the American Academy in Rome.

Joseph L. Fleischer FAIA, is managing partner at Polshek Partnership Architects and has been in charge of many of the firm's award-winning projects, among them the Rose Center for Earth and Space at the American Museum of Natural History, The New York Times printing plant and Carnegie Hall renovation, restoration and expansion.