

king of kings

A '20S-ERA MOVIE PALACE STAGES A RETURN ENGAGEMENT IN BROOKLYN

BY JOHN CAULFIELD, SENIOR EDITOR

When Kings Theatre opened in the Flatbush section of Brooklyn, N.Y., in 1929, it was a sight to behold. As one of five “Loew’s Wonder Theaters,” the 3,200-seat Kings Theatre was distinguished by a lavish interior that took its cue from the Palace of Versailles and the Paris Opera House. New York City’s third-largest theater offered a palatial escape to the more than 2.5 million residents of the borough of Brooklyn (Kings County).

Kings Theatre featured movies and vaudeville acts. Then, in the 1930s, vaudeville gradually faded; in the 1960s, moviegoers started gravitating to multiplexes. By the 1970s, crime and decay brought low a once-thriving Flatbush and its cornerstone three-story theater. Kings Theatre finally closed its doors in 1977. Over the next 36 years the vacant building lost whatever regal standing it once had to neglect and vandalism. Virtually every light fixture and railing was broken or stolen. Nearly two-fifths of the audience chamber suffered severe water damage. Entire sections of the mezzanine were

deteriorated, corroded, or washed away. In the fall of 2012, Superstorm Sandy inflicted the coup de grâce when it ripped off the roof, leaving the domed ceiling at risk of destruction.

Even in its darkest hours, the theatre’s trajectory began to take a more positive path. In 2010, the New York Redevelopment Corporation chose a consortium that included ACE Theatrical Group, Goldman Sachs Urban Investment Group, and the National Development

The theater’s original marquee had been replaced by a signbox in 1949. During the latest restoration, the Building Team removed the signbox from the building and replaced it with a replica of the original. In the process, the original concave metal soffit and the recessed panels were repaired.



Council to bring the Kings Theatre back from the grave. ACE Theatrical Group had tackled the restoration of the Boston Opera House and the \$53 million renovation of Saenger Theatre in New Orleans, which was destroyed by Hurricane Katrina.

A redevelopment team led by Martinez + Johnson Architecture and Gilbane Building Company began planning to rehabilitate and restore the movie house, while at the same time integrating equipment, technology, and support spaces to remake the grand movie palace into a venue suitable for staging live productions and events.

The primary goal: balance preservation with the creation of a modern performance space. Given the theater’s waterlogged, dilapidated condition, the first phase of the restoration required a five-month stabilization period, during which it was dried, cleaned, and made hazard free so that reconstruction could proceed in an orderly, safe manner.

The theater was undersized for the kinds of live acts and events ACE Theatrical Group wanted to book. The stage, loading dock, dressing rooms, and support facilities were deemed inadequate. To accommodate live performances, 10,000 sf of new space was added and the balcony and orchestra sections were re-raked to improve sightlines for an audience of 3,250, 424 less than in the original.

PROJECT SUMMARY

KINGS THEATRE | Brooklyn, N.Y.

BUILDING TEAM

Submitting firm: Gilbane Building Co. (CM)

Owner: ACE Theatrical Group

Architect: Martinez + Johnson Architecture

SE: Lundy & Franke Engineering

Civil engineer: AKRF

MEP/EOR: ICOR Consulting Engineers

Preservation/historical renovation:

EverGreene Architectural Arts

GENERAL INFORMATION

Size: 109,810 sf

Construction cost: \$71,656,000

Construction time: July 2012 to December 2014

Delivery method: CM at risk; design-assist



MATT LAMBROS PHOTOGRAPHY



BEFORE



The interior (above) was waterlogged and torn to pieces, thanks in part to Superstorm Sandy. It took five months just to dry out the space so that crews could work safely. The final result (top) gracefully emulates the original design by theater architects Rapp & Rapp and interior designer Harold W. Rambusch.

Wherever possible, the Building Team attempted to restore the original interior components, particularly the marble and American walnut paneling, terra cotta façade, ornamental fixtures, and mosaics. The meticulous nature of this restoration was manifest in the paint analysis conducted by EverGreene Architectural Arts. The preservation consultant put countless hours into determining the authenticity of existing color schemes before selecting the right colors and finishes to

restore the primary spaces to their most historically valid appearance.

This preservation ethic extended to the theater's mechanicals. The original plan called for the installation of new MEP systems, but removing the existing ductwork would have required demolition and full replacement of intact plaster and painted ceilings, walls, ornamentation, and historical finishes. Instead, the Building Team scanned and pressure-tested existing ducts to determine their integrity, then re-engineered the HVAC system to reuse that ductwork.

The Building Team agreed that it was important to maintain the progression of spaces that would lead theater-goers from the sidewalk to the audience chamber. Consequently, the team implemented a preservation methodology to guide major treatments and interventions. Interior spaces were broken down into four zones according to their relative significance to the historic experience of the theater. Then the team developed a general restoration and rehabilitation treatment strategy to decide the most appropriate course of restorative action. Some changes were made in areas that received the highest level of significance, but interventions for highly significant spaces were kept to a minimum.

Many interior elements were damaged beyond repair and needed to be painstakingly re-created and replaced. Black-and-white photos of the theater's details and in-field molds helped guide the project's craftsmen. In one happy instance, a tiny strip of rug under a long-defunct popcorn machine served as the blueprint for replicating the theater's carpeting.

Off-site fabrication of the 1920s-era plaster figurines, ornaments,

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32nd ANNUAL RECONSTRUCTION AWARDS



MATT LAMBROS PHOTOGRAPHY



Kings Theatre's original chandeliers continue to illuminate its striking lobby. At left, artisans from EverGreene Architectural Arts painstakingly retain and restore the original interior wood treatments and millwork. Where deterioration of the wood was present, the material was replaced in kind, with attention to matching the texture, profile, and general appearance to the original or adjacent material.

and images was conducted in environmentally controlled settings and met all historic landmark requirements. (In 2012, Kings Theatre was listed on the National Register of Historic Places.)

NAVIGATING THE REGULATORY MAZE

Early on, Gilbane's construction management crew established a relationship with the owner and architect so that the Building Team could manage its way through New York's Byzantine building and permitting processes and regulations.

The restoration process was governed by three separate city building codes. When the theater's existing components were being preserved, restored, or rehabilitated, the 1938 and 1968 codes took precedence; for new construction and replacement, the 2008 code prevailed.

When budget constraints prevented the architect from bringing on a New York-based engineer of record, Gilbane suggested a design-assist approach that would provide the local EOR (ICOR) with the resources and information to complete the design per New York City requirements. The result was the bid and negotiation of design-assist contracts for MEP trades, ornamental plaster and paint restoration, miscellaneous metals, demolitions, and the restoration of the theater's exterior marquee.

An additional benefit of this approach was the mutual analysis of building components, including the theater's structural frame and

envelope, the stability of its existing plaster, and the development of as-builts of existing ductwork.

Extensive use of BIM technology was integral to communicating important project information, maintaining schedules, and improving team productivity. Field information was updated regularly and synced to a master database. Subcontractors could sort and access the matters related to their scope of work and alert construction managers when those problems were resolved.

BRINGING BACK THE WONDER YEARS

Three of the former "Wonder Theatres" are now churches. The one in Jersey City, N.J., still shows movies.

But Kings Theatre stands out as the crown jewel at the center of that cluster. On February 3, 2015, a revitalized Kings Theatre reopened with its first live concert, featuring Diana Ross. The venue, Brooklyn's second-largest after the Barclay Center, has emerged as a popular stop for performers and events. Recent shows have featured Garrison Keillor, Stephanie Mills, Josh Groban, and Jackson Browne.

The theater even offers something unheard of in New York City: free parking for 700 cars.

Hanging almost defiantly in the 50-foot-tall lobby are the theater's original 2,000-pound chandeliers. How they managed to elude looters is a miracle.

The chandeliers serve as brilliant reminders of this theater's luminous past, and as beacons of its future—and possibly that of Flatbush, where Kings Theatre is seen as having the potential to be a catalyst of that neighborhood's renaissance.

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32nd ANNUAL RECONSTRUCTION AWARDS

The nearly 150,000-sf Saieh Hall for Economics had to be squeezed into tight quarters on the Hyde Park campus of the University of Chicago.

a truly economic use of space

A BUILDING TEAM FINDS ROOM FOR EXPANSION WHERE NONE EXISTED

BY JOHN CAULFIELD, SENIOR EDITOR

In 2008, the University of Chicago announced plans to acquire the Chicago Theological Seminary, with the intention of using that building to expand the university's world-renowned economics department.

At the time, the acquisition was controversial. Preservation Chicago was concerned enough about the nearly 90-year-old seminary losing its historical identity the advocacy group put the building on its annual "Most Threatened" list. Some faculty members weren't thrilled about a research institute within the proposed complex being named (along with Nobel laureate Gary Becker) for Nobel Prize-winning economist Milton Friedman, a polarizing figure in academia.

Those objections were minor bumps in the road compared to what it took to convert the five-story, 100,000-sf seminary—with its two chapels, a bell tower, classrooms, and dormitories—into a modern education facility that would be fully integrated into the university's Hyde Park campus. The east and west wings of the seminary, a red brick Gothic fortress enclosed by an eight-foot-high wall, were split by a city alley that cut through the center of the building. The seminary had inefficient steam heat and window air-conditioners. The building was too small to accommodate the university's vision for the final product.

In the Building Team Awards judges' estimation, the project dem-

TOM ROSSITER

PROJECT SUMMARY

UNIVERSITY OF CHICAGO SAIEH HALL FOR ECONOMICS | Chicago, Ill.

■ BUILDING TEAM

Submitting firms: Turner Construction Company (CM) and Thornton Tomasetti (SE)
Owner: The University of Chicago
Architect: Ann Beha Architects
Architect of record: Gensler
MEP engineer: dbHMS
Landscape architect: OLIN

■ GENERAL INFORMATION

Size: 149,690 sf
Project cost: \$110,100,000
Construction time: November 2012 to March 2015
Delivery method: CM at risk

onstrated the university's commitment to finding a balance between new construction and adaptive reuse of historically significant buildings. It is a textbook example of how innovative, collaborative design, engineering, and construction can overcome the physical limitations of a building to achieve the owner's goals.

In essence, the university and its Building Team carved out usable space within the seminary's existing footprint where there seemed to be none.

Ann Beha Associates called for removing the outside wall and closing off a street near the seminary; this became a pedestrian thoroughfare that extends the university's main quadrangle by a block. The alley was also closed, and the entrance was retrofitted with a glass-sheathed lobby and second-floor conference room that unify the two wings. To the rear of the lobby, a steel, concrete, and glass stairwell draws natural light into the building.

The second big architectural decision was to excavate common areas in front of the wings below their foundations to create underground spaces for a 90-seat lecture hall on the east side and MEP equipment on the west. "It is practically an entire starship, hiding underground," said Harald Uhlig, former chair of the university's economics department, of the mechanical spaces. The attic, where such equipment would usually be positioned, was repurposed into a study loft with desks for 75 graduate students.

The building's footings adjacent to the excavation had to be underpinned with jacked piles to prevent settlement and alleviate surcharge loading. The high-capacity jacked piles, capable of withstanding a force of 210 kip per pair, are believed to be the heaviest such underpinning ever permitted by the city of Chicago.



The Seminary's Taylor Chapel was repurposed as common space for the 75 students in the university's graduate economics program.

TOM ROSSITER / COURTESY ANN BEHA ARCHITECTS

The Building Team had to develop and test the earth retention solutions, underpinning, and shoring for the deeper basement spaces months in advance of the start of construction. During construction, 80% of the existing basement walls in the east wing were temporarily supported, demolished, and resupported with new structural members. This was necessary in order to accommodate new HVAC, improved egress, and new room configurations.

The Building Team used 3D modeling to frame the post-tensioned, cast-in-place beams that support the underground lecture hall. The street-level courtyards above the underground areas were returned as ADA-compliant public spaces accented by gardens and planters.

Throughout Saieh Hall for Economics (the building's new name) are small rooms and breakout spaces for interactive group work, and quiet areas for more solitary thinking and reflection. Carefully hidden



TOM ROSSITER, COURTESY ANN BEHA ARCHITECTS

LED lighting brightens an old Gothic cloister in the west wing. Ceiling-level clerestory glazing lets in natural light.

“The interior works because the flow ... induces a cooperation in a way that most other buildings I’ve visited have failed [to do],” John List, who chairs the economics department, said about the renovated structure.

All told, 23,000 sf were added to the building within its existing physical footprint. Another 38,000 sf were constructed to the north for the Saieh Hall for Economics.

AN IPD, WITHOUT THE CONTRACT

A charter detailing the project’s goals and the framework of team interaction was signed by all team members and posted at several locations on the job site. Monthly meetings and quarterly surveys held team members accountable.

The AEC firms also established a comprehensive protection plan early on to preserve the quality of the original craftsmanship of the seminary during demolition and reconstruction. The Building Team used iPads and BIM 360 in the field to review RFIs, create sketches, and produce field reports. A laser-scanned, point-cloud survey of the existing buildings provided the basis for the Revit model used to coordinate all the work.

Team members also found ways to minimize the sound and vibration impact of the construction on nearby buildings, which include museums, offices, and two operating nursery schools. One solution, the “Nothing Hits the Ground” initiative, mandated that material fabrications be performed at a working height of 30–39 inches off the floor. A “Ladders Last” policy—which, as its name implies, recommends using lifts, platforms, and scaffolding rather than ladders—was enforced as a safety measure. Over the course of 480,000 work hours, the project’s lost-time incident rate was 1.24; its recordable incident rate was 2.48. There were no fall incidents.

In typical University of Chicago fashion, Nobel Prize-winning professors held discussions with the project’s trade workers about how



COURTESY TURNER CONSTRUCTION COMPANY

To expand Saieh Hall, the Building Team decided to excavate common areas to create underground spaces for the MEP system and new lecture halls. Constructing those new spaces required a considerable amount of preconstruction modeling and testing of fortifications.

research and teaching performed in the new complex would impact the world. (Twenty-eight economics laureates are associated in some way with the university.)

While the contract terms indicated typical design-bid-build project delivery—and the university hired the design and construction management teams for this project separately—the seminary conversion was actually completed more in an integrated project delivery manner, minus a formal three-party contract.

By all accounts, the client is pleased with its new Saieh Hall for Economics. “Having a world-class facility will ensure that Chicago remains the hub of academics and researchers in related fields in the 21st century,” said Larry Blouin, the University of Chicago’s Director of Construction Management Capital Project Delivery, Facilities Services.

As for the Chicago Theological Seminary, in January 2012 it moved into a new four-story, LEED-certified building (designed by Nagle Hartray Architecture) that borders the University of Chicago campus. The seminary and the university partnered on the construction of the 78,000-sf building as part of the original purchase agreement.