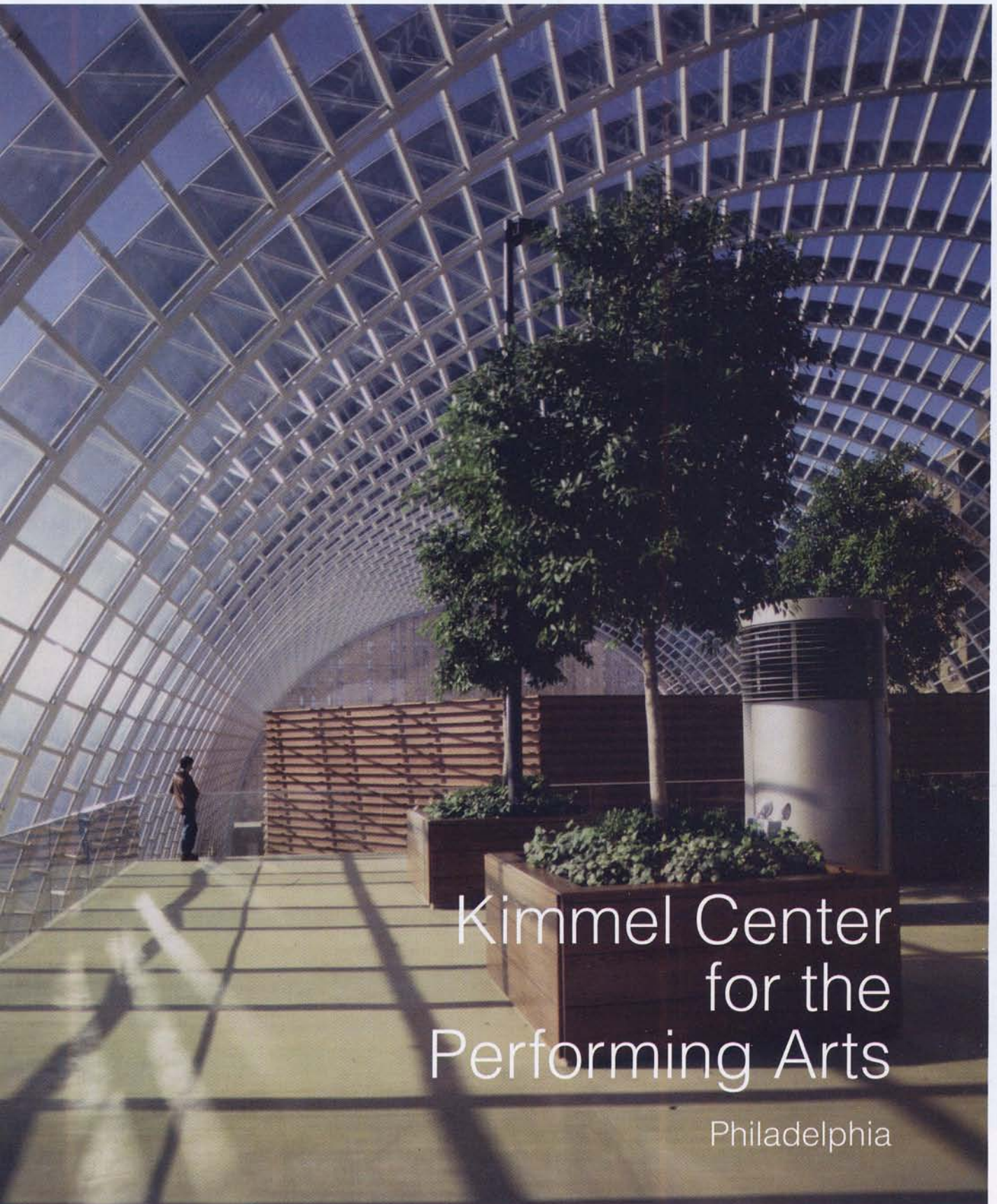




national winner
\$100M and greater



Kimmel Center for the Performing Arts

Philadelphia

“Notable strength for a project of this scale. Clever use of simple geometry and materials to minimize the appearance of the steel structure.”

The Kimmel Center for the Performing Arts is the centerpiece of Philadelphia’s Avenue of the Arts, also known as Broad Street. The one-block complex includes the 2,500-seat Verizon Hall, home of The Philadelphia Orchestra; the flexible, 650-seat Perelman Theater, for performances including chamber music, dance and drama; and a vibrant, inviting civic space. Verizon Hall and Perelman Theater are treated as stand-alone buildings under an immense steel-and-glass barrel vault. Perelman Theater, with its curved façade, is placed off-axis toward the front of the site on Broad Street, and Verizon Hall, with its polygonal exterior, is centered at the far end.

In addition to the main performance spaces, The Kimmel Center includes a rooftop garden that offers striking views. It also includes a “black box” theater: a two-story space with a pipe-grid hanging system, control room and sprung floor. There is an underground parking garage that accommodates 144 cars. The center also includes lounge and banquet facilities, warm-up and dressing rooms, and a restaurant.

The signature steel-and-glass vault rises from the top of the perimeter building to reach a height of approximately 160’ above the plaza floor. Its structure of folded steel ribs sheathed in plate glass creates a transparent enclosure with a free span of approximately 160’. The end walls of the barrel vault, supported by cable structures, achieve such a high level of transparency and structural lightness that they seem to disappear as sunlight pours into the plaza. The barrel vault covers the full length of the building, and in plan measures 350’ by 174’.

The roof structure uses the depth of the vaulted section to create a vierendeel truss that arches across the atrium spaces and provides vertical and lateral support. These trusses are propped against each adjacent element to provide a folded plate action that resists the longitudinal wind loads. High-strength steel was used to minimize the

member size, and the spacing of the members was designed to support an optimal glass panel dimension.

The building façade along Broad Street is largely transparent at street level, which allows passers-by to see into the public plaza. To maintain the scale of the surrounding residential

and cultural buildings, the brick walls rise approximately to the height of the neighboring University of the Arts. The building footprint is 100,075 sq. ft. and the gross program area is 429,085 sq. ft. Ground was broken on Nov. 12, 1998, and the building opened on Dec. 16, 2001. ★



All photographs courtesy Rafael Viñoly Architects, PC

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OWNER/DEVELOPER

Regional Performing Arts Center,
Philadelphia

STRUCTURAL ENGINEERS

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Engineering, PC, New York City

STEEL FABRICATOR

Helmark Steel, Inc. (AISC member)

STEEL DETAILER

Base Line Drafting Services, Concorde,
Ontario, Canada (NISD member)

BENDING SERVICES

Chicago Metal Rolled Products,
Chicago

GENERAL CONTRACTOR

LF Driscoll/Artis T Ore Joint Venture,
Bala Cynwyd, PA

ENGINEERING SOFTWARE

ROBOT Millennium

DETAILING SOFTWARE

SDS/2, SteelCAD

FIRE SAFETY ENGINEER

Hughes Associates, Inc., Baltimore

