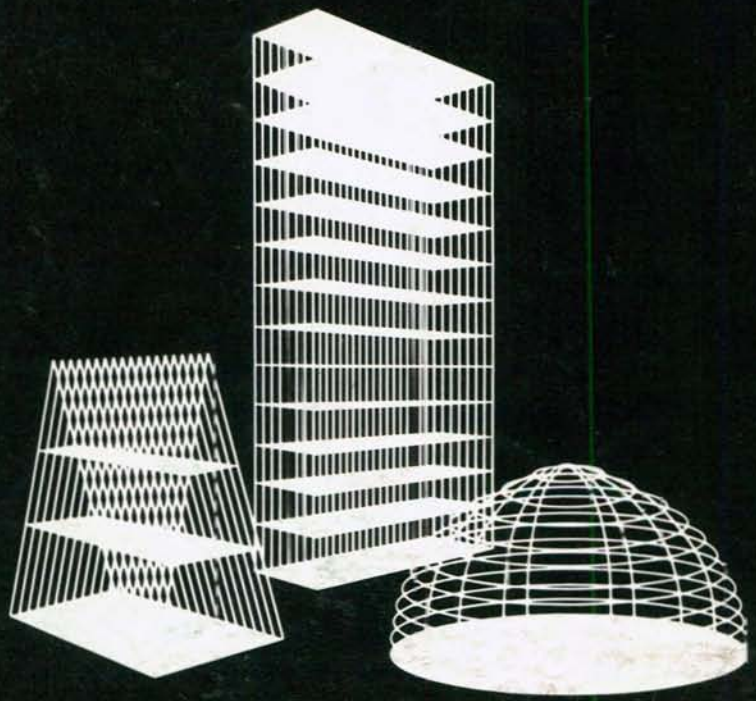
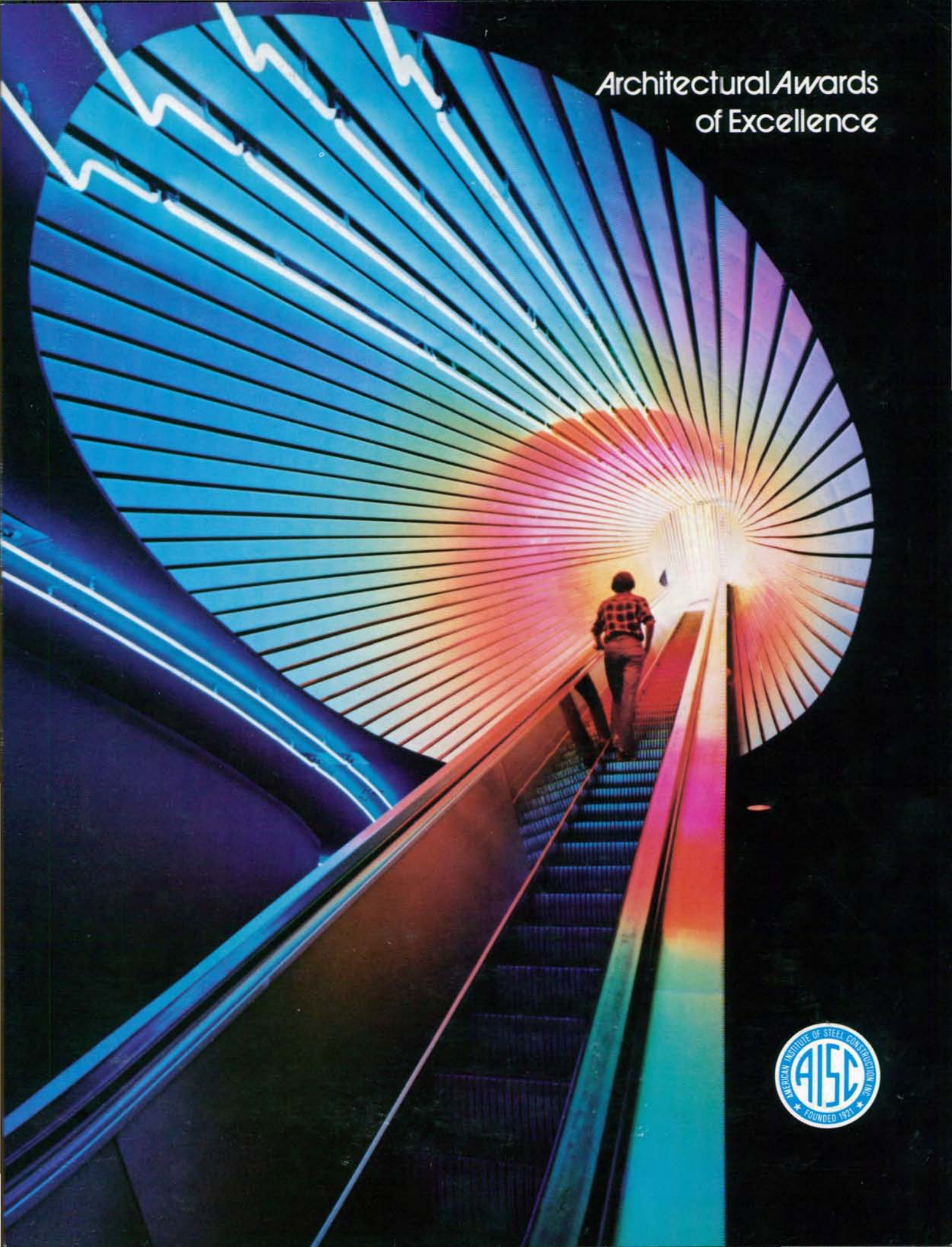
Architectural Awards of Excellence 1978

The Architectural Awards of Excellence were established by the American Institute of Steel Construction in 1960 to recognize outstanding architectural design in structural steel and to encourage exploration of the creative possibilities inherent in steel construction. This year a distinguished jury named eight projects as winners of Architectural Awards of Excellence. In the opinion of the AISC Committee on Awards, each project in its own way represents design of the highest standard. All awards are considered equal in stature.

AMERICAN INSTITUTE
OF STEEL CONSTRUCTION
in cooperation with
American Iron & Steel Institute



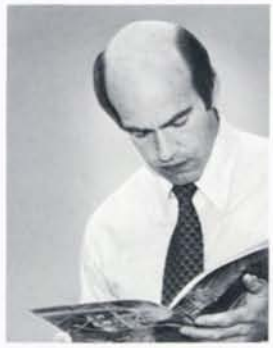

Architectural Awards
of Excellence
AISC
AMERICAN INSTITUTE OF STEEL CONSTRUCTION INC.
FOUNDED 1921

Jury of *Awards*

BERNARD P. SPRING, FAIA
Dean, School of Architecture and
Environmental Studies
City College of C.U.N.Y.
New York, New York

B. J. KINGDON, AIA
President, Law/Kingdon, P.A.
Wichita, Kansas

JOHN M. McGINTY, FAIA
Immediate Past President, AIA
The McGinty Partnership Architects, Inc.
Houston, Texas



CHARLES GWATHMEY, AIA
Gwathmey Siegel Architects
New York, New York

JACK D. GILLUM, M. ASCE
Gillum-Colaco Incorporated
St. Louis, Missouri

Architectural Awards of Excellence 1978

GRUEN ASSOCIATES
Rainbow Center Mall & Winter Garden

CHARLES G. HILGENHURST & ASSOCIATES
East Cambridge Savings Bank Headquarters

WILLIAM KESSLER AND ASSOCIATES, INC.
Detroit Science Center—Phase I

RICHARD MEIER & ASSOCIATES ARCHITECTS
Bronx Developmental Center

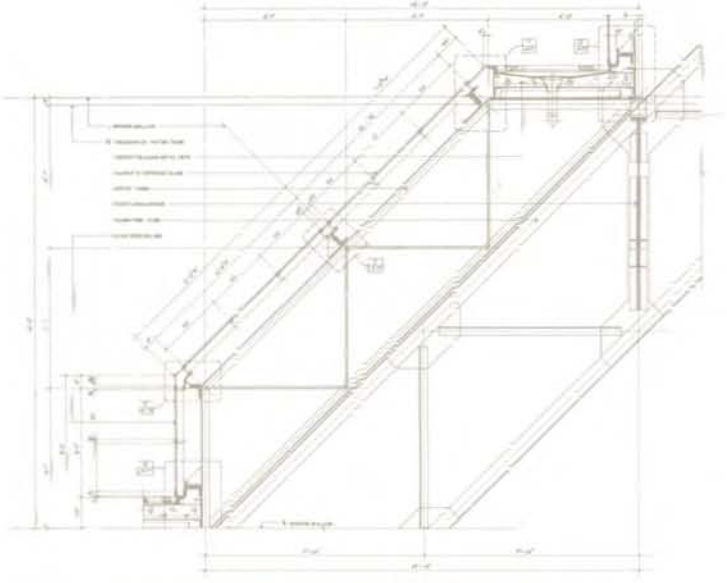
C.F. MURPHY ASSOCIATES
Angela Athletic Facility, Saint Mary's College

HERBERT S. NEWMAN ASSOCIATES
Milford Jai Alai

HUGH STUBBINS AND ASSOCIATES
EMERY ROTH & SONS (ASSOCIATED ARCHITECT)
Citicorp Center

BENJAMIN THOMPSON & ASSOCIATES, INC.
Faneuil Hall Marketplace and Flower Market

"A splendid indoor expression of the out-of-doors... an exciting urban design statement that provides a linkage between community and visitors. This is an exhibition building that is loyal both to its structure and its material"
—Jurors' comments



SECTION SHOWING MAIN TRANSVERSE, LONGITUDINAL AND RAFTER TRUSSES

Architect Gruen Associates, New York, New York

Project Rainbow Center Mall & Winter Garden, Niagara Falls, New York

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Structural Engineer DeSimone & Chaplin & Associates, New York, New York

General Contractor Scrufari-Siegfried Joint Venture Winter Garden, Niagara Falls, New York

Steel Fabricator/Erector Rebco Steel Corporation, Niagara Falls, New York

Owner Niagara Falls Urban Renewal Agency, Niagara Falls, New York

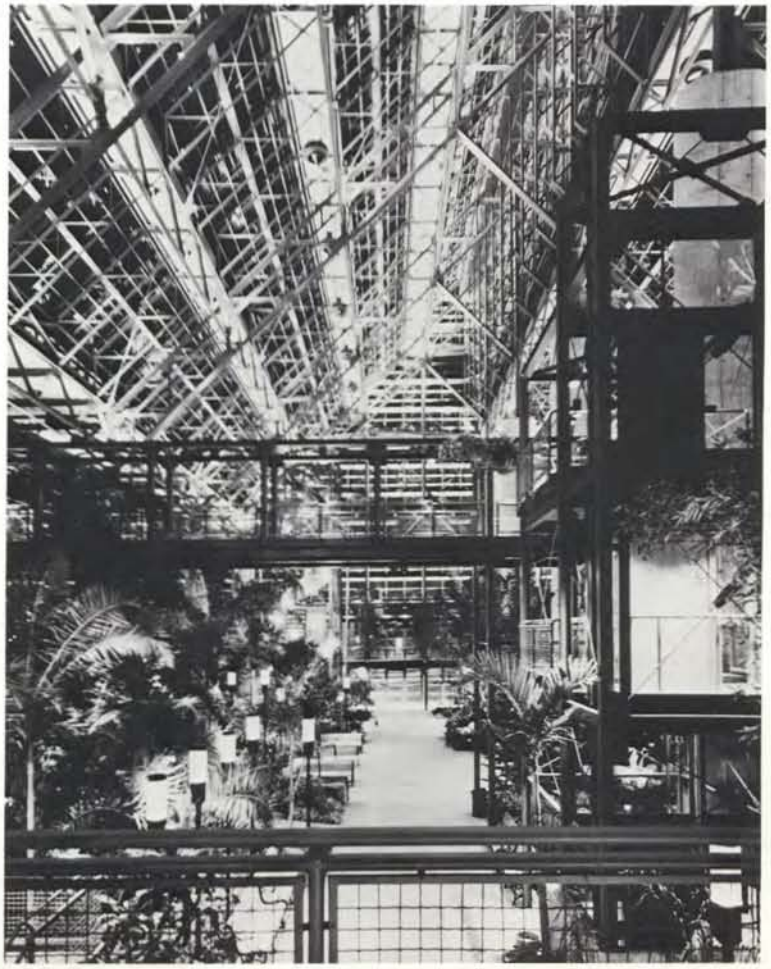
A descendant of the great iron-and-glass greenhouses of the 19th century, and a revival of the Victorian idea of the "winter garden" as an elegant year-round park, this project deals with very modern problems of downtown development.

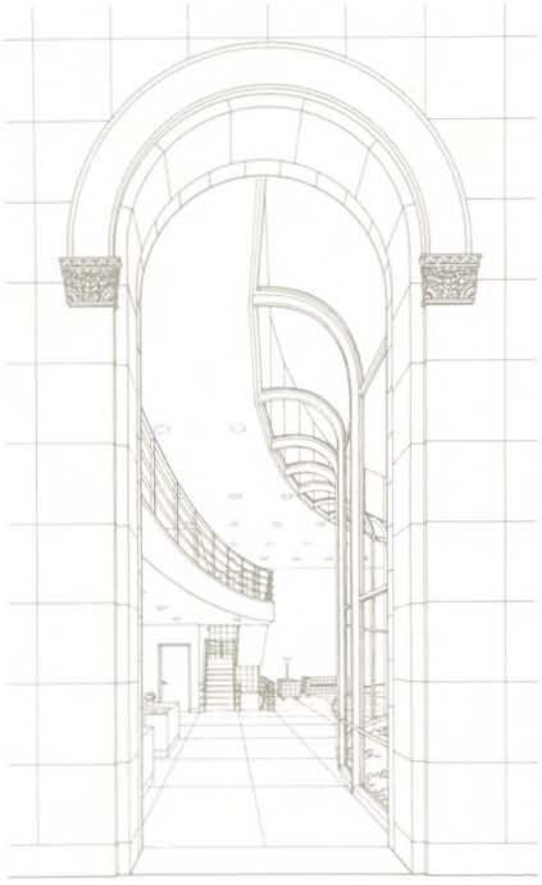
The centerpiece of a 1500-foot long pedestrian mall anchored by the city's new Convention Center on the east and a park overlooking Niagara Falls on the west, the 27,000-square foot, 100-foot high structure is designed to be a magnet for new commercial activity in an 82-acre renewal district, giving potential developers a year-round, two-level, pedestrian connection at what might have been the mall's weakest link.

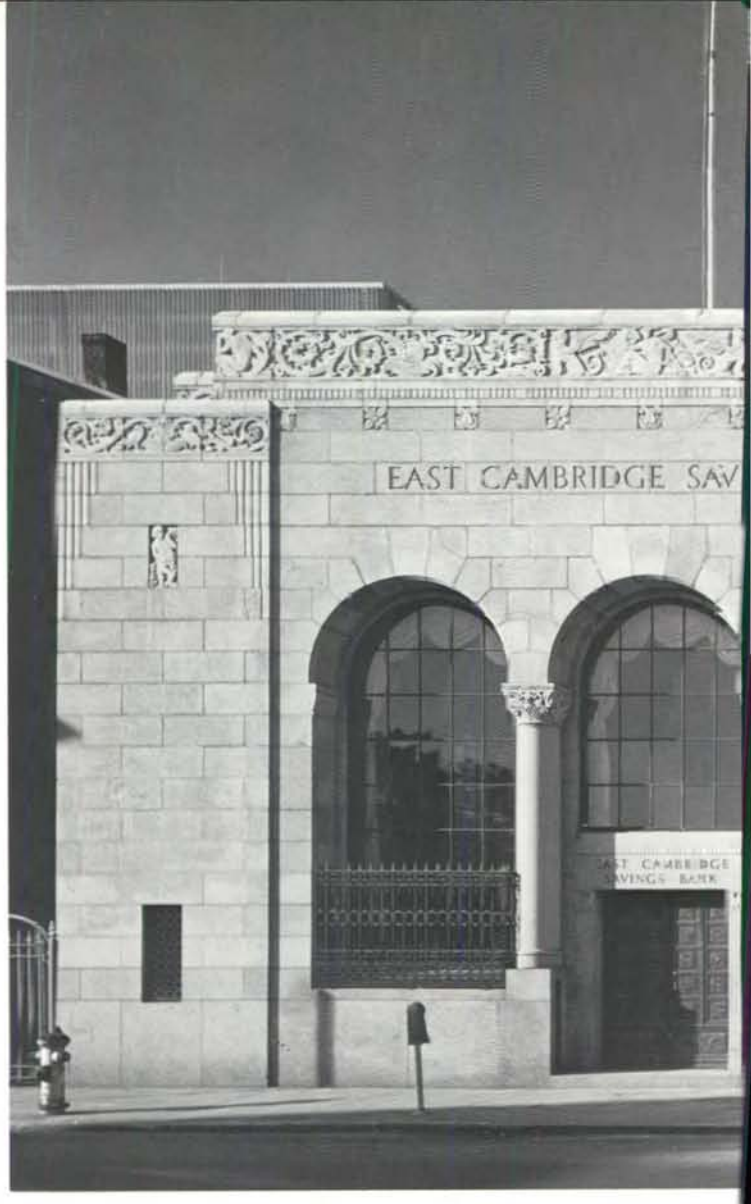
The Winter Garden goes beyond the usual enclosed shopping mall, however, to become a tourist attraction in its own right, a real public amenity on harsh winter days, and a potent symbol of civic pride and renewal.

The light lattice of exposed steel trusswork, an effective visual counterpoint to the lush, naturalistic landscaping, also proved economical in designing for poor sub-soil conditions. Cantilevers up to 14 feet long create a column-free perimeter, with maximum flexibility for future commercial frontage and minimum interruption of the mall's directional space. The external glass wall, hung from the cantilevered roof trusses, features vertical mullion support trusses as high as 80 feet.

Exposed steel is used throughout the project for such elements as bridges, railings, and freestanding elevators. Removable steel wall panels give flexible access to future commercial frontage.







"Elegant, sensitive...a rare instance where the new is as good as the old. Its concept and execution are masterful."
—Jurors' comments

Architect Charles G. Hilgenhurst & Associates, Boston, Massachusetts
Project East Cambridge Savings Bank Headquarters, Cambridge, Massachusetts

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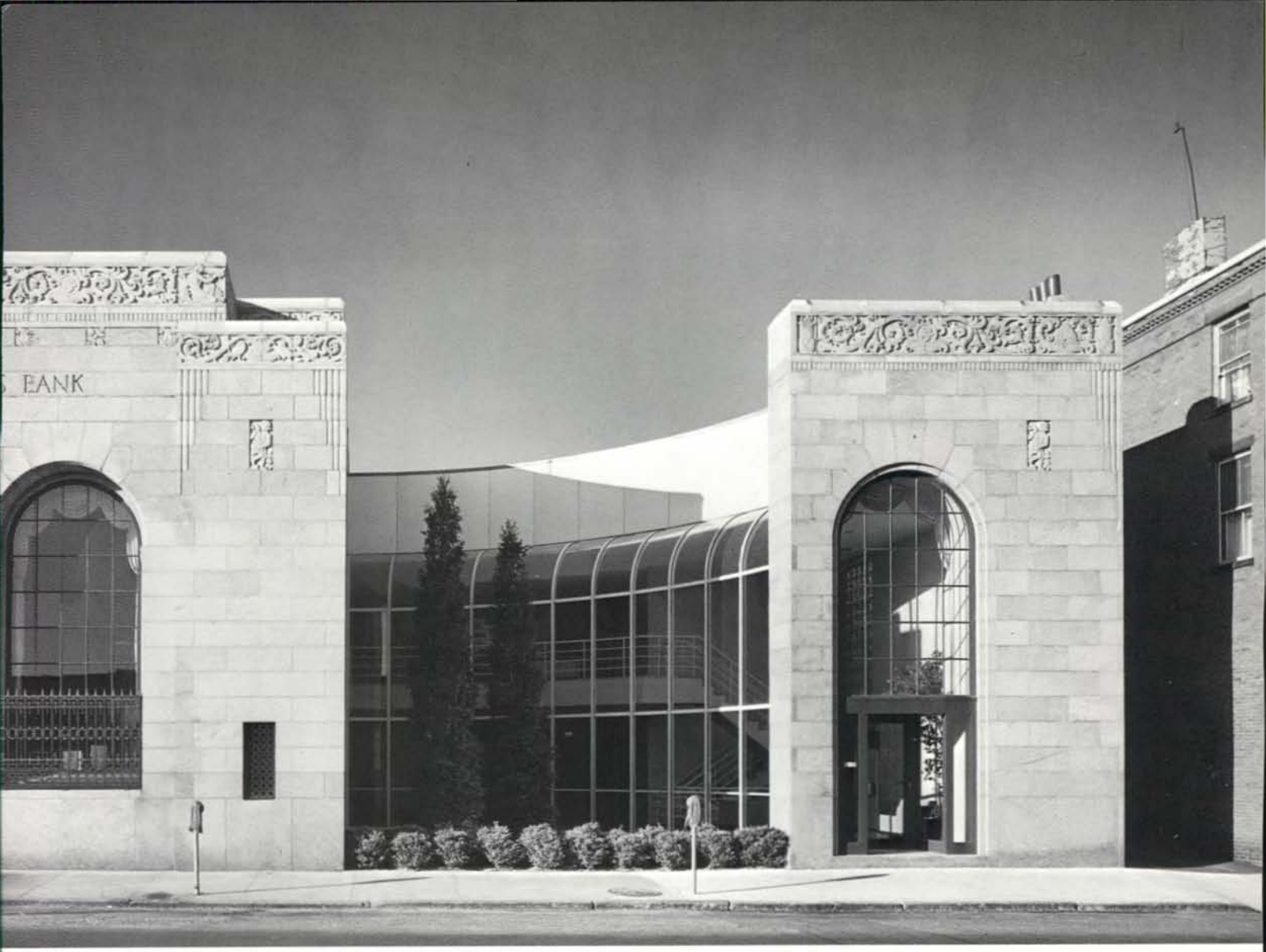
Structural Engineer Simpson, Gumpertz & Heger, Cambridge, Massachusetts
General Contractor Bond Bros., Inc., Everett, Massachusetts
Steel Fabricator A.O. Wilson Structural Co., Cambridge, Massachusetts
Steel Erector Kurtis Steel Erectors, Norwood, Massachusetts
Owner East Cambridge Savings Bank, Cambridge, Massachusetts

Structural window mullions of 1/2" steel plate frame a window wall that curves in elegant contrast to the thick masonry of an old bank, while it defines this expansion's main architectural concept: that an arched bay of the former side elevation has been "rotated out" to form the front facade of the 9,000-square foot addition.

The existing bank headquarters, a Beaux-Arts design in granite with fine carved Byzantine details, was enlarged to provide modern office space and improved circulation along with renovation of the old banking hall.

The new public spaces continue the graceful, spacious quality of the old. Steel-framed cantilevers and a light ornamental stair add to the feeling of openness. The existing building's steel structural system, plus the careful economic analysis needed to achieve the $48 per square foot budget, also influenced the choice of steel.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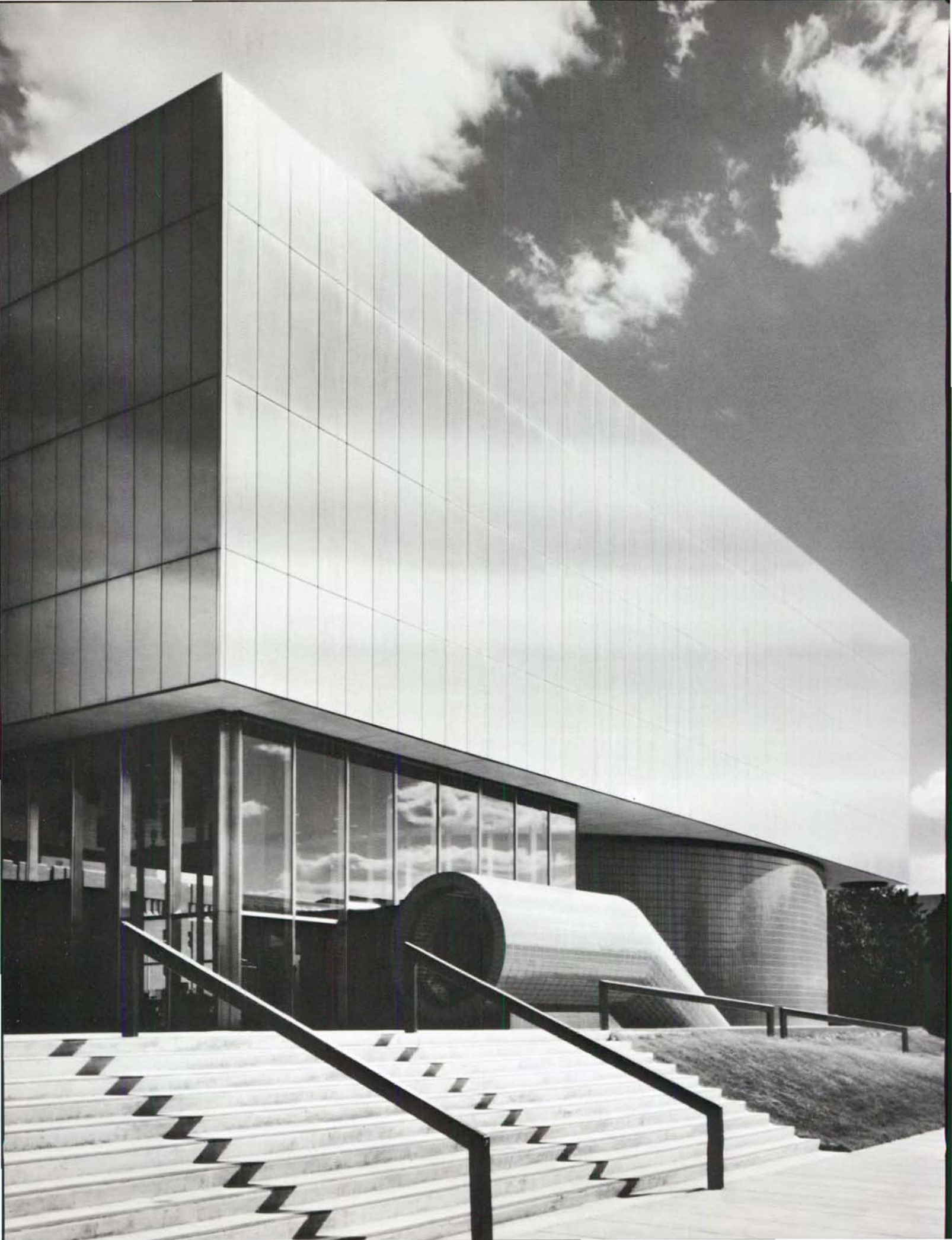
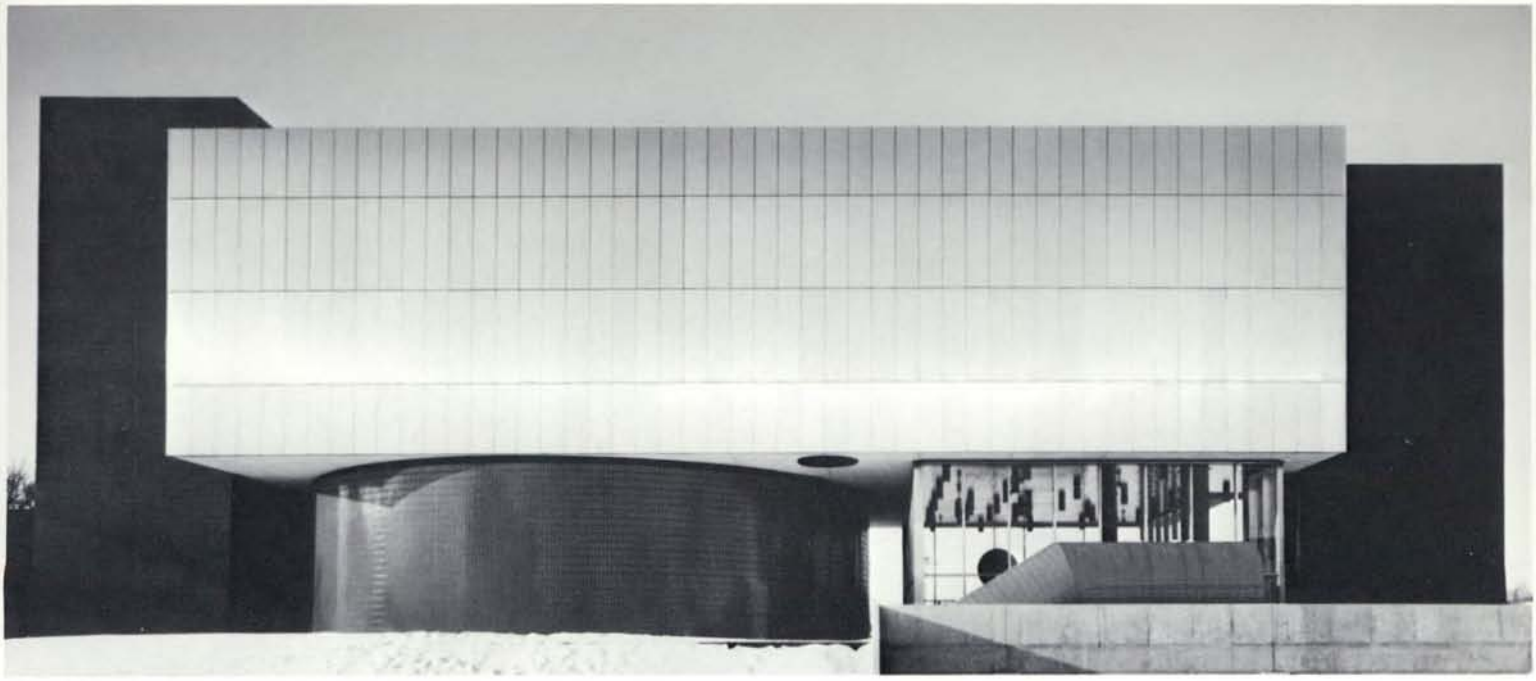
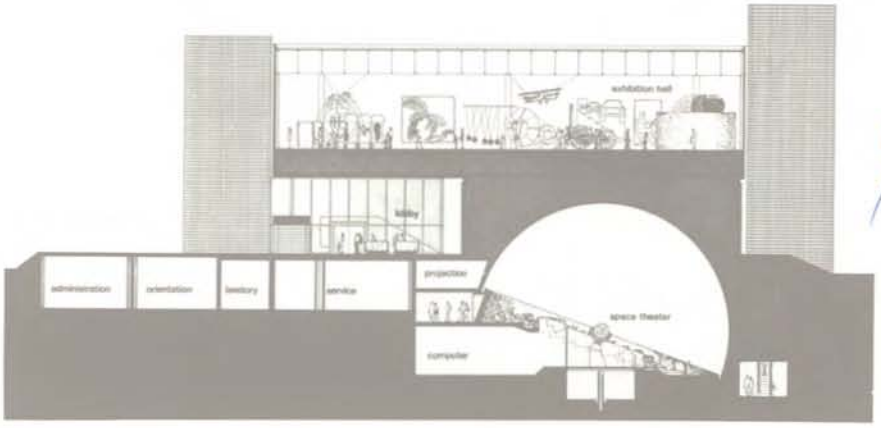




"This building says a great deal about the use of materials. It is not large, but everything is specific... well organized... and strongly focused on its purpose. Excites the spirit of science and discovery."
—Jurors' comments



Architect William Kessler and Associates, Inc., Detroit, Michigan
Project Detroit Science Center—Phase I, Detroit, Michigan

Structural Engineer McClurg and Associates, Inc., Bloomfield Hills, Michigan
General Contractor A.Z. Shmina & Sons Co., Dearborn, Michigan
Steel Fabricator/Erector Freedland Structural Steel, Inc., Livonia, Michigan
Owner Detroit Science Center, Incorporated, Detroit, Michigan

This building, located in a campus of educational and cultural institutions, represents the first phase of what may ultimately become one of the largest centers for science exhibits and presentations in the country. While the current facility, a 36,000-square foot space theater with related exhibit areas, is a small segment of the projected 500,000-square foot master plan, it sets a design vocabulary that can serve all phases to come.

In this design system, flexible exhibit halls—stainless steel-sheathed boxes supported on steel interstitial space frames that allow complete underfloor access to the mechanical and electrical needs of changing exhibits—hover above lower level special-use spaces, anchored by vertical black tile towers that house stairs, toilets, and other service functions.

The first phase space theater shows this system to good advantage: the auditorium itself, a complex, curvilinear, partially below-grade volume covered in bright red glazed tile, sets up a provocative contrast to the shiny exhibit box overhead. The theater entrances—red tile-sheathed escalator tubes that on the inside pulsate in multicolored neon—lead to a 67-foot domed space with one-directional seating and provisions for both planetarium-type and conventional projection.

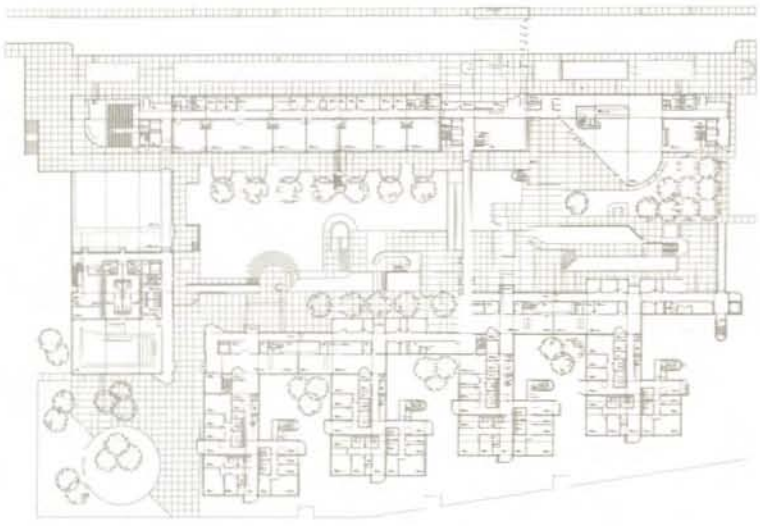
The structural system allows flexibility for considerable preplanned expansion, both in brand-new phases and, as when the space theater adds a second auditorium in a few years, within existing units.

Architect Richard Meier & Associates Architects, New York, New York
Project Bronx Developmental Center Bronx, New York

Structural Engineer Severud-Perrone-Sturm-Bandel, New York, New York
General Contractor Starrett Brothers and Eken, Incorporated, New York, New York
Steel Fabricator Grand Iron Works, Inc., Bronx, New York
Steel Erector Ermco Erectors, Inc., Corona, New York
Owner New York State Facilities Development Corporation, Albany, New York

The Bronx Developmental Center provides complete residential care to 300 physically disabled and mentally retarded children, in addition to outpatient services. The center's complex technical and social need are coupled with the problems of its site, a bleak urban "leftover" bounded by highways and rail lines.

The resulting buildings combine humanistic concerns with high technology in a way reminiscent of early modern architecture. Turned protectively inward to create their own environment, the center's main elements—a long spine with educational and community services, a physical therapy building, and four carefully subdivided residential units—are linked to form a functional village. Unlike most villages, however, this one wears a taut metallic skin. Beneath is a structural steel frame that permits long spans and specialized mechanical systems.



"An important piece of didactic architecture that teaches us all something about technology and design. On an extremely difficult site, a place hard to make humane... it successfully organizes a wide range of activities and fits well." —Jurors' comments

Architect/Engineer C.F. Murphy Associates, Chicago, Illinois

Project Angela Athletic Facility, Saint Mary's College, Notre Dame, Indiana

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General Contractor The Hickey Co., South Bend, Indiana

Steel Fabricator Steel Fabricating Division of Midland Corporation, Mishawaka, Indiana

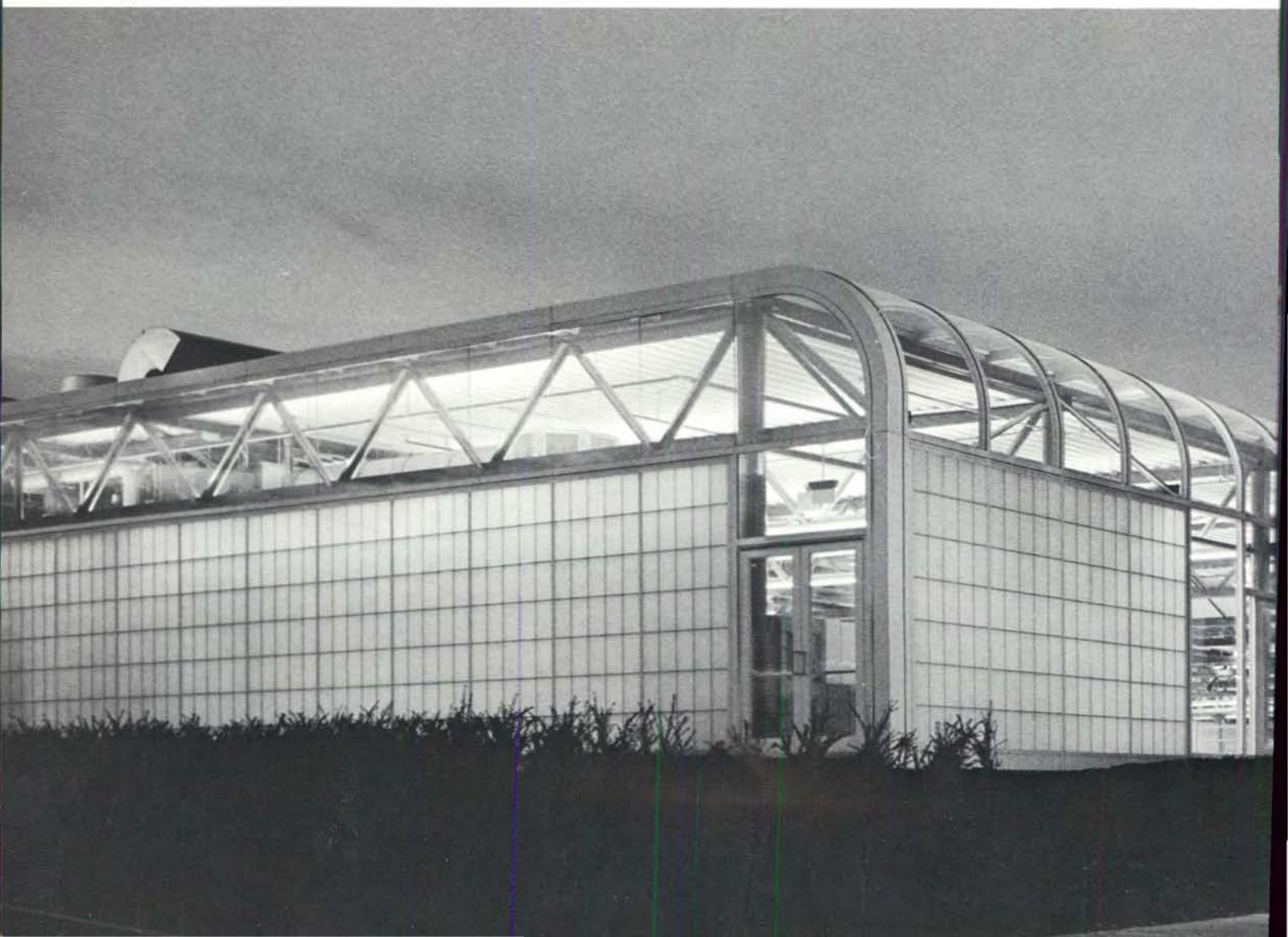
Steel Erector Crane Industrial Service, Mishawaka, Indiana

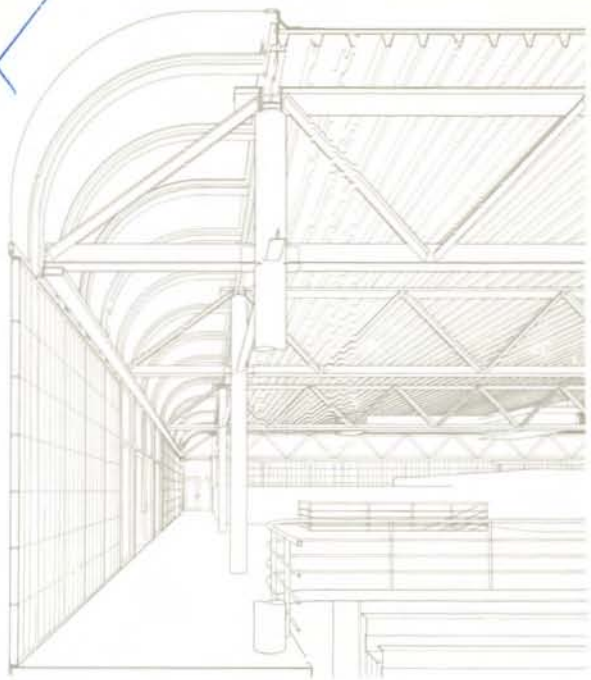
Owner Saint Mary's College, Notre Dame, Indiana

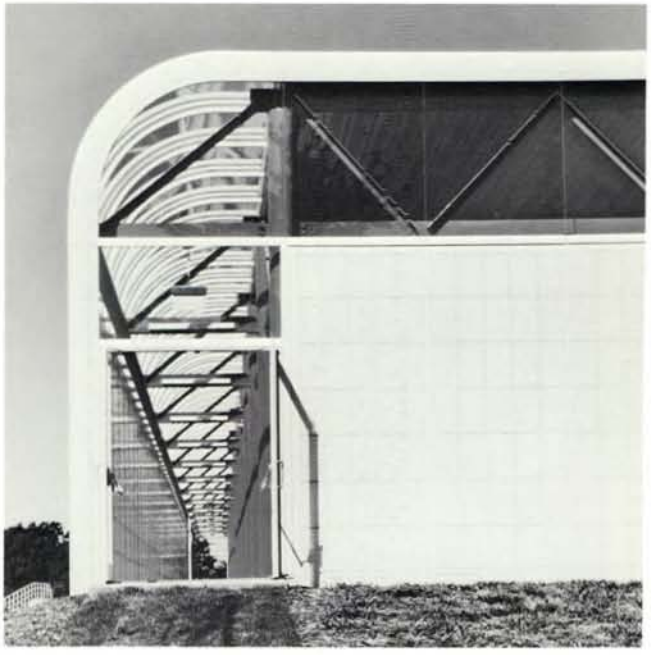
A one-directional long-span steel roof structure provides both flexible use and expandability for this athletic facility, which can also accommodate a full range of college events from rock concerts to graduation ceremonies. Steel trusses span 120 feet to enclose two major spaces, a low-bay gymnasium area and a high-bay area for tennis, volleyball, and basketball, with bleacher seating for 1800 spectators. Two racquetball courts and various support spaces complete the present phase.

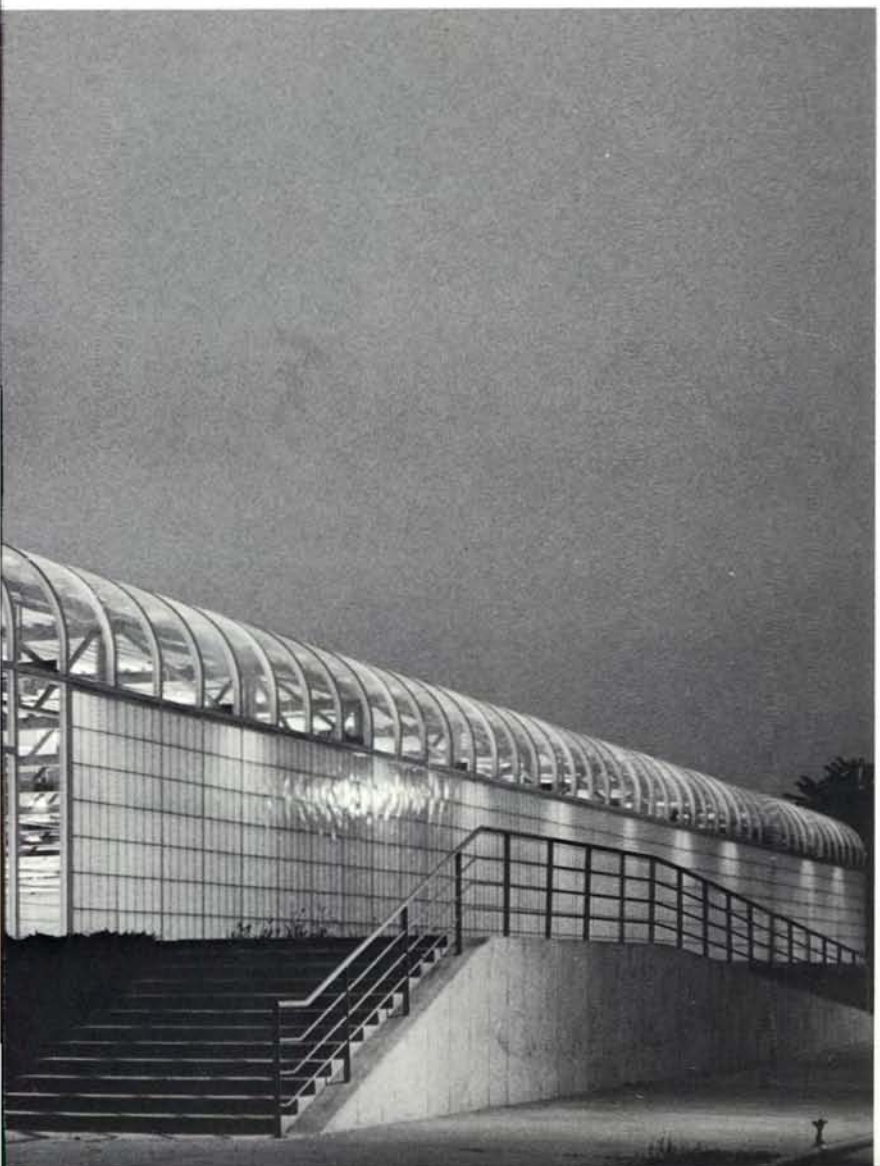
The regular mass and low profile are complemented by a tight, streamlined building envelope, both translucent and transparent, that reveals the brightly color-coded exposed steel frame and mechanical systems. By day an energy-efficient receiver of natural light at night the building becomes a glowing lantern at the center of the campus.

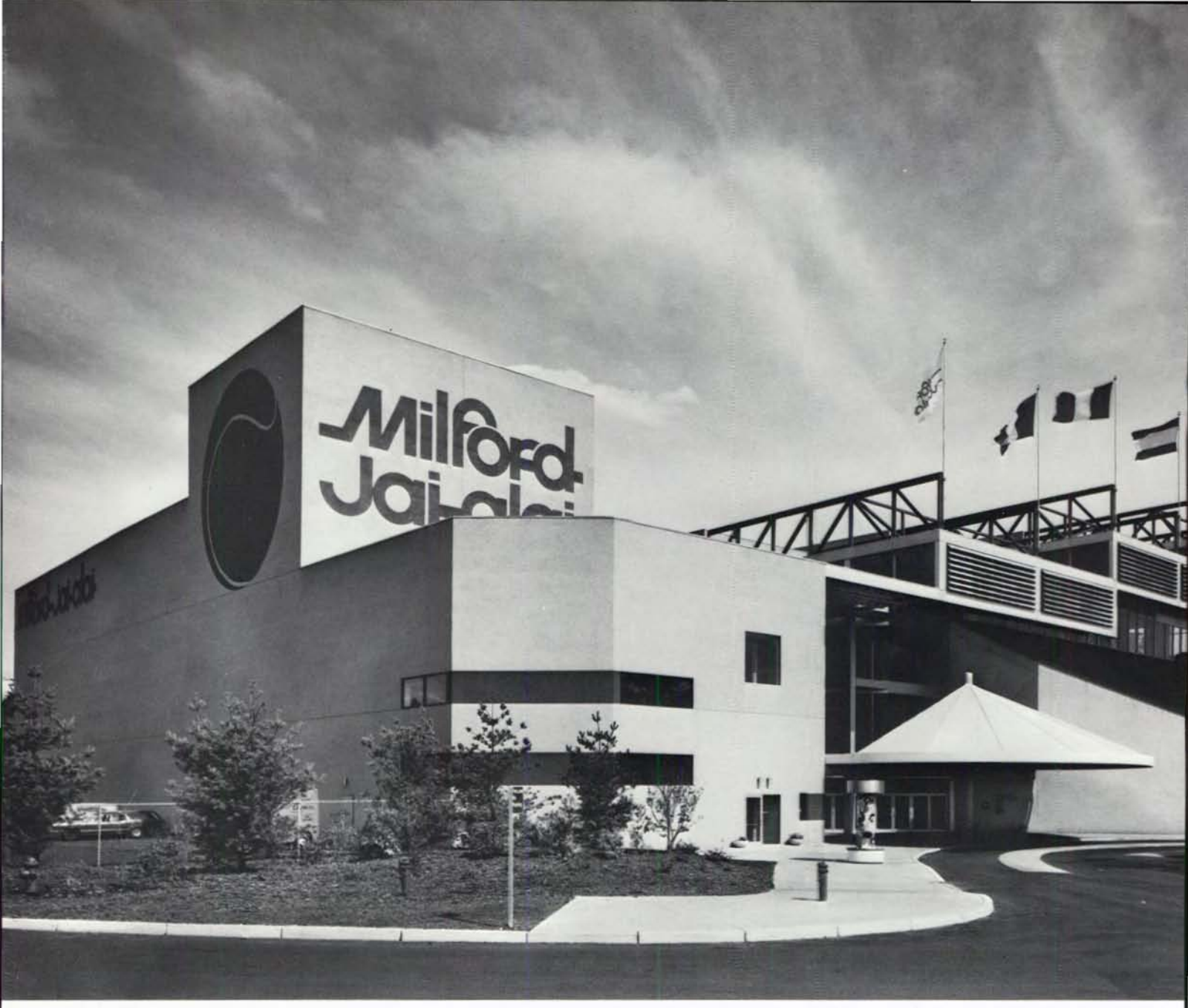
"Spatial and visual excitement generated by a straightforward solution to complex problems of span, access, and light. The combination of translucent and transparent enclosure and the structural steel cage is clear and exciting." —Jurors' comments



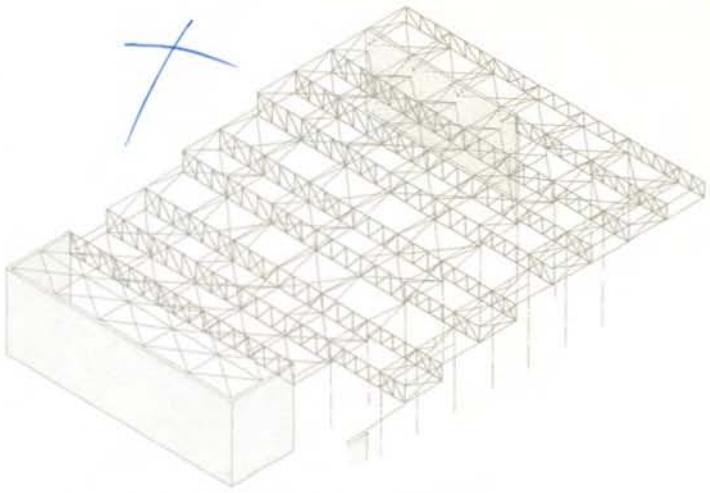







Milford

"A nicely solved balance between the simple and the complex, a spectator place and a participatory place... accomplished quite dramatically. A fine place for public activity and recreation... and that's exactly what it looks like."
—Jurors' comments



Architect Herbert S. Newman Associates, New Haven, Connecticut

Project Milford Jai Alai, Milford, Connecticut

Structural Engineer Spiegel and Zamecnik, Inc., New Haven, Connecticut

General Contractor George B.H. Macomber Co., Boston, Massachusetts

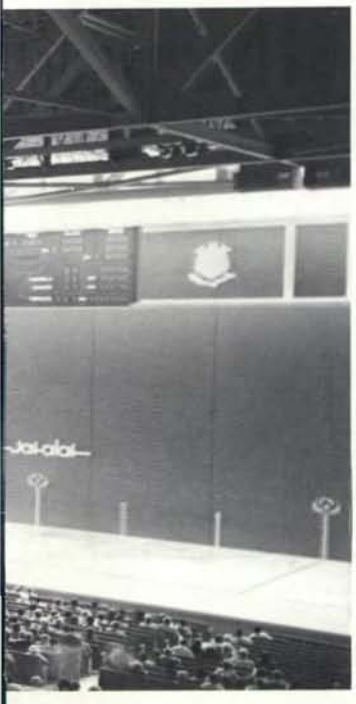
Steel Fabricator/Erector The Standard Structural Steel Co., Newington, Connecticut

Owner Dania Jai Alai of Connecticut, Inc., Milford, Connecticut

From its beginnings in the Basque country of Spain, the playing of jai alai, which roughly translates as "merry festival", has been equally an athletic and a social event. The result of a recent Connecticut decision to permit pari-mutuel betting, this colorful, pavilion-like building in a New Haven suburb marries sport and play under a 240-foot wide roof suppported by exposed steel trusswork.

The trusses span 180 feet over the fronton itself, a 4800 seat grandstand and court, then cantilever up to 60 feet over the galleria, a lively indoor street with entrances to betting lobbies, cocktail lounges, a restaurant, and a closed-circuit TV room and snack bar. The betting lounges are strategically placed under the grandstand to form the main entrance—and exit—for the spectator seats. Low building elements for the restaurant and bars nestle under cantilever-supported sunscreens that shade the galleria's high clerestory windows.

The steel structure, which steps down the hillside to reduce the volume above the sloped grandstand, transfers wind loads to shear walls which include the three walls of the court itself (the front wall is granite sheathed to take the impact of serves that reach speeds of 150 mph). The visually massive columns are actually two rolled steel sections, welded together, enclosed in 4-foot diameter fiberboard tubes covered with the synthetic plaster that is the main exterior finish.



Architect Hugh Stubbins and Associates, Inc., Cambridge, Massachusetts

Associated Architects Emery Roth & Sons, New York, New York

Project Citicorp Center, New York, New York

Structural Engineers LeMessurier Associates/SCI and the Office of James Ruderman, New York, New York

General Contractor HRH Equity Corporation, New York, New York

Steel Fabricator/Erector Bethlehem Steel Corporation, Bethlehem, Pennsylvania

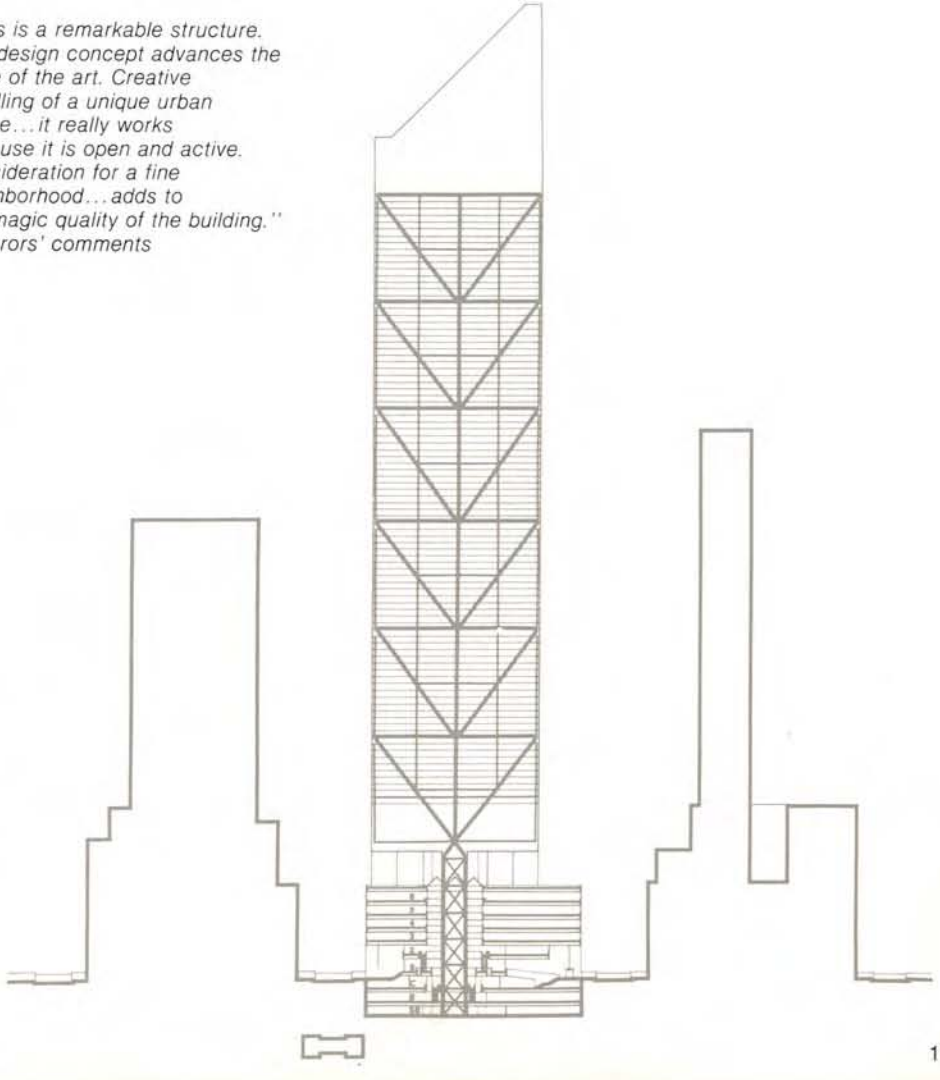
Owner Citibank, New York, New York

Like the classic New York skyscrapers of the 20's and 30's, Citicorp's 914-foot tower adds its own distinctive silhouette to the midtown skyline. Many of its structural and planning innovations, however, have to do with the way it meets the ground.

In order to accommodate a variety of functions at the base, including a sunken plaza and subway entrance, a skylit atrium with restaurants and shops, low-rise executive offices, and a new freestanding church building on the congregation's original corner site, the tower's mass is supported 114 feet above the street by four giant mast columns, located at the midpoint of each side of the 157 foot square tower in a way that frees the church's corner location and creates a dramatic sense of openness. A unique steel structure combines an unusually light, triangulated "chevron" frame, which transfers loads to the four main columns using simple, non-moment connections, with a 400-ton movable block of concrete called a Tuned Mass Damper, which reduces wind movement without adding weight to the structure itself. Large trusses at the base of the tower transmit forces to the building's core and help make possible the 72-foot corner overhangs.

The building's computer-controlled mechanical and electrical system is designed for maximum energy efficiency, with excess heat from lights, people, and machines reclaimed and circulated.

"This is a remarkable structure. The design concept advances the state of the art. Creative handling of a unique urban space... it really works because it is open and active. Consideration for a fine neighborhood... adds to the magic quality of the building."
—Jurors' comments



Architect Benjamin Thompson & Associates, Inc., Cambridge, Massachusetts

Project Faneuil Hall Marketplace and Flower Market, Boston, Massachusetts

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Structural Engineer Zaldastani Associates, Inc., Boston, Massachusetts

General Contractors *Marketplace:* George B.H. Macomber Company, Brighton, Massachusetts
Flower Market: Minton Construction Corporation, Revere, Massachusetts

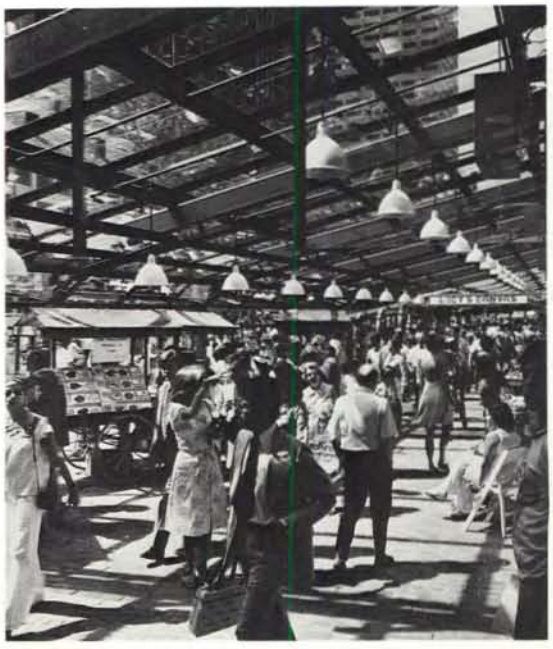
Steel Fabricator Southeastern Metal Fabricators, Inc., Rockland, Massachusetts

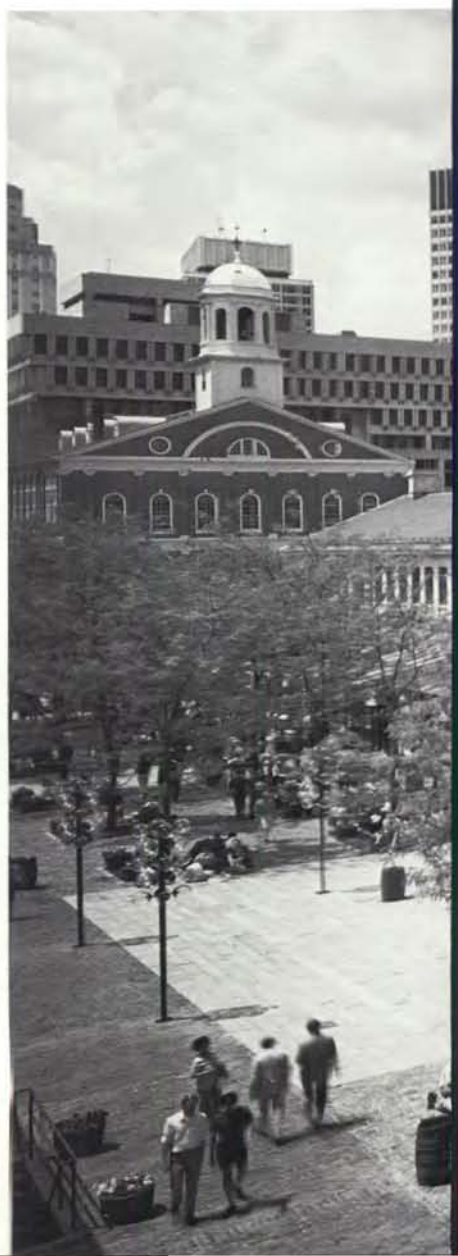
Steel Erectors *Marketplace:* Reading Steel Erectors, Inc., Reading, Massachusetts
Flower Market: Southeastern Metal Fabricators, Inc., Rockland, Massachusetts

Owners *Marketplace:* The Rouse Company, Columbia, Maryland
Flower Market: Harry McCue, Boston, Massachusetts

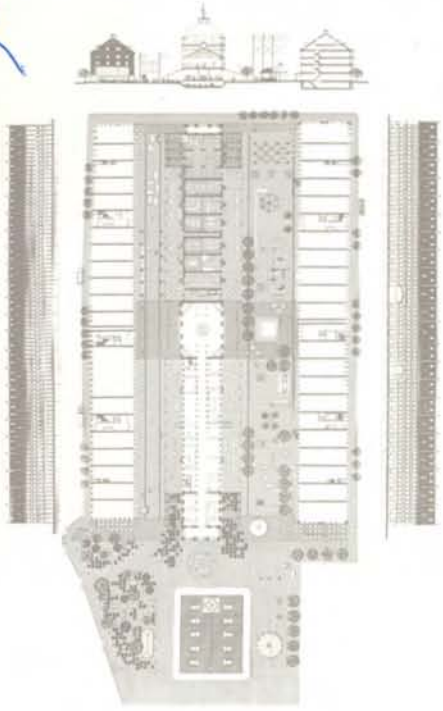
What might seem to be a simple restoration of three early 19th century commercial buildings is actually a completely reconstituted retail center that manages to preserve the integrity of existing construction while adding large amounts of indoor and outdoor selling and eating space. Most of this expansion, which ranges from the freestanding, greenhouse-like Flower Market building to the broad glazed canopies of the central Quincy Market and the glass-covered awnings of the flanking North and South buildings, is enclosed in light, exposed structural steel, an identifiably modern but unassertive complement to the original granite masonry.

Unseen steel helps open up the North and South buildings — originally built as 45 separate, 21 foot wide warehouses — for modern retail space and mechanical equipment and frames the rebuilt central dome and rotunda. To avoid disturbing the original surfaces of the outer copper dome and inner plaster dome, components of the new tied arches were passed down through the windows of the lantern in a *tour de force* of steel erection.





"Gorgeous... a whole new environment without losing anything of the original. A great deal has been done with an economic use of materials and a minimum of intrusion. An outstanding example of reuse through restoration. Portends great opportunities for the future of urban centers."
—Jurors' comments

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Milford Jai Alai	Norman McGrath (Drawing reprinted from Architectural Record April 1978 © 1978, by McGraw Hill, Inc. with all rights reserved.)
Citicorp Center	Peter Aaron—ESTO Norman McGrath Nick Wheeler
Faneuil Hall Marketplace and Flower Market	Norman McGrath Steve Rosenthal

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