IMI Case Study

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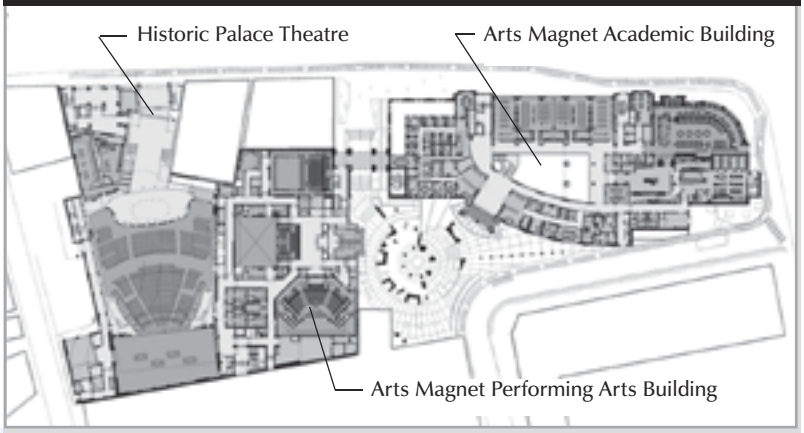
During its prime, Waterbury Connecticut was recognized as the "Brass Capitol of the World." The "Arts" also had a strong presence, with several theatres located in the downtown area. Unfortunately, when the city experienced a slowdown in manufacturing, it also saw the closing of all the town's theatres. Like many cities in similar situations, Waterbury has been struggling to draw people back to the downtown area.

Palace Theatre & Arts Magnet School

Waterbury, CT



Owner:	City of Waterbury
Developer:	Naugatuck Vally Development Corp. Waterbury, CT
Architect/ Structural Engineer:	Kaestle Boos Associates, Inc. New Britain, CT
Theatre Consultant:	Martin Vinik Planning for the Arts, LLC, Saugerties, NY
Construction Manager:	Tomasso Brothers, Inc. New Britain, CT
Plaster Restoration:	Conrad Schmitt Studios New Berlin, WI
Terra Cotta Restoration:	Armani Restoration, Hartford, CT
Mason Contractor:	Lombardo Bros. Mason Contractors Hartford, CT
Ceramic Tile Contractor:	Dupont Flooring Systems Stamford, CT
Local Union:	International Union of Bricklayers & Allied Craftworkers, Local #1, CT
Area:	Arts Magnet School: 210,000 sq.ft. Palace Theatre: 100,000 sq.ft.
Project Cost:	Palace Theatre: $30 million; Arts Magnet School: $54 million

The Naugatuck Valley Development Corporation has been working to revitalize Waterbury's traditional city center by focusing on arts, education and entertainment. One of their major projects called for renovation and restoration of the historic Palace Theatre, which was built in the 1920's. The project included the construction of a new Arts Magnet School.

The Palace Theatre Renovation

The Palace Theatre, designed by renowned Theatre Architect Thomas Lamb, was originally known as a vaudeville movie house and rock concert hall. The interior is a fantasy of Renaissance revival design, with nearly all of its decoration made of cast plaster attached to plaster walls, ceilings, and domes, tooled and finished in place. The grand lobby's walls, railings, and balusters are finished entirely in scagliola, a decorative plaster treatment and faux paint technique that make the entire room look as though it is finished in marble. This treatment has to be convincing, as it is installed next to real marble base trim, stair treads, and terrazzo floors. Even in the 1920's this labor-intensive approach was less costly than installing marble itself.

When the Palace was investigated by the design team in the fall of 2000, its interior was found to be seriously damaged by water infiltration from roof leaks and uncontrolled climate conditions. When plaster remains wet for long periods, the moisture destroys the metal lath that holds it together and the entire system fails. As a result, there were extensive areas of interior plaster that had to be completely reconstructed.

The challenge of the decorative restoration process required the attention of Conrad Schmitt Studios, specialty restoration contractors experienced in reconstructing plaster and other interior surfaces. For

Extensive areas of decorative plaster had to be completely reconstructed because of interior water damage from roof leaks and uncontrolled climate conditions.

the design team of Kaestle Boos Associates and Martin Vinik, the challenge was in restoring the interior without making it look brand new. This required tooling new plaster in the slightly uneven style of the original work, even though more precise finishing would have been possible. It also meant preserving imperfect old plaster rather than the wholesale replacement of historic building fabric.

Other restoration work included repairing the cracks in the old terrazzo floors by polishing and sealing rather than removing entire sections of the floor. Also, decades-old stains in the scagliola panels were sanded to diminish their appearance, and the original panels were preserved wherever possible.

Behind the existing Palace Theatre facade, new program spaces were added to accommodate the owner. These included a new ticket lobby, a VIP Room and small support spaces, as well as new plumbing cores suited to meet plumbing codes for the assembly space. One of the challenges facing the design team was how to reconfigure the floor levels to accommodate these program spaces. It was also necessary to revise egress components for approximately 2700 seats.

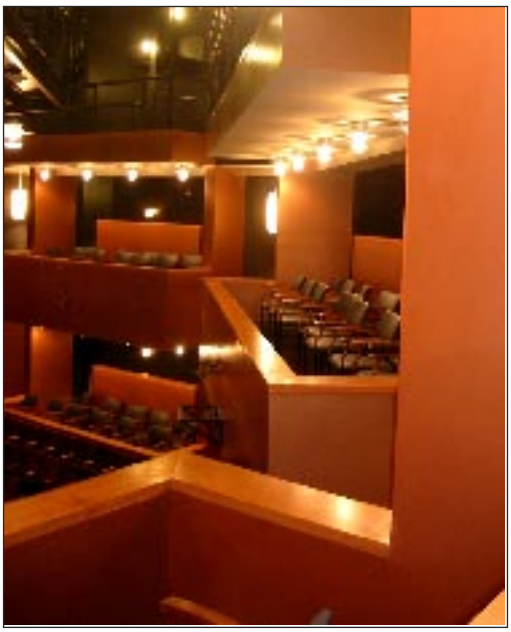
Prior to beginning construction, an engineered scaffolding system was installed to support the existing facade from the outside. While the facade was being braced, new structural steel columns were installed to support the new construction, as well as to brace the existing masonry bearing wall of the exterior facade.

Once the facade was stabilized, the team from Armani Restoration was able to perform the necessary restoration work to the architectural terra cotta. Though the terra cotta was in fair condition, a significant amount of work was required to repair the cornice construction, as is typical of any 80 year-old building. To maintain consistency with the existing coursing and design, the team used cast stone, made in similar scale and color, to infill the public storefront of the Theatre and create an aesthetically pleasing view from the street.

As a result of the careful restoration process, the Palace Theatre has been given new life for a new century. Though the interior was in ruins just a few years ago, it will once again dazzle audiences, just as it did when it originally opened.

The Arts Magnet School

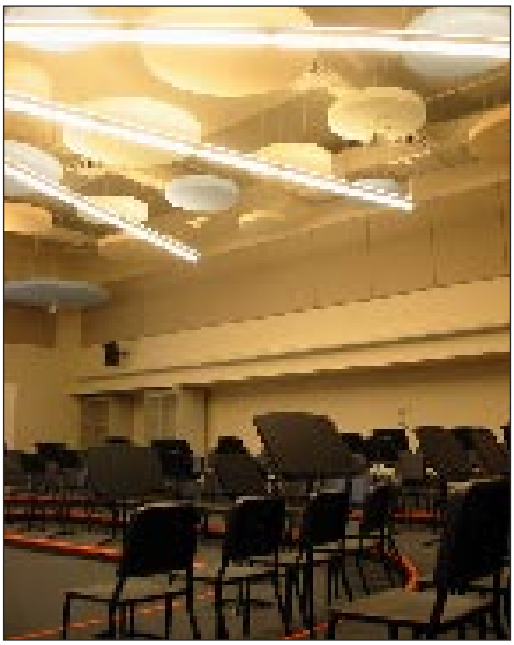
Adjacent to the Palace Theatre sits the new Arts Magnet School. The school is divided into two distinct, but closely related, components. The academic portion of the facility contains the core school program spaces and visual arts classrooms for Grades 6 through 12. The Performing Arts Center encompasses all of the small theatre performing and practice venues tailored for each art and discipline.



The main performance venues include an apron stage with 225 seats, a large dance studio with 125 seats and a recital hall with 100 seats. The practice spaces include a television studio, drama classroom, costume shop, theater set design area, band and choral rooms, and several other rooms of various sizes. These spaces are connected to the academic building via an elevated walkway.

Because of the center's impressive size and its many specialized practice rooms, the designers faced a unique challenge. Theoretically, each performance and practice space could be in use simultaneously, making it vitally important to provide high quality sound insulation. Masonry was chosen as the most appropriate construction material because of its superior sound control properties. The cores of concrete masonry units were filled with sand to increase each unit's density. The units were then used to create the outside box of the "box-in-a-box" construction.

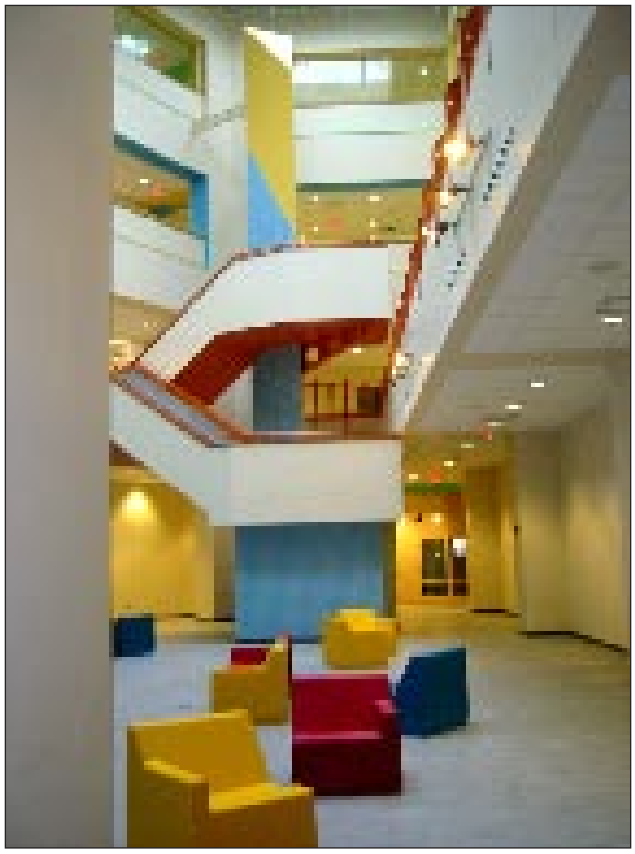
The masonry envelope that surrounds all of the performance spaces allows complete isolation of sound as it enters or exits a space. In addition, Lombardo Bros. Masonry Contractors were able to use the masonry block for constructing the many rated walls; including the 2 and 3-hour firewalls that were required throughout the facility. Masonry was predominantly used for its fire resistant qualities, energy and sound efficiency, and its ease of maintenance.



The academic area of the Arts Magnet School is organized around a four story atrium. Because the main floor of the atrium encompasses all of the visual art program spaces, the designer used the theme of artistic expression through the visual arts as a unifying element throughout the atrium.

Ceramic tile was chosen as the dominant design material for this area of the school because of its unique ability to symbolize creativity and the arts. Its modular size, matt finish and variety of colors allowed the material to take on qualities unlike any other. By using tile, and the creative expression it allows, the designer was able to exploit its colors and develop a way-finding system that unifies the facility.

The way-finding system is organized using complimentary colors of both ceramic tile and paint, creating a distinct palette that is reflected on each floor throughout the facility. In addition, each of the individual tile colors come together at several focal points to create the visual experience the designers were looking to achieve. The tile, installed by Dupont Flooring Systems, was also used within corridor spaces to provide a durable surface that could take typical school abuse.



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The academic and performing arts areas of the school each have an entry door for visitors that can be accessed from a courtyard space created by the facility. Within the courtyard, visitors will also find a small amphitheatre defined with quarried brownstone blocks and saw cut sitting walls.

The exterior veneer of the school facilities is constructed of modular brick, mason-set precast, and architectural precast panels, as well as aluminum window and curtain wall assemblies. The use of these materials, in various arrangements and colors allowed the design team to take a large facility and create the feeling of several smaller urban buildings. By using durable materials in the urban fabric, and by addressing the scale of the overall facility, designers have given the Arts Magnet School a strong sense of belonging as it resides in this historical area of the community.

The Kaestle Boos Associates team consisted of: David King, AIA, Principal-in-charge; Traci Hillebrecht, RA, Scott Mangiagli, RA, Project Architects; Stephen Agostinucci, Paul Dominov, AIA, Derek Labrecque, RA, Jennifer Mangiagli, Job Captains/ Project Designers; Janice Lintner, Jim Uriyu, Interior Designers; Richard Gossoo, PE, John Chipko, PE, Keith Bowman, PE, Paul Sheehan, EIT, Structural Engineers; Richard Webb, ASLA, CSI, Director of Landscape Architecture; A. David Lynch, Site Representative

For additional information on the project detailed in this IMI Case Study, contact:

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