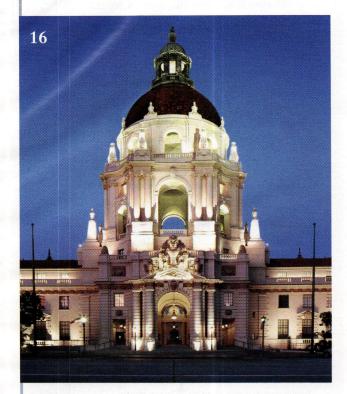


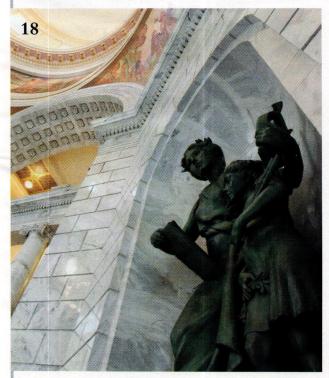
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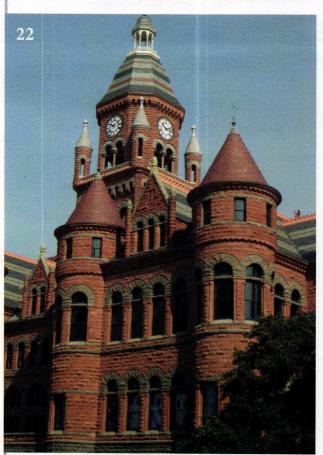
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**On the cover:** This gilded detail from the Utah State Capitol House of Representatives looks out over the restored chambers. See page 18. *Photo: Michael Dunn, Dunn Communications, Salt Lake City, UT* 

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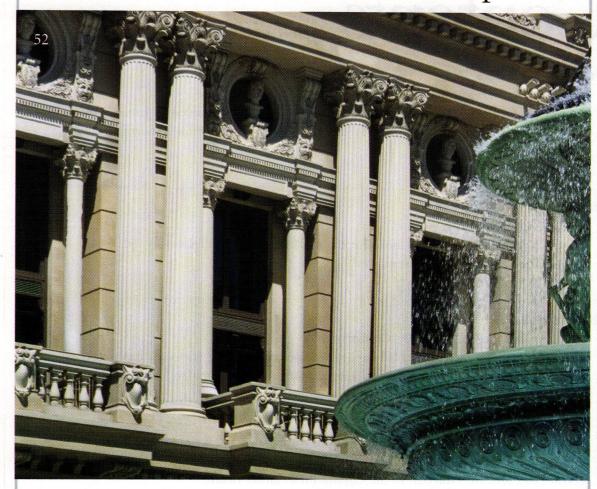
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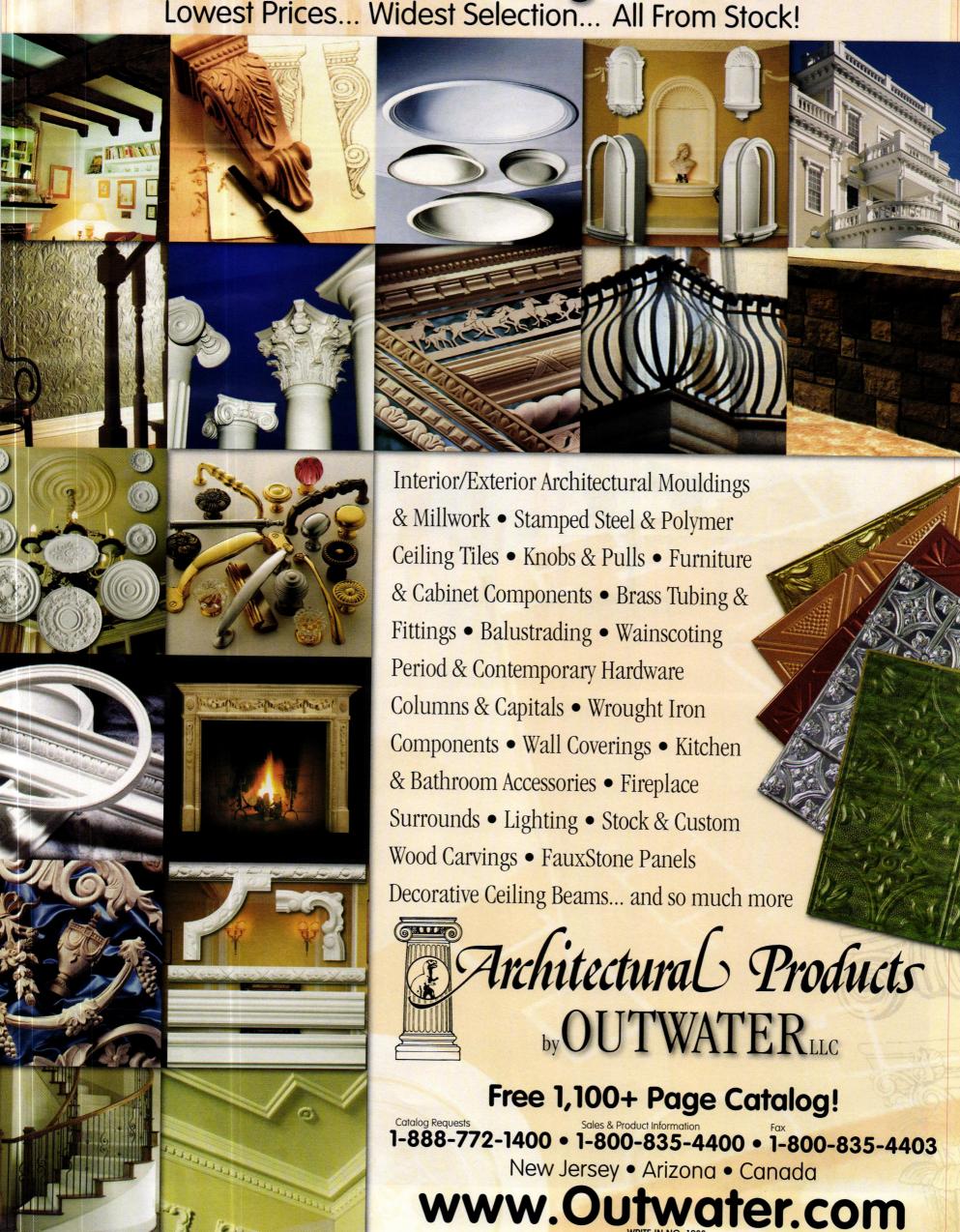
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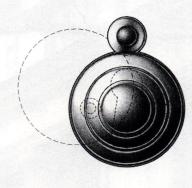
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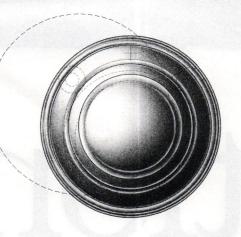


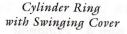


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## Preservation



Paul S. Byard, FAIA, brings both a discerning architectural eye and a passion for the past to his work as director of Columbia University's historic preservation program. He is not interested in traditional buildings for their decorations but for the role they play in American life. Photo: Dorothy Alexander

One of the most beautiful buildings on the Columbia campus is Avery Hall, which houses the preservation program as well as the departments of architecture, urban design, urban planning, and real estate development. Its greatest resource is Avery Library, one of the nation's finest architectural repositories. Photo: Kim A. O'Connell

Columbia University's graduate historic preservation program – the first of its kind in the United States – continues to push the boundaries, while honoring its own 40-year history. By Kim A. O'Connell

he U.S.S. Intrepid, a World War II aircraft carrier normally docked on the west side of Manhattan, may seem like an improbable object of scrutiny for a group of historic preservation students. Yet in the fall of 2006, students from Columbia University's graduate preservation program spent a semester developing interpretation plans for the ship, which became a museum in 1982 and was designated a national historic landmark four years later. The results are astonishing, and they offer a heartening glimpse into the future of historic preservation.

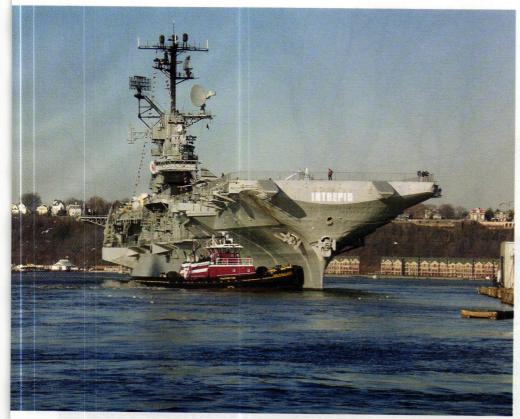
Intrepid began its long career in the Pacific theater during World War II; later, the carrier recovered spacecraft from the Mercury and Gemini programs and served during the Vietnam War. In late 2006, the vessel was towed to New Jersey for repairs and renovation, where it will remain until later this year. As part of this effort, Columbia's preservation students were tasked with offering new conceptualizations of the Intrepid museum. One student, Toni Ann DiMaggio, proposed "taking the museum out of the artifact" by distilling the ship's major mechanical aspects into a series of hand-held flipbooks, thus allowing tactile engagement with major historical themes while protecting the object itself. Another, Lindsey Ann Schweinberg, made a film starring a cartoonish image of architect Aldo Rossi, shown making the case for moving the Intrepid to LaGuardia Airport's historic Marine Air Terminal.

Other proposals were equally creative, provocative and profound, in keeping with the broad view of historic preservation espoused by James Marston Fitch when he founded the Columbia program – the first of its kind in the nation – more than 40 years ago. Indeed, although the program expresses a deep appreciation for tradition, its leaders are steadfastly opposed to the kind of staid curriculum that focuses only on architectural revivals and traditional icons.

"You have to separate out what is a rubric for a particular polemic, i.e. traditional building, and that which celebrates all sorts of old buildings," says Paul S. Byard, FAIA, director of the Columbia program, a partner with Platt Byard Dovell White Architects of New York, and author of the acclaimed book *The Architecture of Additions* (the basis of one of his classes). "Of course we're interested in old buildings, but we're interested in them for the public interest in what they contribute. You have to understand what old architecture does for us. The idea is that it's not what it looks like, it's what it means."

#### Fitch's Curriculum

On a crisp, clear day in January, Avery Hall was crackling with activity, even though the spring semester hadn't yet officially begun. The Neoclassical building, which houses Columbia's Graduate School of



The U.S.S. Intrepid, a World War II aircraft carrier, has been towed into the 21st century, courtesy of a restoration that will be completed later this year. As part of that effort, Columbia's preservation students have developed a series of provocative interpretive plans for the ship. All photos: courtesy of Columbia University Historic Preservation Program, unless otherwise noted

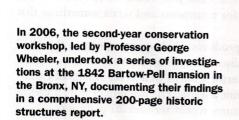
Architecture, Planning, and Preservation, was the location of the third International Architectural Paint Research Conference, which brought together world-renowned conservators and paint analysts for well-attended lectures and demonstrations. Students and professors milled about in the halls, offices, classrooms, and particularly the magnificent Avery Library – often considered the nation's premier research center on the history of architecture. Such resources – the library, the university, the reputation and the curriculum – have set Columbia's preservation program apart, Byard asserts.

"We're the creation of a lot of modern architects who were interested in continuing the reform that had been part of Modernism, and that reform was to make

sure that everyone paid sufficient attention to those buildings that were being destroyed, so they would not continue to be casually destroyed," he says. "We started at a very important point in history 40 years ago, a big historical turn of which Columbia was a part between 1968 and 1974, that began a very different view of the United States and everything else in the world. We were part of that change and carried with us the values that came before."

Leading the vanguard of this change was James Marston Fitch. An architect, historian and writer, Fitch joined the Columbia architecture faculty in 1954 and founded the preservation program with Charles Peterson a decade later. From the first, Fitch was interested in the broad array of disciplines that informed preservation, as well as the rich tapestry of vernacular architecture where everyday people lived and worked. It was from these interactions between people and place - in all its messy, unexpected and glorious forms - that Fitch derived great inspiration. "As completely as fish in water, people are submerged in their own environment," Fitch once wrote. "But, unlike fish, people act upon their environment as well as being acted upon by it."

After Fitch's retirement in the late 1970s, he was succeeded by several program directors, including David DeLong, now professor emeritus of architecture at the University of

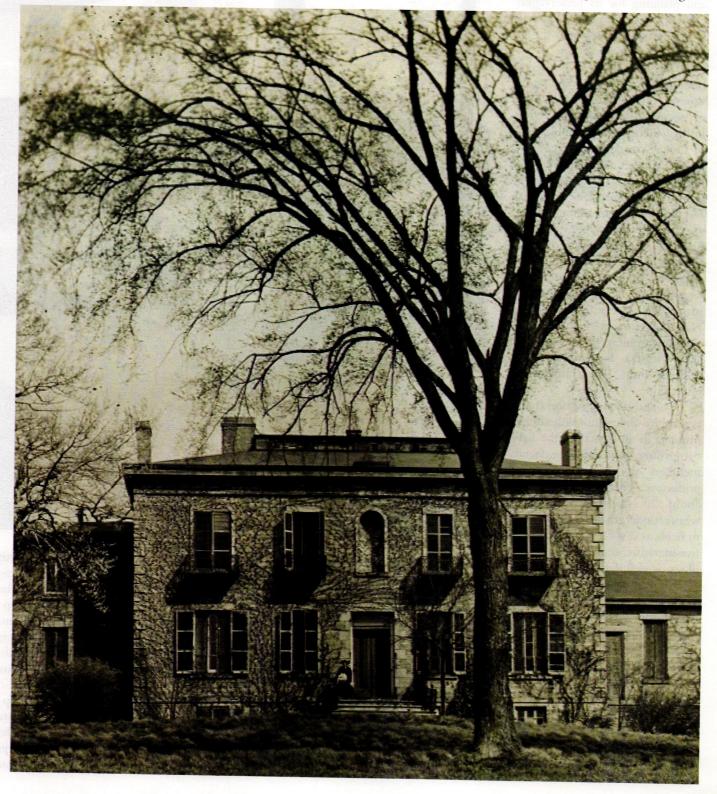




John Zukowsky, chief curator of the Intrepid Air and Sea Museum, takes Columbia students on a tour of the Intrepid as part of Professor Jorge Otero-Pailos's course on interpretation. Their resulting projects were diverse and engaging, including a distillation of the ship's history into a series of postcards and proposals to shift how the ship is oriented in relationship to its berth on the west side of Manhattan.

Pennsylvania; Daniel Bluestone, an architectural history professor at the University of Virginia; and most recently, Robert A. M. Stern, who went on to become dean of Yale University's architecture school. Byard, himself a graduate of the Columbia architecture school and an adjunct professor there since 1974, was named director of the program in 1999.

The preservation program is one of several housed within the school, which is led by Dean Mark Wigley and includes architecture (the fourth-oldest architecture program in the nation), urban design, urban planning and real estate development. The 60-credit preservation program confers a Master of Science degree in four semesters. In the first year, two studios offer a basic grounding in understanding and





In addition to the fundamentals, Columbia's preservation program has pushed into more experimental territory as well. Professor Jorge Otero-Pailos and his students, for example, are examining new ways to enhance the visitor experience at Philip Johnson's Glass House in Connecticut (above and below), including re-creating its historic aroma, even if that includes stale cigarette smoke. Photos: Kim A. O'Connell

documenting historic architecture and planning for its preservation. Students also take required courses in planning, architectural history and materials conservation.

The second year is devoted to more advanced courses and workshops in one of four specializations or "sectors" – conservation, design, history/theory and planning.

Finally, students must prepare a thesis - a rigorous work based on a hypothesis and supporting arguments that must be defended. Dorothy Miner, an adjunct associate professor who specializes in planning and preservation law, says she has advised students on a wide range of thesis topics, including examinations of the habitat dioramas at the American Museum of Natural History in New York and a company mining town in southern West Virginia. In between years, students must also complete an internship.

Columbia's preservation faculty are diverse and accomplished practitioners in all aspects of the field, comprising three full-time faculty members and about 15 adjunct professors. The program accepts about 30 students every year, whose undergraduate degrees are in fields as diverse as art, comparative literature, economics and soci-

ology, as well as the expected disciplines of architecture and preservation.

"Our curriculum is still fundamentally Fitch's curriculum," Byard says. "The subject matter of historic preservation is architecture, but it's about the art of architecture, and the human value of the art of architecture, not about one particular kind of architecture. We don't even like to use the word style, because it's a way of avoiding talking about substance. We're where we want to be, in a sense, housed in an architecture school, and in a school that is so theoretically interesting."

A Radical Approach

Of all the resources available to Columbia students, the most significant may simply be the city of New York. The city and its environs offer innumerable opportunities not only to study buildings of all stripes, but also to see how preservation groups and municipal agencies operate. In the 2007 second-year conservation workshop, for example, students examined two highly divergent buildings: Paul



Rudolph's much-reviled Brutalist courthouse in Goshen, NY — whose bulging volumes make the building seem almost alive — and the 18th-century Van Cortlandt mansion, a stately Georgian house museum in the Bronx.

"We've been working in partnership with New York's Historic House Trust to give students an opportunity to go out into the field," says George Wheeler, the program's director of conservation and a longtime conservator with the Metropolitan Museum of Art. "We talk about materials and what you would do to restore them, and the students make recommendations for treatments and write something that is close to a historic structures report."

In 2006, the conservation workshop produced a 200-page report on the 1842 Bartow-Pell mansion in New York, carefully recording such problems as biological growth, masonry cracking and mortar deterioration, as well as the results of extensive tests of cleaners, repair options and paint analysis. The document now serves as a much-needed update to a historic structures report written 20 years ago.

Columbia preservation students take a field trip to Frank Lloyd Wright's Fallingwater in Pennsylvania as part of a course on cultural site management. Adjunct Professor Pamela Jerome (far right) worked on the stabilization of the famously dipping cantilever of the house over the water.

Andrew Dolkart, the James Marston Fitch Associate Professor of Historic Preservation (the program's first full-time endowed chair), also encourages his history sector students to do work with real-world applications. Recent student projects include a critical look at alternatives for Madison Square Garden, a treatise on the historic significance of Manhattan's six-story apartment buildings, and a preservation plan for the west Chelsea neighborhood. The planning sector, for its part, has produced theses on the preservation of the Cross Bronx Expressway and Coney Island.

Dolkart and his colleagues believe strongly that the program's four-sector approach to preservation enhances, rather than inhibits, cross-disciplinary understanding. "Fitch was firm in his belief that preservation was very diverse and that it should attract people from many backgrounds, and that together in the discussion of many ideas, preservation could thrive," says Dolkart, himself a graduate of the architecture school, who studied under Fitch.

"You could have architects, chemists and historians, and they could all bring something to the study of this field. Some people are grounded in design, but most of us here are not architects, and we want our students to understand design but they don't have to do design."

That said, one of the most important and fascinating courses in the program is the innovative design workshop, conducted jointly with the advanced architectural design studio of the architecture program, which has planned and designed additions to such international sites as the University of Mexico and the Capital Complex of Chandigarh, India. The workshop, as Paul Byard has written, offers "both disciplines a unique opportunity to collaborate in the common design enterprise that allows valuable old architecture to continue to contribute to our lives."

Some of the program's most boundary-stretching work is taking place in the second-year studio taught by Jorge Otero-Pailos, an architectural historian. As evidenced by his students' new visions for the Intrepid, Otero-Pailos is drawn to teaching with nontraditional resources, as well as nontraditional, even experimental, means with which to examine and interpret those resources. "To experiment in preservation is to establish what preservation will be in the future," he says. "We've said that creativity at the small scale goes to conservators, creativity at the building scale goes to architects, and creativity at the urban scale goes to planners. Preservationists need to be able to speak the language of the conservator, the plan-

ner and the architect - and they need to be in a position of power in relation to those other disciplines. There must also be a self-criticality to the work of preservation, so that we develop into public intellectuals and not only mechanical executors."

At Philip Johnson's Glass House, Otero-Pailos and his students have looked at new ways of shaping the visitor experience at a historic site. There, the house's ceilings are stained yellow from cigarette smoke, so this spring Otero-Pailos is investigating how site managers might recreate the building's historic aroma - even if that means the smell of stale smoke. His studio is also researching and documenting historic soundscapes - such as the roar from old sports stadiums.

"We're all working as cultural agents in creating the

future of our built environment," Otero-Pailos says. "We need to service practice by being ahead of it. We need to push and question practice to be leaders in the field. We need to be teaching students what will happen in 20 years so they can be ahead of the curve. The kinds of work that we do will open them up to new realities and get them moving in new directions."

The program continues to reach out to, and learn from, the field in other ways as well. Otero-Pailos is the founder and editor of Future Anterior, the program's highly respected peer-reviewed preservation journal. The program has also added two new public forums - the annual James Marston Fitch Colloquium in the spring and the Preservation Design Forum in the fall. This March, the Fitch Colloquium focused on preservation and climate change, convening experts from both within and outside the preservation field. The faculty will also be participating in a full curriculum review this spring, working with outside advisors. The tension always exists, faculty members say, between how much relative weight should be given to the core curriculum versus individualized field work and experimental projects.

In the end, courses may be tweaked, but the program's essence, its steadfast commitment to plumbing the meaning of architecture and place in American life, will remain. James Marston Fitch might not have anticipated all the challenges of material, form and thought facing tomorrow's preservationists, but he would understand their will to meet them. "It's fair to say that we're not here to prevent things from changing," Byard says. "We're here to make things come out right and come out in a way that you'd really like them to, from the point of view of the public interest in old architecture, new architecture, and the urban environment. We think of ourselves as fairly radical." TB



In January, the preservation program hosted the third International Architectural Paint Research Conference. Here, a paint expert demonstrates how to recreate and match historical finishes. Photo: Kim. A. O'Connell

## Urbanisms Old and New

Throughout history, urban design theories have sought to create social change and improve living conditions.

By Eric R. Osth, AIA

ur nation's physical form has been shaped by both urban theory and the market economy - often with unforeseen results. Whether we like it or not, the influence of the market economy has dramatically altered the implementation of urban theory over the course of the last century. A cursory review of the last century's theories and implementation can offer great insight as we move forward as practitioners of urban design.

Quite simply, urban theory is a reaction to social and economic conditions or a political mandate to improve the built environment; ideally, urban theory answers a burgeoning collective need. Stretching back through the centuries, movements have shared that common goal to improve the way in which people live. However, the methods and implementation tools are different across urban theory, and pio-

neering urban design is not simple. Urban designers must battle incredible professional challenges - unpredictable economic forces, brutal politics and complex societal influences.

The market, in the economic sense, is a combination of popular and monetary support that helps bring new ideas to fruition. The market will build what people need, though at times, theory has shaped its course. As we look back upon the impact of major planning movements over the last century, understanding how the market has responded to urban theory will help us, as urban designers and architects, to envision the influence of current theory and future development.

#### City Beautiful/Garden City

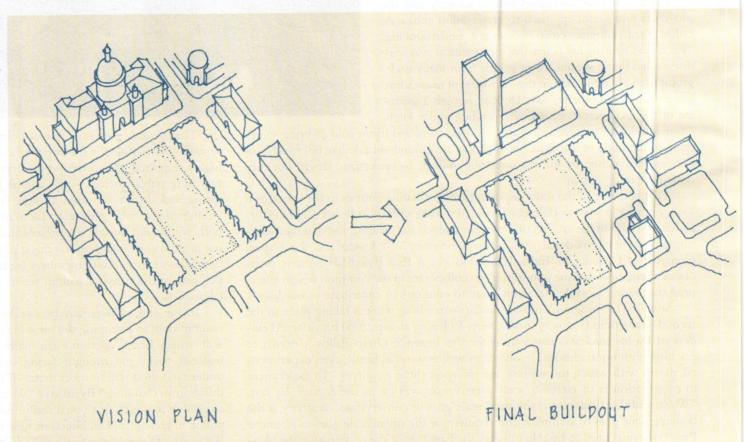
The City Beautiful movement and the Garden City movement ran in parallel. Both theories envisioned an overall planning diagram of a central city linked by rail to a constellation of satellite towns, with corridors of natural greenbelts in between, and both were influenced by Frederick Law Olmsted (who did not formally join either movement).

While the Garden City movement shaped a design aesthetic and pattern for satellite towns, the City Beautiful movement was aimed at restructuring American downtowns around a coordinated ideology and strategy. Just prior to the 20th century, America was becoming an international economic power, and its cities were in need of an urban form indicative of the new national identity. America's cities were fraught with problems, and the City Beautiful movement helped provide a physical form for the previously established Public Health Movement. The City Beautiful movement envisioned the city as an entire work of architecture; its practitioners insisted that all construction conform to a singular vision. They believed that cities had failed and that a new expression of values would inspire good government and public stewardship.

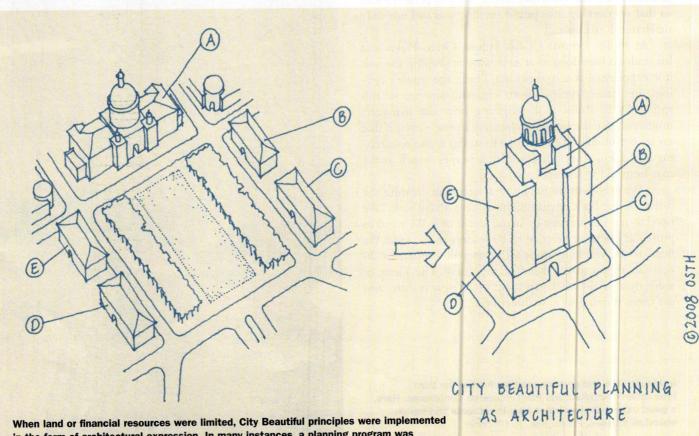
The 1893 Chicago World's Fair Exposition was one of the greatest catalysts of the City Beautiful movement. The fair was an unparalleled success and celebration of American ideals, inspiring tremendous political and public support nationwide. Consequently, cities across the country invested heavily in urban renewal. During the course of the movement's influence, more than 70 cities commissioned urban design plans classified as City Beautiful. As the movement matured, it became more comprehensive, incorporating urban repair, integrating social and education programs, and laying the groundwork for urban design as the profession we know today - coordinated work between landscape architects, urban planners and architects.

The City Beautiful movement was successful for many years and did not end abruptly, but was slowed by extensive infrastructure clearing and rebuilding, overambitious planning, the Depression era, and World War II. Following many years of interruption, today there is a renewed interest in the reconstruction of City Beautiful plans and the creation of new designs.

Generally, City Beautiful centers consisted of government buildings coordinated around a green space, often with a domed public building as the hierarchical centerpiece. Due to the elaborate visions for design, it was often cost prohibitive to complete these city center plans during the era when the corresponding architecture was in fashion. These central squares were often completed in future decades, during the time of 'contrasting' rather than 'conforming' architecture and planning. Therefore, it is essential for theorists to think ahead



Due to the extraordinary scope of City Beautiful proposals, many designs were realized over the course of multiple planning and architectural paradigms. Certain phases of a finished plan may have included architecture incompatible with the original vision.



in the form of architectural expression. In many instances, a planning program was reassembled vertically into a skyscraper, achieving the dramatic visual effect of a dome. towards years of change and a variety of architectural styles.

During the movements of later years, American market conditions shifted and the political language and propaganda of the City Beautiful movement followed suit. When space or funds were short, architects designed skyscrapers with ornamental architectural work indicative of the City Beautiful movement. McKim, Mead & White's New York Municipal Building and Oakland City Hall are examples. These economical skyscrapers became a flexible model for City Beautiful principles. They represented the "working man's dome" in which the original planning of the movement (distinct departments in separate buildings) was reassembled vertically.

The result was a distortion of the original theory – City Beautiful planning was not upheld. However, given appropriate siting, the outcome was often as dramatic as the initial domed buildings envisioned by the movement. In countless cities, towns and counties across the nation, civic buildings were constructed in this architectural style and expression. At times, planning ideology is not implemented but manifest through architectural expression.

Although 19th-century cities were considered places of opportunity, they were, in many cases, unpleasant places in which to live. Unlike the City Beautiful movement, which attempted to restore cities from within, the Garden City movement aimed to take people outside of the city — away from the pollution and ills of industrial life. With the growth of railways, the opportunity to live in the countryside, yet still connected to the city, became a reality.

The seeds of the Garden City movement stretch back to the writings and practice of Andrew Jackson Downing and Olmsted. Sir Ebenezer Howard, a British author of the movement, founded the Garden Cities Association in order to share techniques and proliferate Garden City ideals. He envisioned Garden Cities as compact, transit-oriented communities surrounded by greenbelts of natural landscape; they were to contain all the pieces of a town, integrating residential, commercial, industrial, landscape and agricultural uses. Howard authored the first radial city plan, which is a useful diagram for city planning even today. Garden City architectural styles were diverse but inspired by expressive, picturesque and romantic designs appropriate to natural settings.

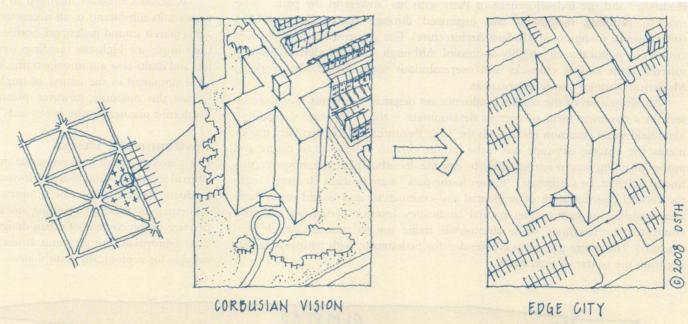
The design techniques of the Garden City movement were well shared, well documented, and, early in the course of its progression, extremely

well designed. Because greenfield development eliminated the complexities of urban infill, at the time, Garden City plans were relatively easy to implement. Good examples of Garden City planning include Hampstead Garden Suburb, Letchworth, Coral Gables and Olmsted's Forest Hills Gardens. Following their success, many more small towns were designed, some of which were already underway as vacation communities. Many original Garden City developments are still successful today and are often cited as models for development in the 21st century.

#### The Automobile

The Garden City vision was unexpectedly complicated by the popularity of the automobile. Increased automobile use did not paralyze the most notable Garden Cities; however, as the influence of the automobile grew, the movement struggled to catch up with the newfound freedom of its drivers, widespread fear of accidents, the reality of leaded gas vehicle emissions, and traffic congestion. In an effort to accommodate the car, the elegant core principles of the initial movement were lost. Thus, the automobile suburb was born.

The automobile suburb esteemed a social theory divergent from the community ideals of the Garden City movement. In essence, visions of independence and



Corbusian planning principles, which were intended to foster equality, natural landscapes, mixed-use centers and fresh air as part of urban life, inadvertently became the model for current day "edge cities." Multi-lane, high-speed automobile corridors replaced sidewalks, parking lots replaced green space, and single-use buildings replaced mixed-use centers.

freedom inspired by the automobile shaped the entire landscape. To illustrate this shift in development, consider first the town of Radburn, NJ, and then its derivatives – a generic golf course development and cul-de-sac subdivision.

Radburn, a small town in New Jersey, was designed by the RPAA (Regional Planning Association of America) whose founders, Clarence Stein and Henry Wright, were well known proponents of the Garden City movement. Radburn represented a synthesis of new planning ideas. It was considered the first cul-desac community and "super-block" development – a development of limited automobile access – bisected by an arterial road that flushed traffic through its center. Cars entered the residential block via a service drive, in the form of a cul-de-sac. Pedestrians accessed houses from front entries; front yard greenbelts segregated foot traffic from automobile traffic and allowed for a shared community space. The entire goal was to separate people from the car.

Although Radburn's architecture was never fully embraced by Modernists or traditional architects and its planning was criticized for its awkward landscape spaces (too small for community activities and too large to create a sense of continuity), it was nonetheless a popular model for future development and modern planning ideals. Across the country, Radburn's plan morphed into two common

suburban plans: the all-too-familiar golf course development and the generic cul-de-sac development. In the first example, the original landscape corridor, an easy target for value engineering, was replaced with a golf course — an economic generator adding value to the "view" property. This development lacks a mixed-use core and a sense of community. Radburn was considered the nation's first cul-de-sac community, but the golf course development represents a clearly divergent ideal.

Radburn minimizes cars and encourages people to walk through a common landscape. The golf course development necessitates travel by automobile - its residents merely look out upon "nature" from their private backyards rather than entering into it through their front doors. The second example deviation, a more common, prototypical cul-de-sac development, neither has a mixed-use core nor a greenbelt. The pedestrian network has been forfeited for ease of automobile circulation. Clearly, the market valued the automobile more than a pedestrian greenbelt. As a result, the Garden City movement was paradoxically a bridge to modern planning and the modern physical form of the United States.

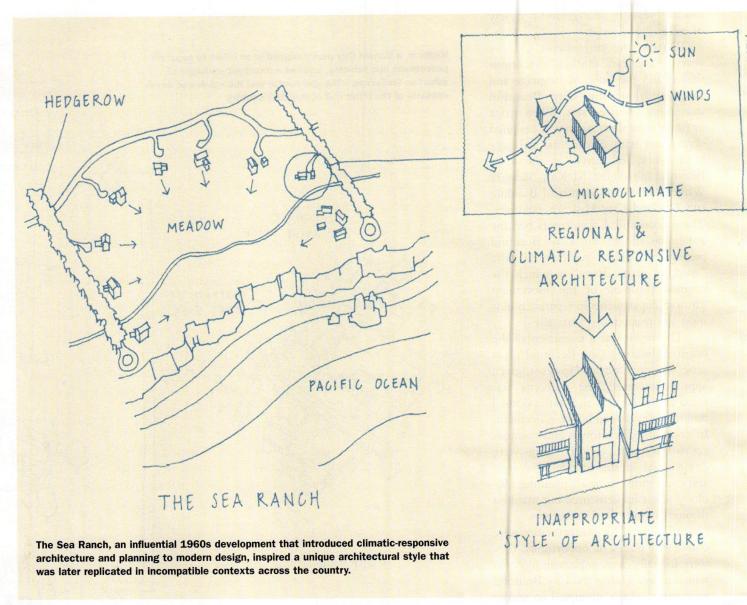
#### **Modern Visions**

Modern architecture and planning evolved in parallel with modernity in other areas of pop culture and society.

Following the triumph of democracy over tyranny in World War II, American culture began to lean heavily towards the promise of a convenient, "modern" life free from past hardships. Physical manifestations in the built environment were an inherent component to this greater societal shift.

Even prior to World War II, architects were beginning to experiment with modern planning techniques as a solution to urban problems. Le Corbusier, in particular, led an era of rigorous invention motivated by his proposal "La Ville Radieuse" and the redevelopment of Paris with his "towers in the park." The modern planning movement was organized through the work of CIAM (International Congress of Modern Architecture). The group was extremely well connected politically and highly successful. Although some Modernist projects suffered from budget cutbacks and overambitious scale, overall, the work of Modernist planners was transformative.

An illustration of the market's influence on original Modernist ideals can be seen in a common form of current development – the "edge city." Corbusier's ideas held some common ideals with the City Beautiful and Garden City movements: the historic cityscape was to be rebuilt, citizens connected to nature and proper planning was to restore glory to city life. Its urban plan was, however, distinctly different. Le Corbusier's "towers in the park" were to stand 50 meters high; the vertical concentration of residential and commercial uses would make more area available for surrounding natural landscapes. Interior pedestrian networks connected the buildings, while automobile traffic was to circulate on elevated roadways. The entire ground was intended for pedestrians, with pathways radiating from the center of each block.

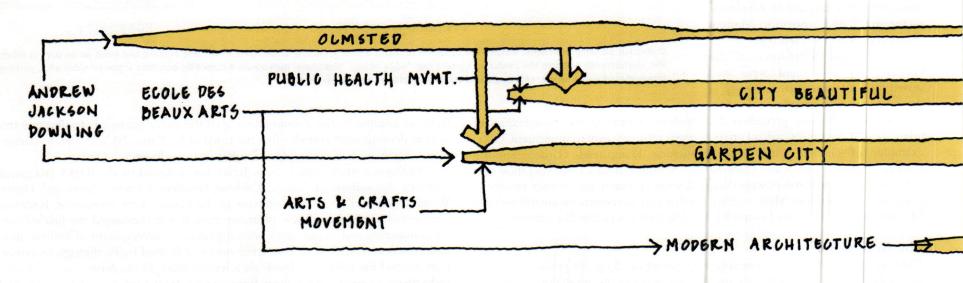


Corbusier's specific vision for "towers in the park" was never fully realized, but another form of development, markedly reminiscent of the towers, did begin to spread after automobile ownership surged in the 1950s. The "edge city," a concentration of business, shopping or residential development outside of a traditional urban area, soon became the standard model for urban growth in America, representing a 20th-century urban form distinctly different from the 19th-century central downtown.

Whereas Corbusier intended to foster community via pedestrian traffic and connect its inhabitants to all necessities of life within walking distance, edge cities are centered around pedestrian-hostile principal roads. Edge cities are notorious for their single-use high-rise buildings (residential or commercial) isolated by parking lots and multi-lane automobile traffic. Within the context of the market, these ideas were simplified in the course of implementation. Le Corbusier certainly did not foresee this outcome, however, planning for single use was fully embraced by Modernist planners in the 1960s and '70s in the early growth of edge cities.

#### Environmental Design

It is a stretch to call environmental design an organized movement as it has such a broad scope and long history. However, as evidenced by a number of projects and graduate degrees across the country, environmental design has been especially influential in Modern planning since the 1960s. Environmental designers who practice in the context of urban design generally utilize green building technologies, appropriate site planning, landscape architecture and conservation methods suitable for ecologically critical areas.

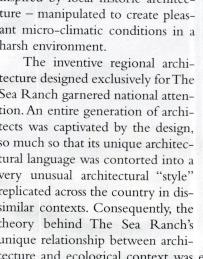


REGIONAL/ HISTORIC PRECEDENT.

The Sea Ranch, designed by Larry Halprin and shaped by the work of Moore, Lyndon, Turnbull, and Whitaker (MLTW) and Joseph Esherick, was an incredibly influential project designed in the 1960s. The Sea Ranch is a rugged costal landscape, dotted with distinctive homes, that extends for about ten miles on either side of Highway One in Sonoma County, CA. It is noted for its unique architecture simple, weathered-wood structures inspired by local historic architecture - manipulated to create pleasant micro-climatic conditions in a harsh environment.

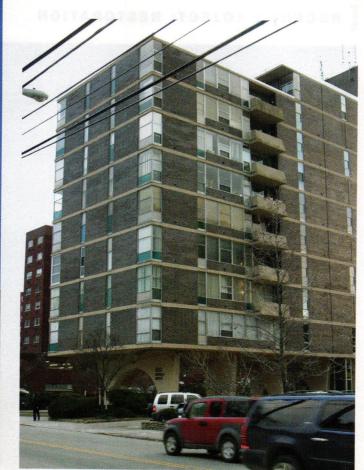
The inventive regional architecture designed exclusively for The Sea Ranch garnered national attention. An entire generation of architects was captivated by the design, so much so that its unique architectural language was contorted into a very unusual architectural "style" replicated across the country in dissimilar contexts. Consequently, the theory behind The Sea Ranch's unique relationship between archi-

tecture and ecological context was eclipsed. Therefore, this example of environmental design actually developed into a style, which unlike the City Beautiful skyscrapers, was inconsistent with the theory's essence.





Oakland City Hall in Oakland, CA is an example of the architectural expression of City Beautiful principles.



This building, modeled after Le Corbusier's Marseilles Block, does not have the same meaning in a context of parking lots.

#### New Urbanism

Growing discontent with the monotony and isolation of suburbia has helped fuel a steady increase in New Urbanist projects during the past two decades. New Urbanism, a current theory and practice inspired by past movements, has emerged primarily to answer a demand for renewed community life in our built environment. New Urbanists design "neighborhoods," revive downtowns and create new satellite towns based on historical models of development. Excellent examples of New Urbanism include Seaside, FL, Disney's Celebration, and the revival of existing cities such as Norfolk, VA.

New Urbanists have organized themselves around a common ideology and enjoy a spirit of collaborative invention and sharing of techniques. The primary tenants of this movement are summarized by the Congress for the New Urbanism: neighborhoods should be diverse in use and population; communities should be designed for the pedestrian and transit as well as the car; cities and towns should be shaped by physically defined and universally accessible public spaces and community institutions; urban places should be framed by architecture and landscape design that celebrate local history, climate, ecology and building practice. And, due to their inherent connections, environmental design is rapidly converging with New Urbanism.

In contrast to generations of development built without regard to comprehensive public interest, New Urbanists implement projects informed by collaborative processes. New Urbanists have influenced local codes and regulations through application of the 'transect,' form-based coding and the revival of pattern books. Despite these efforts, New Urbanists face considerable challenges as their complex ideas are translated to meet market demands.

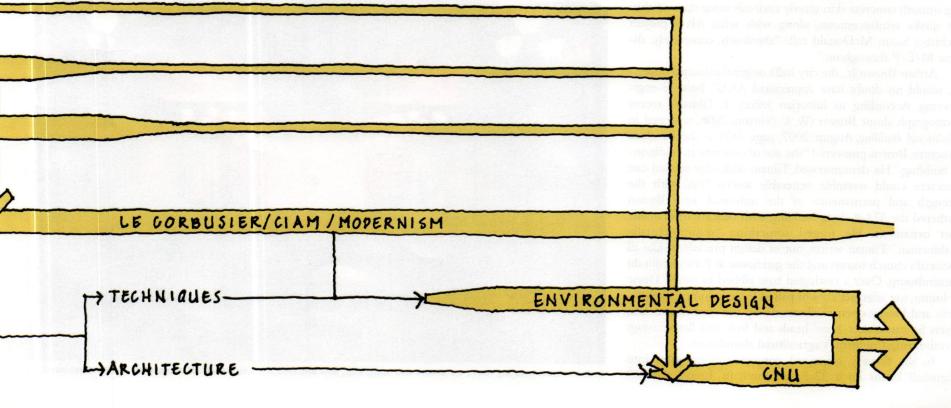
The United States is poised for a dramatic increase in development. Notable organizations have predicted that our nation's built environment will double in square footage by the year 2030. Even if this prediction is off by a factor of ten, such **Gateway Center, in** Pittsburgh, PA, is an example of Corbusian design principals. The **Cruciform towers** are set in a public. park-like setting.

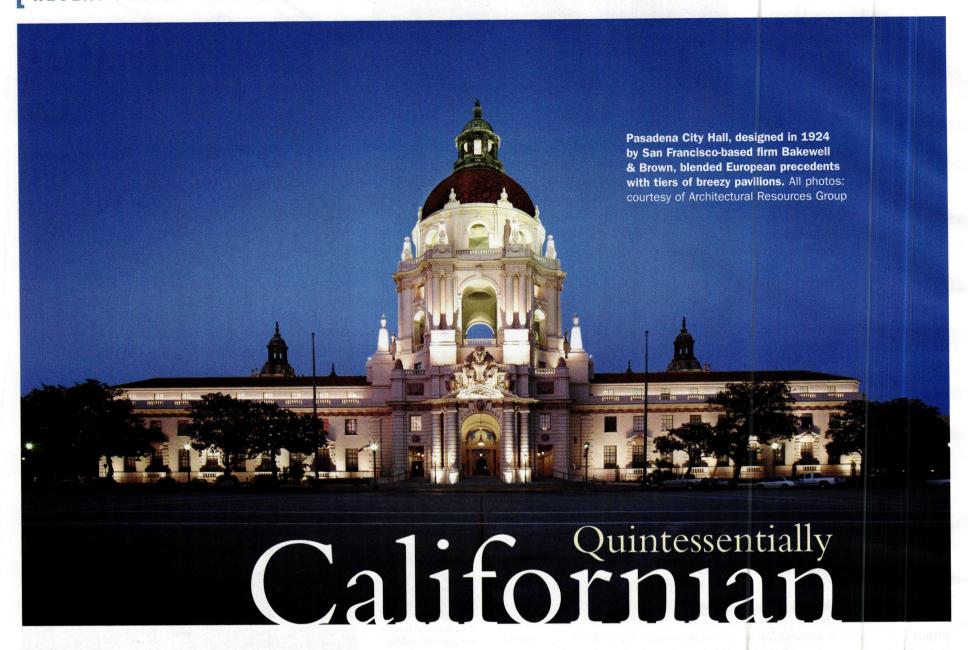


growth will dramatically alter our nation's physical form yet again. A number of concerns will affect the form of our development: an aging population, globalization and the loss of regional identity, high petroleum costs and rates of future growth.

As architects and urban designers, we have the advantage of a century's worth of theory and implementation to learn from. We can shape new demand and help guide the market to a certain extent. However, the future will bring new obstacles that no measure of hindsight can solve. We should never stop trying to resolve the challenges facing our cities, towns and neighborhoods. However, we cannot avoid the tide of market influences that will inevitably shape the future. Although we practice within the confines of anticipation and rough prediction of future markets, by making use of historic lessons and integrating public interest into our theory we can have confidence in our efforts to design places of lasting value. The

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PASADENA WAS A SOMEWHAT PROVINCIAL yet ambitious community of some 40,000 people in 1924, when it commissioned a new city hall via competition. The brief called for "an official building of imposing beauty, massive yet graceful, and suited to a land of flowers and sunshine." The winning design, by the San Francisco firm of Bakewell & Brown, laid out a five-domed, reinforced-concrete landmark towering over a streetscape of mostly shingled cottages and low-slung commercial buildings.

#### PROJECT

Pasadena City Hall, Pasadena, CA

#### Architects

Architectural Resources Group, San Francisco, CA; Susan McDonald, project architect

#### Historic Preservation Monitor

Historic Resources Group, Los Angeles, CA The government spent \$1.3 million realizing most of Bakewell & Brown's vision (except for one wing of the cloister-like footprint, which fell victim to cost cutting). The city has since lived up to its auspicious, glamorous city hall, quadrupling in population and developing a reputation for fostering high culture, whether in museum exhibits, college curricula or movie making. There's only been one lingering flaw in Bakewell & Brown's skyline-defining spire: 1990s studies showed that it would collapse during the kind of 7.0 or 8.0 earthquakes that have struck elsewhere in the region.

In 2005, the City of Pasadena shuttered the building for \$117.5 million worth of seismic overhaul and exterior and interior refurbishment,

orchestrated by the San

Francisco firm of Architectural Resources Group. The resulting smooth concrete skin utterly conceals some state-of-the-art quake reinforcements, along with what ARG project architect Susan McDonald calls "absolutely, completely, allnew M/E/P throughout."

Arthur Brown Jr., the city hall's original principal designer, would no doubt have appreciated ARG's bold re-engineering. According to historian Jeffrey T. Tilman's recent monograph about Brown (W.W. Norton, 2006, reviewed in Traditional Building, August 2007, page 167) at the Pasadena structure, Brown pioneered "the use of concrete in traditional building." He demonstrated, Tilman adds, that refined cast concrete could resemble venerable stucco "but with the strength and permanence of the industrial age." Brown slathered the 374-ft.-long building with delicate or dramatic cast ornament. He forged something "quintessentially Californian," Tilman writes, out of design precedents like El Escorial's church towers and the gatehouse at Paris's Jardin du Luxembourg. Over a rusticated base ribbed in paired Doric columns, tier after tier rises of paired Ionic columns, obelisks, urns and breezy open pavilions. Along the rims of the cake layers lie cartouches, lions' heads and fruit and flower swags (symbolizing California's agricultural abundance).

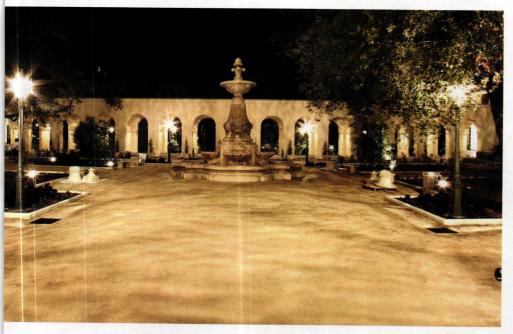
In the flowery courtyard, gargoyles spout water into clamshell basins on a 22-ft.-tall fountain. Inside, the 235



When the ambitious reinforced-concrete structure was unveiled, it towered over a cityscape of mostly shingled or stuccoed low-rises.



In the council meeting room, woodwork and stenciling, now situated amid high-tech AV equipment, has been restored.



Above: The courtyard's original plantings and 22-ft.-tall gargoyle-studded fountain were kept well fenced-off and protected throughout construction.

Right: Pasadena's multi-domed City Hall has undergone a \$117.5 million restoration, including subterranean seismic reinforcements and a steel-reinforced concrete arcade (left) replacing a quakevulnerable terra-cotta original.



rooms have vaulted, coffered or beam-striped ceilings and are trimmed in white oak and Alaskan marble. In 1965, one historian gushed that Brown's opus "might be the dwelling place of Renaissance royalty costumed as Apollo or Aphrodite."

The domed profile has appeared on the likes of calendars, key chains, t-shirts and mugs, and Pasadenans have voted city hall their favorite historic building. The locals have also continually worried about its long-term soundness. In 1982, the city brought on Architectural Resources Group to start analyzing and giving advice about cracks, leaks, lost or loose ornament and vintage wiring systems.

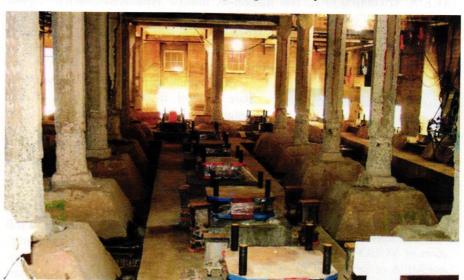
"It's an incredibly popular building," explains ARG co-founder Bruce Judd. "To restore it has involved enormous community involvement from citizens on many different commissions and committees."

ARG gradually persuaded Pasadenans to fund the costliest but least obtrusive form of seismic protection: excavating the basement, removing the foundation slab and installing 240 friction-pendulum base isolators either attached to existing columns or mid-bay. The isolators, Judd notes, "can convert an earthquake's high-frequency shaking into a gentle swaying." A moat at the building's perimeter leaves room for that swaying. Conventional shear walls would not only have obscured Brown's domes but also left the building susceptible to some expensive quake damage – not to mention the cost of temporarily re-quartering the city's staff. The government voted enthusiastically to support ARG's base-isolator plan, with funding from sources including bond sales, FEMA, and the city's share of the regional power company's revenue.

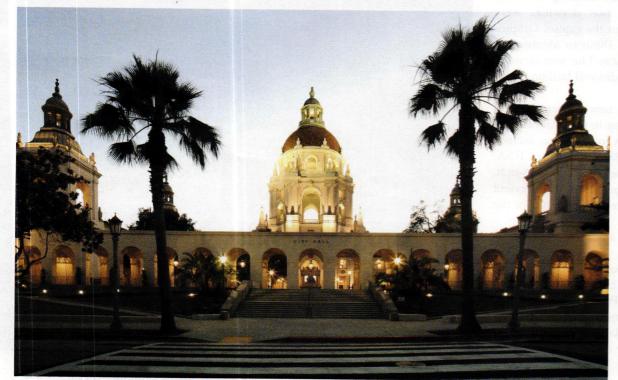
During city hall's two-year closure, the government website posted frequent progress reports with scores of photos. Locals were reassured, for instance, that the courtyard's live oaks were well fenced off and protected from construction machinery. Citizens were also informed that a terra-cotta arcade along one avenue was too quake-vulnerable to preserve, but would instead be lovingly replicated in steel-reinforced concrete. Construction crews in the end spent a total of 541,000 person-hours on the project, which came in on time and within budget. The structural engineer firm for the project was Forell/Elsesser Engineers of San Francisco, and the Clark Construction Group of Costa Mesa, CA, was the contractor.



Lyre-shaped balusters and fleur-de-lis window grilles grace a newly re-stuccoed stairwell.



To absorb earthquake shocks, the basement was excavated and the foundation slab removed to make way for 240 friction-pendulum base isolators. A moat at the building's perimeter leaves room for swaying during quakes.



Some 450 city staffers returned to their desks last summer. "They'd been scattered in temporary quarters, and everyone was so relieved to finally get back in," says McDonald. Yet for all the internet construction updates, she adds, "some people still didn't quite realize how much had been done, how much is new or newly rethought." Judd says that his firm "worked very hard to make it look like not that much had been changed. Some people think we just repainted." After 25 years of pondering the building's workings and fate, he says, "We do miss working there sometimes. But our Pasadena office is only two blocks away, so we can always visit. And the dome is always a delight to see on the skyline." – Eve M. Kahn

Although the arcade was originally a 1920s budget substitute for a never-constructed fourth wing of City Hall, it gracefully complements the surrounding towers' archways.



TAKE A 320,000-SQ.FT., 168 million-lb. historic reinforced-concrete capitol with a 226-ft. tall copper-covered dome and shake it around a bit and what happens? Not that much, according to Reaveley Engineers of Salt Lake City, because a comprehensive, one-of-a-kind seismic upgrade has just been installed as part of a multi-year multi-million dollar historic preservation effort.

#### PROJECT

Utah State Capitol, Salt Lake City, UT

#### **Architect of the Capitol**

David Harris Hart, AIA

#### **Architect**

Capitol Restoration Group, Salt Lake City, UT, an association of VCBO Architecture and MJSA of Salt Lake City and Schooley Caldwell Associates of Columbus, OH The building in question is the Utah State Capitol in Salt Lake City. It was designed by Richard K.A. Kletting and completed in 1916, at a time when Utah was developing a sense of pride in its statehood. The grand Beaux Arts building resembles the U.S. Capitol more closely than many other capitols constructed during this era.

When restoration began in 1998, researchers found that time had taken its toll on the building. The first phase of the project was the preparation of the historic structures report by Cooper Roberts, Simonsen Architects (CRSA) of Salt Lake City, working with the Capitol Preservation Board. It was completed in 2001. During the early days of the project, two drawings were

found that when combined, created the new master plan for the capitol campus. The first was by John C. Olmsted, who was hired in the 1880s to identify the site. He created a park-like setting with an elliptical walkway. The second was a site plan by Kletting. It provided for growth with three additional buildings surrounding a quadrangle.

Phase two, from 2001-2004, saw the completion of a new master plan and construction of two new buildings as envisioned by Kletting in the capitol complex, the Senate and House Buildings on the 40-acre site. A joint venture including FFKR Architects; Gillies, Stransky, Brems & Smith (GSBS); along with CRSA, all of Salt Lake City, led this phase of the work. "These two 80,000-sq.ft. Neoclassical buildings were designed and built to be compatible and subservient to the original capitol," says architect of the capitol and executive director of the Capitol Preservation Board, David H. Hart, AIA.

With the new structures in place, the board turned its attention to the renovation of the original building. At this point, the architects were selected and the Capitol Restoration Group was created, including VCBO Architecture, MJSA and Schooley Caldwell Associates. "We were engaged in 2002 to begin the design work for the restoration of the capitol," says Robert N. Pett, AIA, president of MJSA and lead design architect for the project. "It was a multi-phased, complex project, encompassing a full seismic upgrade, complete replacement of all systems and a restoration of the interior, exterior and the site." The construction manager was a joint venture between Jacobsen Construction, Salt Lake City, and Hunt Construction, Phoenix, AZ (JHJV).

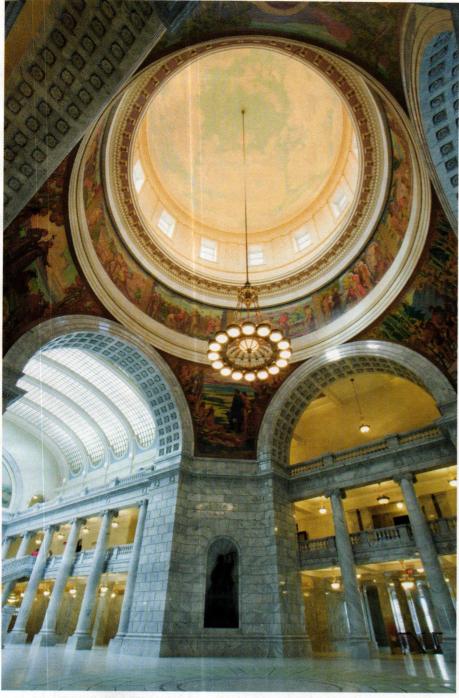
Another unusual aspect of this project was the collaborative effort. The architects proposed putting an office on the site so that everybody would work together under one roof, including the construction manager. "That was a huge change for the architects and engineers, but it gave us a tremendous team that was completely unified and that was committed to doing things right from the beginning," says Hart. "It eliminated all of the adversarial issues. We have a total change order of less than four percent and that's unheard of for a \$212 million job. It goes back to the collaborative effort."

Before the work began, 17 workshops were conducted on the different aspects of the building and the job. "We wanted to get everyone on the same page," Hart notes. "We worked through the issues and problems together, setting guidelines and imperatives. The architects took the information from these workshops and created the scope documents."

The seismic work done by Reaveley Engineers + Associates of Salt Lake City; UT, and Forell/Elsesser Engineers, of San Francisco, CA, involved removing the entire foundation of the building to make room for the base isolation system. It incorporates 265 base isolators each weighing 5,000 lbs. that are interconnected to a series of concrete beams. "They act in concert to allow the building to move and to reduce the impact of the earthquake," says Jerod Johnson, S.E., chief engineer



When completed in 1916, the Utah State Capitol building site designed by John C. Olmsted featured formal walkways. Historic photo: courtesy of the Capitol Preservation Board



The main rotunda of the capitol features restored WPA (Works Progress Administration) murals on the rotunda frieze (cyclorama) and pendentives. The 6,000-lb. chandelier, restored and repaired by Rambusch Lighting, hangs from the center dome, which is 165-ft. above the floor. The dome features a painting of the sky and clouds with seagulls. EverGreene Painting Studio restored the dome painting and other artwork throughout the building.

and principal with Reaveley. "The building is sitting on base isolators so it can move as much as 24 inches in either direction, lumbering back and forth slowly relative to the ground, so the large movements from the earthquake don't have such a severe impact on the building. It lessens the impact of an earthquake by 80 percent."

What is different about this base isolation system, he explains, is that the Utah State Capitol is the first historic concrete building to use the technology. "There are maybe a dozen historic buildings in California, such as the San Francisco and Pasadena city halls, that have installed base isolation systems, but they are structural steel construction. The Utah Capitol is the first historic building of this magnitude that is comprised of reinforced concrete that has base isolation."

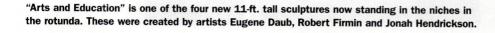
The base isolation technology was chosen because it is the least invasive. "It became the only alternative in terms of the historic spaces of the building. We were given the directive that we were not to change the character of the building," Johnson notes. "This was the only way we could improve the safety of the building and keep the historic character."

The seismic update also involved strengthening the building with concrete walls hidden within the structure. These were located in areas such as abandoned ventilation shafts. The addition of these concrete support walls increased the weight of the building from 132 million pounds to 168 million pounds. "It's a massive building," says Johnson. "It weighs more than twice what a new building of similar size would weigh."

When the foundation was removed, the architects decided to build a large terrace around the building, which like the east and west buildings, had been specified by Kletting from the beginning, but never built. "The loss of the use of the basement displaced mechanical systems as well as the occupants," says Pett. "Much of the space that was displaced was recovered in the new terrace structure. The project included a complete replacement of all of the mechanical, electrical and a/v systems, of all technology," he adds, "as well as a full restoration of the finishes."

The architects and engineers worked together to preserve the historic fabric of the capitol "This building has wonderful internal spaces, a rotunda and two flanking atrium spaces that are three stories high, with skylights and monumental stairs on either side," says Robert Loversidge, Jr., FAIA, president and CEO of Schooley Caldwell Associates. "For us, the challenge was the idea that we could design this building so it could take a journey of 20 inches – that's a long journey for a masonry building – and still preserve its historic character."

In some cases, the concrete walls that the engineers wanted to build to reinforce the building had to be denied. "Sometimes these were in historic areas and we had to say no," says Loversidge. "The walls are necessary so that when the base





Like the facing staircase on the east side of the building, the grand staircase on the west side of the capitol leads to the second floor. The cleaned and restored skylights light the area as well as the restored mural in the lunette, "Reclaiming the Desert by Irrigation."



The State Reception Room, known as the Gold Room, has been restored to its original glory and continues to serve the state as a formal meeting room. The Beaux Arts ceiling mural, "Children at Play," by Lewis Shettle, is surrounded by cherubs adorned with gold leaf.

of the building moves, the top goes with it, but they had to be hidden in out-of-the-way places."

Hart notes that much of the public space on the first floor of the three-story building had been closed off for offices over the years. One of the priorities was removing as many of the non-historic walls as possible to let light back into the public spaces. Skylights and windows were also restored to reintroduce natural light into the building.

Where lighting was involved, the architects wanted to return to the historic appearance. Working directly with the architects and lighting consultant Randy Burkett of St. Louis, MO, Rambusch Design Studio of Jersey City, NJ, restored, repaired and replicated lighting fixtures for the capitol. "We went from being a lighting vendor to being part of the design team," says Rambusch president Edwin Rambusch, commenting on the high level of communication and cooperation on the project.

His firm disassembled, documented, restored and re-installed 450 historic fixtures in the building. In addition, many fixtures were replicated or were created in a period-appropriate style. "We delivered approximately 1,400 lighting fixtures in 46 different families to the Utah Capitol," he notes. "In some cases we replicated fixtures and in some cases, we created new fixtures that were appropriate to the building. This is one of the largest jobs we have undertaken. Because there was such open communication within the design team, it went very well."

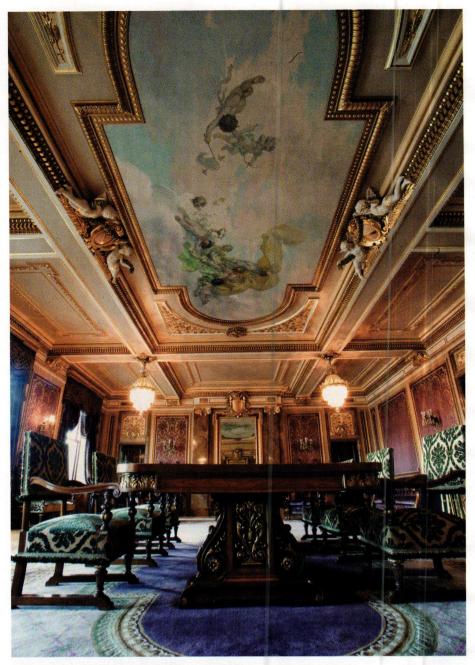
"We realized that the lighting was too complicated to specify," says Hart, "so we brought Rambusch into the process as part of the design-assist team, which allowed them to provide both design assistance and the physical restoration and replication work. They brought historic lighting back to the capitol. It is one of the great successes of the project."

The largest fixture in the building is the chandelier in the central dome, which weighs 6,000 pounds. In addition, the skylights and laylights were restored, bringing light back into the vast public spaces. "We tried to be as true to Kletting's notion of light as we could be," Hart points out. "We reopened auxiliary corridors, restored all skylights, reopened windows in the rotunda. All of that natural light now floods into the building. Then at night, the restored lighting once again lights the building. Here, we tried to be as energy-efficient as possible, using compact fluorescent lighting in 95 percent or more of the building."

Historic windows were replicated by Re-View of N. Kansas City, MO. The firm designed, fabricated and installed 539 historically correct 6x14-ft. mahogany windows to replace aluminum windows that had been installed 40 years ago.



The restored chambers for the House of Representatives now houses contemporary technology in an historic environment. Two new murals commemorating the history of Utah were commissioned for the north and south coves.



Features like modern weather stripping and insulated glass were used to achieve energy efficiency within the original elements of the windows.

EverGreene Painting Studio of Chicago and New York City restored the decorative painting and murals throughout the building. This included the restoration and repair of the dome mural, a sky scene of seagulls flying from the Great Salt Lake. In some cases, new paintings and sculpture were created to coordinate with the existing fabric. For example, Utah painter David Koch was commissioned to paint two new murals for the coves in the house chambers and new monumental bronze sculptures were created for niches in the rotunda by Daub, Firmin Hendrickson, a three-sculptor partnership based in Berkeley, CA.

Many other subcontractors were also brought in to work on the building. The extensive plaster restoration was directed by E.B. Berger, Inc. of Salt Lake City, UT, and new marble lions are being carved by Nick Fairplay of Oberlin, OH, for placement at the east and west entrances. The four original 9 ft. long by 5 ft. tall lions had deteriorated over the years.

New reproduction torchieres around the exterior terrace were designed and built by Historical Arts & Casting of West Jordan, UT, and fabric wallcovering for the State Reception Room and the Ceremonial Office of the Governor was designed and created by Scalamandre of New York City.

After almost a decade of work and planning, and 91 years after the capitol was completed in 1916, the Utah State Capitol campus is now ready to serve the citizens of the state for at least another 100 years, with its magnificent original building serving as a view to the past and a beacon to the future.

"When the Capitol was built, the intent was to show that we were not an isolated state," says Johnson. "It took a lot of sacrifice to build it 90 years ago at an original cost of \$2.7 million. We pride ourselves on respecting what was here before. And, it would have cost \$800 million to replace it, so a \$212 million renovation is wise use of state funds."

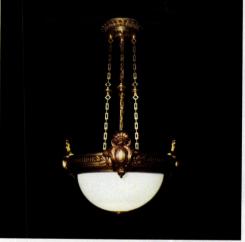
"We tried to stay as true to the building as we could," says Hart. "Whenever we had a problem in the restoration process, we always went back to the two masters, Olmsted and Kletting. As long as we went back to the original plans, we were always able to solve the problems of the historic building and make it work for a modern society." – Martha McDonald



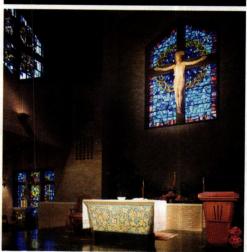
The foundation of the capitol building was removed so that 265 base isolators weighing 5,000 lbs. each could be installed. During that time, temporary jacks supported the building. Photo: Robert Loversidge, Jr., Schooley Caldwell Associates When cost matters, experience pays



STANDARD LIGHTING Salt Lake City Public Library Salt Lake City, UT



CUSTOM LIGHTING
Utah State Capitol
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LIGHTING | CUSTOM LIGHTING | ARCHITECTURAL CRAFT

THE PROGNOSIS SEEMED dire 30 years ago when the Dallas-based restoration architect James Pratt first toured the city's 1892 county courthouse. "It had been eviscerated of all wood and marble and most stained glass," he says. "It had lost the top third of its clock tower and its entire central stair. The walls and archways were covered with sheetrock and fake Formica. The gutters had been ripped out, so water was flowing down the sides of the building and pooling in the attic, and the tension members in the roof trusses had been cut so you could see rivets popping out and the trusses digging holes into the masonry. Not to mention," he adds, "there was an inch of acidic bird guano on the masonry, eating away at

#### PROJECT

the mortar."

Old Red Museum of Dallas County History & Culture, Dallas, TX

#### **Architect**

James Pratt Architecture/ Urban Design, Dallas, TX

Pratt immediately started stabilizing endangered areas and prioritizing and executing repairs. He has only slowed down during the past year, since the overhauled courthouse has opened as a county history museum plus a con-

vention bureau, ballroom-sized events hall and courtroom for visiting judges. The building's \$23 million restoration has made the courthouse corridors ring with a unique mixture of gavels, wedding DIs and schoolchildren's excited chatter.

"At first I'd thought it was a second-class building, in terms of architectural and construction quality, because it was so damaged," says Pratt. "But we've kept discovering more and more evidence of its original grandeur. It's revealed itself as richer and richer."

The original architect, a Brooklyn-born German-American named Max A. Orlopp Jr., had specified a Texas red granite base and trim for a multi-turreted mass of Peco red sandstone. ("Old Red" has long been the building's nickname.) Before Orlopp completed his Richardsonian Romanesque essay at the site, five previous courthouses had stood there. Made of logs, brick or granite, each one had burned down. So Orlopp aimed for maximum fireproofing.

"The floors are a system of tile arches between light steel members set five feet apart, with tension rods in between," says Pratt. Orlopp also fitted the structure with his era's lat-

est mechanicals, including steam heat and hydraulic elevators. Landmark legal cases, such as temperance battles against gambling houses and struggles for civil rights, were heard in courtrooms with 20-ft. ceilings, gilded moldings and kaolin porcelain fireplace boxes.



Dallas took such pride in the courthouse that its image appeared in countless postcards and engravings.



its multi-turreted mass. The top 90 feet of the clock tower, cut down in 1919, were replicated last year. Photos: courtesy of Old Red Museum of Dallas County History & Culture unless otherwise noted

The building held up well even as county administrators lopped off some ornament in the early 1900s. The tower was deemed structurally unsound and shortened, its 4,500-lb. bell and 10-ft.-wide clock were sold for scrap for \$300, and offices took the place of the atrium's curlicued iron stair.

In the 1960s, courtrooms were chopped into yet more offices, causing grievous structural problems. Contractors slathered silicone compound onto the masonry: "Of course water migrated behind and froze, and the compound started popping off," says Pratt. In an enclosed north porch, a leaky planter on the steps caused rising damp. Air-conditioning installers had cut into the steel frame, so widespread rust had formed on the structural members. Pratt's restoration contractor glumly suggested gutting the interior.

"That demolition would have cost a million dollars which, fortunately as it turns out, our budget wouldn't allow," says Pratt. "I asked for advice from a physicist I knew in Venice who was experimenting with lasers to clean statues. He convinced us to use high-intensity lamps to zap off the rust on the steel, which only

The 30-year courthouse restoration, he adds, "has proceeded in six major phases and countless smaller phases." Working for the Old Red Foundation of Dallas, TX, he has rethought every inch of the building, from new subterranean drainage troughs to 14 tons of steel roof reinforcements. In his most significant recent intervention, he recreated the tower's top 90 feet, complete with an aluminum and steel lantern (from Campbellsville Industries in Campbellsville, KY), a bronze bell cast by Royal Eijsbouts of the Netherlands, and a clock from Boston's E. Howard & Co. (successor to the firm that made Orlopp's original).

Pratt based the tower's structural engineering on wind-tunnel tests of a courthouse mockup. "We interspersed our new tower with 4-in.-thick concrete diaphragms, and we added 40 I-beams into 16 pockets in the existing tower stub," he says. "We've been monitoring the lower walls for the past year, and they haven't moved even a tenth of an inch. The 3-ft.-deep original limestone footings, it turns out, are incredibly strong."

Datum Engineers of Dallas, TX, provided structural consulting and the contractor for the project is Thos. S. Byrne of Fort Worth, TX.

Pratt keeps stumbling upon more of Orlopp's inspired ideas, or their ghosts. When partitions were torn out of the stairwell, outlines appeared of original landings, banisters, treads and risers, which Robinson Iron of Alexander City, AL, has replicated. Pratt has turned up samples of the original tricolor roof slates (in the attic), and discovered that one county commissioner had taken home a souvenir

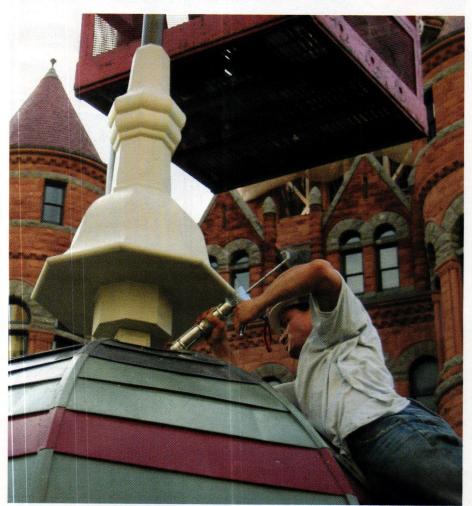


A flared granite base supports the granite-trimmed sandstone mass. Arched lunettes crown over 100 windows.

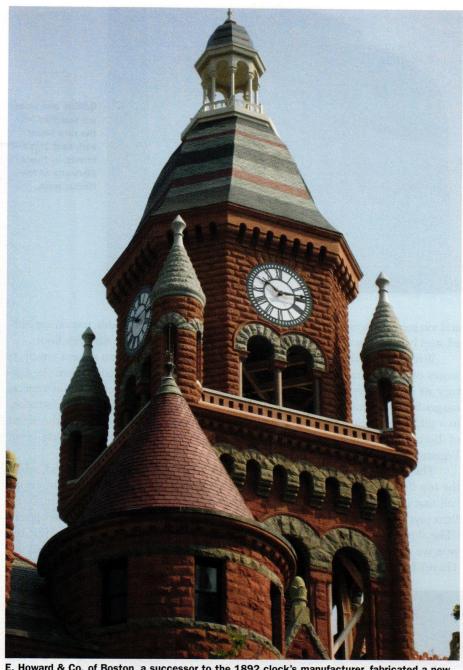
chunk of Tennessee marble wainscoting, and another commissioner had stashed away one white-oak, stile-and-rail door with solid brass hardware.

While the interior has regained its 1892 stateliness, some modern touches suit the demands of artifact exhibits. The courtroom ceilings look like their plaster ancestors, but are covered in Eurospan, a sound-absorbent polyester, and the centers are subtly dropped to make room for air ducts. Pratt fashioned new but weathered-looking window frames out of wood salvaged from Alabama beer vats, and the 7/16th-in. laminated glass panes provide 96 percent UV blockage.

The exhibit designers, Gallagher & Associates, further protected artifacts from sunlight by covering windows with perforated vinyl scrims printed with vintage photos. The scrims, says Gallagher senior designer Greg Matty, "are back-lit at night, and they help brand the building as a museum." The galleries' panel displays



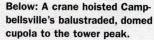
The aluminum and steel cupola, by Campbellsville Industries of Campbellsville, KY, is roofed in overlapping stripes that emulate the original slate.

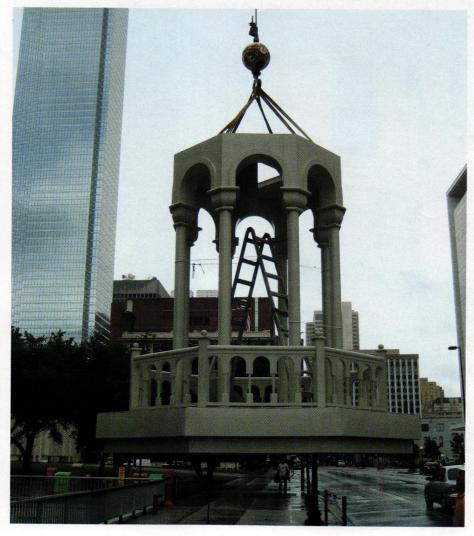


E. Howard & Co. of Boston, a successor to the 1892 clock's manufacturer, fabricated a new



The replicated clockworks rest on a cabriole-legged stand.





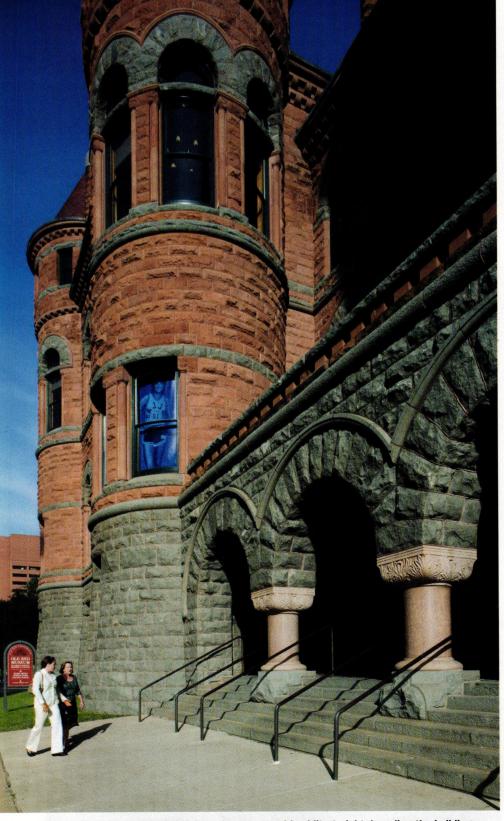


Griffins and vines are sculpted into the new tower bell, cast in bronze by Royal Eijsbouts of the Netherlands.

and vitrines (fabricated by Explus Inc. of Houston, TX), Matty adds, rest on weighted steel bases rather than any support poles piercing the sensitive tile-arch floors.

Wiring is equally unobtrusive; a centrally controlled wireless system connects scores of touch-screens. The computer games and video footage explore the history of the county's two dozen municipalities. The quirky selection of objects ranges from a chunk of stone from the river crossing where Dallas was founded, to a gilded walk-in safe made for the county treasurer, the guns used in the arrest of Bonnie and Clyde, Lee Harvey Oswald's handcuffs, and a 15-ft.-long neon Pegasus that advertised a Dallas oil company.

The galleries occupy part of the ground floor and most of the second, while the top floor contains a courtroom with a pilastered judges' bench, plus an events hall that is already booked up for every Saturday night through the end of 2008. Pratt says he long expected Orlopp's revealed design to have huge popular appeal. "The slow pace of the restoration turned out to be fortuitous," he says. "Just last year, we discovered and exposed another forgotten arch that had been blocked up. There's been a 30-year series of finds and surprises." – Eve M. Kahn



The window scrims are visible from the street and backlit at night, branding the building as a museum amid lavish Richardsonian Romanesque stonework. Photo: Wyatt Gallery



Based on staircase ghosts found throughout the courthouse atrium, Robinson Iron of Alexander City, AL, created a curlicued multi-switchback replica.



Perforated-vinyl scrims, printed with vintage photos, protect artifacts in galleries graced with recreated oak trim. Photo: Wyatt Gallery



## There's only one way to replace the windows on a historic courthouse: By the book.

he tiny community of Jackson occupies a significant place on the Minnesota map, with an entire downtown district on the National Registry of Historic Places. The crown jewel is the 1908 Jackson County Courthouse, an impressive Neoclassical construction of Bedford limestone. After almost a century of use, every magnificent detail had been restored to its original glory, down to the worn-out, inefficient windows. The detailed lite pattern in the courthouse's dome windows were replicated perfectly to fulfill the National Registry criteria. In



The 3-by-3 diamond lite cut is uncommon; Marvin's Simulated Divided Lite with spacer bar solution is equally unique.

addition, the town was thrilled to find a lower-maintenance solution for the 101 massive double hung windows. With a custom Simulated Divided Lite solution that incorporated a spacer bar for historical accuracy and low-maintenance extruded aluminum cladding, the new Marvin windows ensure that the courthouse will perform its civic duty for generations to come.



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## Order in the OUIT

ON THE SOUTHWESTERN VIRGINIA section of the Appalachian Trail lies the town of Pearisburg. Famed for its stunning scenery and Civil War history – it is home to the Andrew Johnston house where Dr. William Wirt McComas organized the Pearisburg Reserves – the town celebrates its official bicentennial this year.

Among Pearisburg's historic landmarks is the Giles County Courthouse on the town square. The two-story Federal building was constructed in 1836 by

#### PROJECT

The Giles County Courthouse, Pearisburg, VA

#### Architect

HDH Associates, PC, Christiansburg, VA: John P. Cone, Jr., project architect; Mason B. Montgomery, project manager

#### **General Contractor:**

Thor Construction Inc., Atlanta, GA Thomas Mercer at a cost of \$5,000, and subsequently expanded by the county to incorporate two flanking additions: a two-story wing with a courtroom on the second floor, and a three-story county jail. These and the original structure comprised load-bearing brick walls supporting wood framing, plus a hip roof with a cupola containing a single bell, which was used to warn the townspeople of impending danger. A four-column portico was added to the front of the building at a later date.

The courthouse was placed on the Virginia Department of Historic Resources list of protected historic buildings in 1982. However, maintenance in intervening years was limited. No upgrades were made to the

antiquated electrical and heating systems, the original wood shake roofing was replaced with asbestos shingles, and the exterior brick masonry was coated with thick paint to prevent the deterioration of the lime-based mortar. Periodically, the windows were replaced with locally sourced stock windows, and two 17ft.-tall windows in the courtroom were closed on the interior side, presumably to guard against assassination attempts.

In addition to its deterioration, and sub-standard repairs, the courthouse lacked handicapped access to the second-floor courtroom. Seeking to address this, the court mandated in 1998 that an elevator be installed in the main building. The court enlisted HDH Associates of Christiansburg, VA, to carry out a feasibility

study, during which the firm determined that constructing an elevator shaft inside the existing structure would damage the wood framing, occupy much-needed space and seriously compromise the historic exterior roof line.

Rather than squeeze the elevator into the building in its existing state, the county opted to completely renovate it. As well as a discreet new elevator on the exterior, the revised design included new exterior windows, roof replacement and up-to-date heating and air conditioning, plus new lighting and wood paneling in the judge's chambers and offices. Work began in 1998, and was aided by a rural development grant from the United States Department of Agriculture.

The new elevator is situated between the chimney of the original building and the exterior corner adjacent to the early addition; the arrangement allowed adequate clearance without disrupting the appearance of the roof or taking up much-needed space. "To provide the overhead clearance required by code within the original building footprint would have required the elevator tower to go through the existing roof," says project architect John P. Cone, Jr. "That was unacceptable, so the question became: how do we design an elevator on the exterior and make it 'disappear?' So we moved it outside, and matched the brick and windows."

By 1998, the original windows had been replaced several times. However, those in place were poorly constructed, mismatched between the upper and first floors, and in some cases, had been treated with lead paint. HDH selected the Graham Window Company of York, PA, to provide the new windows. The lead-contaminated windows were removed and safely disposed of. The new windows



The only surviving photograph of the courthouse taken before the Civil War shows the original wood shake roof. Photo: courtesy of the Giles County Historical Society





The Federal-style building was expanded to include a story-wing with a second-floor courtroom (above, right) and a three-story jail. The new elevator addition is situated between the chimney of the original building and the exterior corner adjacent to the early addition.

were constructed in extruded, color-coated aluminum for minimal maintenance, and their design was based on evidence of the original window construction found on the second floor. "As I examined the windows, those on the second floor appeared to be heavier and better built," says Cone. "Also, there was a brick mold around these windows that appeared to be either the original, or close to it." The company fabricated a special aluminum extrusion that matched this mold exactly, and replicated it throughout the building. And in the courtroom, the tall windows were re-opened, and lined with bulletproof glass.



The judge's bench was relocated to provide more space for the judge.

A civil war-era photograph revealed that the original roof was probably constructed of wood shingles. However, the Virginia Department of Historic Resources relaxed its rules on replicating original materials – ordinarily a condition of approval – and agreed to a new standing-seam copper roof. The roofing is of field-fabricated 16-oz. copper pans, installed by traditional methods.

With the building envelope secured, the firm turned its attention to the courtroom and chambers. The renovation was an opportunity to make some welcome changes to the courtroom arrangement, which, as it stood, positioned the jury with its back to the judge and facing the witness box. To approach the judge, lawyers had to walk behind the jury box, where there was limited space. And, as the judge's bench was very close to the back wall, courtroom staff regularly had to disturb the judge to reach their seats.

"The judge didn't like that," says Cone. "It was a very unusual arrangement, and one that didn't afford the judge or legal counsel much privacy, but someone thought it was a good idea back in 1883." Two rows of audience seating were sacrificed to move the jury seating forward, permitting better access to the judge and creating space for state-of-the-art communications and video equipment. In addition, secure access was provided between the judge's chambers and the courtroom so, as Cone says, "the judge didn't have to enter the courtroom arm-in-arm with the accused."



The lobby was repainted and finished with new cherry wood paneling.



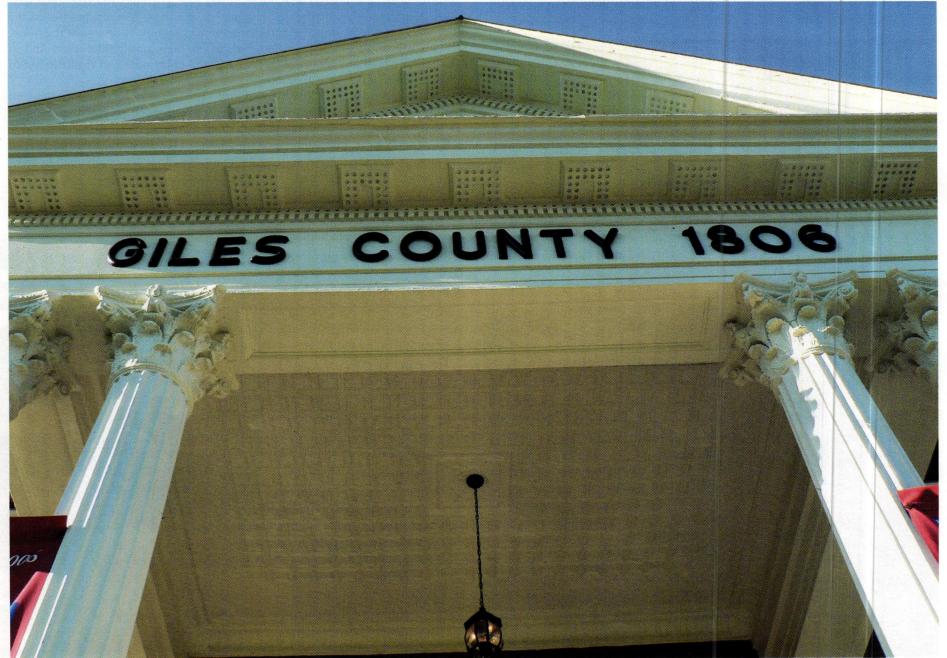
Greek revival cornice work was discovered above a suspended ceiling in the courtroom during construction, and incorporated in the final design.

During construction, the firm discovered a Greek Revival wood cornice at the rear of the courtroom, above a suspended acoustical tile ceiling. It depicted traditional triglyphs and metopes, and appeared to be original. The county issued a change order to retain the cornice, and the firm incorporated it into the final design. "We had to put in a higher ceiling than we'd planned, and we omitted the acoustical tile we'd designed," says Cone. "We put in a gypsum wallboard ceiling above the cornice and used surface instead of recess lighting because we had to go right up against the existing wood framing. It turned out to be a very nice addition to the design." Much of the original cherry wood paneling was renovated, and matching new cherry wood paneling was added.

The Greek Revival molding was just one of many surprises uncovered by the firm. No plans existed for the building, so at every turn, the firm had to guess what

lay behind existing finishes, walls and floorboards. The lack of documentation was most problematic when the heating system was changed from steam to hot water. There was no provision for new pipe space in the building, and the firm was forced to create its own. "We planned for it, but we still ran into things that were unexpected," says Cone. "From time to time, we would put a pipe through a floor and discover that there was a beam in the way. We had to drop ceilings, steal corners and so forth."

After eight years of near-continuous work, the Giles County Courthouse was rededicated on May 27, 2006, in a ceremony attended by residents from across the county. The renovations were so well received that there are tentative plans to renovate the adjacent Sheriff's building, which also dates from the 1830s. – Lynne Lavelle



The building was rededicated on May 27, 2006, in a ceremony attended by residents from across Giles County.



## Roars Back

THE BRONX ZOO'S image in the public mind now is largely primeval. Visitors best remember glimpsing exotic herds and flocks nestled into simulated savannahs, Himalayan plateaus or rainforests – any architecture onsite pales by comparison. But one of the city's most cohesive Beaux-Arts complexes, on par with Columbia University's campus, lies little known at the heart of the zoo's 265 acres.

Called Astor Court, the Neoclassical ensemble contains half a dozen circa-1900 structures plus balustrades, boxwood beds, grottoes and a sea-lion pool. The master plan and most of the buildings were designed by Heins & La Farge, a firm best known for colorfully tiled subway stations. The court's façades are a study in varied peachy-orange shades of Roman brick and stone or terra-cotta animals. The species portrayed – including reptiles, monkeys, pachyderms and big cats – once lived in cages along the court, and millions of visitors annually strolled the balustraded paths.

#### PROJECT

Astor Court and Lion House, Bronx Zoo, New York, NY

#### **Architect**

FXFOWLE, New York, NY

#### **Restoration Consultant**

Building Conservation Associates, New York, NY

#### **General Contractors**

General Contractors: Hill International, New York; FGI Corp., Bronx, NY By the 1980s, the wildlife had been moved to roomier habitats elsewhere, and offices took over much of Astor Court. Its most ornate landmark, the Lion House, lay fallow while the Wildlife Conservation Society

(WCS), which is headquartered at the zoo, runs four other zoological parks in town and employs thousands of naturalists worldwide, pondered reuse options.

"It was such a shame to have such a beautiful building not open to the public, to not have life in it for our guests," says Susan A. Chin,

WCS's director of planning. For six years, she has been overseeing conversion of the Lion House into a mini-Madagascar, complete with pliable rubber tree branches for lemurs to leap along and rockwork-walled tanks for 13-ft.-long crocodiles. Throughout the rest of Astor Court, meanwhile, a Chin-led team has recreated a Beaux-Arts landscape that, as Building Conservation Associates (BCA) project manager Claudia Kavenagh puts it, "had been altered over the years on an as-needed basis.



An intimidating jaguar carved by eminent sculptor Anna Hyatt Huntington guards a boxwood-striped Italian Garden at the Bronx Zoo's circa-1900 Astor Court. Photo: courtesy of Julie Larsen Maher © Wildlife Conservation Society

It had lost a lot of its original logic and sense of place. WCS asked us to help them turn it back into a destination."

The court originally was a place where the elite – socialites, politicians and other celebrities – liked to be seen on balmy afternoons. *The New York Times* would cover their visits breathlessly, and report on the arrivals, births, escapes, surgeries and deaths of popular animals. Guests entered near Astor Court via the Rainey Memorial Gates, which Paul Manship sculpted in bronze with bears, deer, monkeys, owls and herons. Of all Astor Court's attractions, however. *The Times* called the Lion House "the handsomest building," as well as the most technologically advanced: "It has every possible modern improvement, many of its features being entirely novel."

Wire mesh, rather than the standard depressing bars, fronted the cages. Pneumatic pumps powered the heating system. Elevators, pulleys and floor-mounted

tracks allowed caged cats to be safely moved throughout the 192-ft.-long building. Skylights as well as tile murals of jungles and deserts reminded the lions, leopards, tigers, pumas, cheetahs and jaguars a little of the great outdoors.

As early as the 1940s, the zoo began moving felines into more convincingly naturalistic settings with names like Lion's Island. As the rest of Astor Court was turned over to offices, plans were floated to use the Lion House as a conservation school or restaurant. But WCS has geared up in recent years for a high-profile \$650 million capital campaign, Gateways to Conservation, emphasizing links between its local and global programs. So the Lion House made most sense as a showplace explaining how and why the society helps preserve habitats on the island of Madagascar, home to one percent of the planet's biodiversity.



Now restored to its original condition (above), Astor Court's monumental double staircase is a medley of scalloped grottoes, garlanded plinths, brick and stone pavers, and terra-cotta balusters. Photo: courtesy of Julie Larsen Maher © Wildlife Conservation Society; circa-1900 photo (right): © Wildlife Conservation Society

Right: The stone jaguars now watch over the restored brick and stone pavement rectangles that flank central diamonds in the staircase's original patterns. Photo: courtesy of Building Conservation Associates

Below: This summer, the WCS will unveil a restoration of a multi-tiered antique Italian fountain studded with cherubs and sea creatures. Photo: © Wildlife Conservation Society



In the exhibit opening in June – officially named "Madagascar!" – visitors will meander between carved-concrete cliffs and epoxy or concrete baobab trees (some of which conceal air ducts or structural columns). Skylights made of ETFE (ethylene tetrafluoroethylene, developed by Foiltec NA of Cohoes, NY) let in UV light that plants and animals need, but are etched with square patterns that can be overlapped for opacity on hot days. Mesh walls divide habitats, so lemurs' chatter will echo throughout the place. Photo-realist murals and mirrors back the exhibits, giving the narrow building an illusion of depth. Videos show animals under threats such as fires or forest clear-cutting, and under the care of WCS conservationists.

"We've created a stage set, with many, many layers to discover, so guests will keep finding something new each time they visit," Chin says. "We want to inspire respect for wildlife while giving people a sense of immersion in nature, a sense of what has threatened the creatures on the island, and a sense of hope for change."

"Madagascar!" is expected, of course, to boost zoo attendance while magnanimously educating the public. The building itself will also help the WCS revenue stream, since a rentable, restored events hall occupies 40 percent of the interior. Original truss work bands the hall's vaulted ceiling, and pilasters and columns are crowned in sculpted lions or flora. Along some walls, the architects set slats alluding to the vintage cages – the wood species chosen was, fittingly, zebrawood.

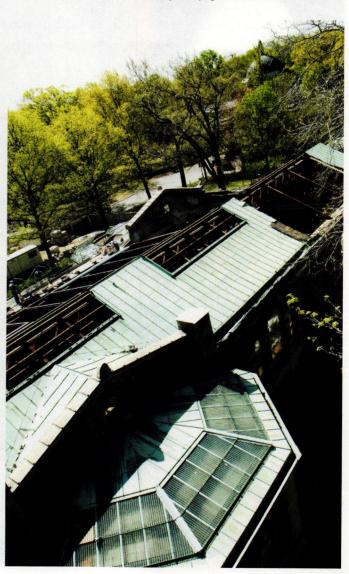


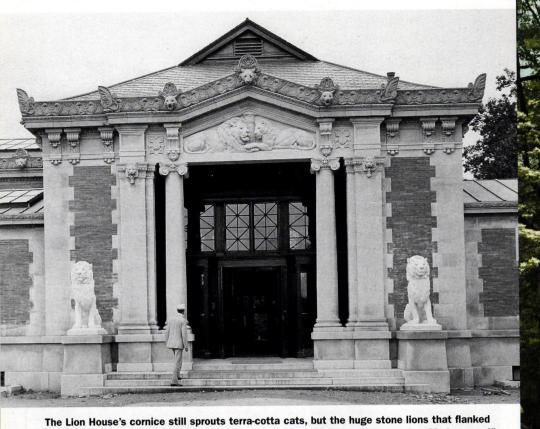
Mechanicals extend deep under the hall's polished concrete floor – the basement was lowered from 5 to 10 ft. into solid rock, and the building underpinned with steel to make room for equipment including a fuel-cell generator and a water-recycling system that also serves the nearby sea-lion pool. "There's been so much complexity into fitting cutting-edge exhibits into a landmark building while meeting LEED-Gold standards," Chin explains. The mechanicals protrude under a new back terrace, flanked by stone lions that originally guarded the front door.



Above: At an entrance path near the fountain stand bronze gates by Paul Manship, enlivened with bears, deer, monkeys, owls and herons. Photo: © Wildlife Conservation Society

Right: The Lion House will open in June as a home for "Madagascar!" habitats. While the original feline inhabitants enjoyed ample skylights along the building's 192-ft. spine, the new occupants will benefit from ETFE skylights that let in UV light while maximizing climate control in the LEED-Gold-standard project. Photo: courtesy of Julie Larsen Maher © Wildlife Conservation Society



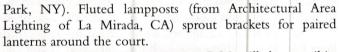


The Lion House's cornice still sprouts terra-cotta cats, but the huge stone lions that flanked the south doorway (above) have been hoisted to a rear garden terrace, so the "Madagascar!" exhibit entrance can be clearly branded. Photo: courtesy of Julie Larsen Maher © Wildlife Conservation Society; circa-1900 photo (above): © Wildlife Conservation Society

Chin explains that especially for young guests who can't read yet, "We didn't want lions at the entry that might confuse anyone about what's exhibited here now."

After spilling out of the "Madagascar!" exhibit, guests are likely to encounter free-ranging peacocks and peahens. New paths crisscross Astor Court's main lawn, which has been renamed the Peacock Garden, and boxwood and yew rows encircle flowerbeds in an adjacent Italian Garden. BCA's team dug trenches to conceal upgraded services, such as power and data lines, and hundreds of original granite curbs defining paths and lawns were reset. The monumental double staircase was completely disassembled and rebuilt; along its brownstone treads rise garlanded plinths, scalloped grottoes, carved jaguars by Anna Hyatt Huntington, and terracotta balusters (replacements came from Boston Valley Terra Cotta in Orchard





When the Lion House reopens, BCA will also unveil its restoration of an antique Italian fountain, a tiered stack of dolphins, sea gods and goddesses, cattails, cherubs, octopus tentacles and a swan. "The rejuvenated fountain will be a crowning touch on an impressive ensemble," Kavenagh says. "It will be wonderful to enter the zoo again as elegantly as you were meant to originally." – Eve M. Kahn



To give the long, narrow Lion House an illusion of depth, photo-realist Madagascar murals surround dense forests of epoxy or concrete baobab trees (some of which conceal air ducts or structural columns). Rubber branch tips will allow lemurs to make springy jumps. Photo: courtesy of Julie Larsen Maher © Wildlife Conservation Society

Left: Carved-concrete walls at a Lion House exhibit replicate sharpedged limestone cliffs common in Madagascar. Photo: courtesy of Julie Larsen Maher © Wildlife Conservation Society

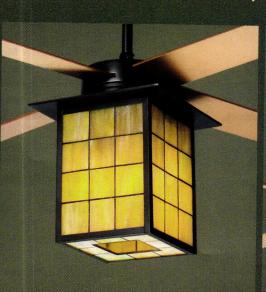


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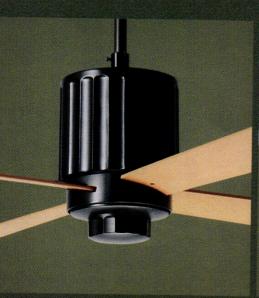
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Restore Media LLC is the only publisher and conference producer dedicated to the traditional building market. The company's magazines, conferences, trade shows, websites and directories serve the information needs of architects, builders, developers, building owners, facilities managers, government agencies, interior designers, landscape architects, suppliers, preservationists, town planners, artisans, trades people and old house enthusiasts who work passionately to renovate and restore historic buildings or build new ones in a traditional style.

The traditional building market has emerged into a recognized and firmly established segment of the residential and commercial construction industry with more than \$170 billion in construction volume. From grass roots movements in America's historic neighborhoods to a government mandated National Historic Preservation Act, Americans have a heightened appreciation for our architectural heritage and are spending money to preserve and improve it.

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www.restoremedia.com

### **Historical Products Showcase**

#### AAMSCO Lighting, Inc.

843-278-0000; Fax: 843-278-0001 www.ferrowatt.com Summerville, SC 29483

Manufacturer of Ferrowatt-brand Edison-reproduction light bulbs: early carbon, 1910 Mazda tungsten & other models.

Write in No. 2240



This replica 16-candle-power, carbon-filament bulb, one of the first models produced by Gerald Philips and manufactured for the Electra company in Amsterdam, is distributed by AAMSCO Lighting.

#### Above View by Tiles, Inc.

414-744-7118; Fax: 414-744-7119 www.aboveview.com Milwaukee, WI 53221

Supplier of suspended plaster ceiling tile & exotic wall panels: gypsum & other non-combustible aggregates.

Write in No. 1537

#### American Clay Enterprises, Inc.

866-404-1634; Fax: 505-244-9332 www.americanclay.com Albuquerque, NM 87102

Supplier of finishes for walls & ceilings: clays, aggregates & natural pigments; alternative to plaster & gypsum; non-flammable, resists mold; 'green' Marittimo finish made of reclaimed shells.

Write in No. 1906

#### **American Restoration Tile, Inc.**

501-455-1000; Fax: 501-455-1004 www.restorationtile.com Mabelvale, AR 72103

Custom manufacturer of historical tile: for fireplaces, flooring, kitchens, baths & custom mosaics; restoration & new construction; custom matching of glazed & unglazed tile.

Write in No. 8032

#### **Antique Lumber Corp.**

617-548-1829; No fax www.antiquelumber.net Chelsea, MA 02150

Supplier of vintage wood: antique & salvaged timber & boards; antique wood flooring; random-width & wide-board flooring.

Write in No. 1457

#### Architectural Grille

800-387-6267; Fax: 718-832-1390 www.archgrille.com Brooklyn, NY 11215

Manufacturer of custom grilles: perforated & linear bar grilles; aluminum, brass, steel & stainless steel; variety of finishes; stock sizes; water-jet & laser cutting.

Write in No. 2220



Architectural Grille custom designs and manufactures grilles using water-jet-cutting technology.

#### **Bathroom Machineries, DEA**

209-728-2031; Fax: 209-728-2320 www.deabath.com Murphys, CA 95247

Supplier of Early American & Victorian bathroom fixtures & accessories: antique & reproduction clawfoot tubs, high-tank toilets, pedestal sinks, mirrors & many one-of-a-kind items.

Write in No. 1725 for plumbing; 5860 for hardware



Bathroom Machineries has an extensive line of pedestal sinks and restored faucets and valves.

#### **Bovard Studio, Inc.**

800-452-7796; Fax: 641-472-0974 www.bovardstudio.com Fairfield, IA 52556

Restorer, designer & fabricator of stained-glass windows: wood, aluminum & steel frames; protective glazing systems; replicates lost stained-glass windows; faceted glass; mosaics; hand-painted kiln-fired original art glass.

Write in No. 7690



Bovard Studio restored "Angel Among the Lilies," by Louis Tiffany and Co., for St. Luke's United Methodist Church in Dubuque, IA.

#### Brian Greer's Tin Ceilings, Walls & Unique Metalwork

519-743-9710; Fax: 519-570-1447 www.tinceiling.com

Petersburg, ON, Canada NOB 2H0

Supplier of decorative tin ceiling panels: tin, copper, brass, chrome & pewter finishes on 2x2-ft. panels; can be painted or left bright tin; moldings, fillers & cornices available.

Write in No. 966

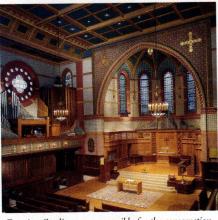
#### **Canning Studios**

203-272-9868; Fax: 203-272-9879 www.canning-studios.com Cheshire, CT 06410

Restorer & designer of decorative finishes, ornamental plaster & wood: historic-paint analysis; plaster consolidation &

stabilization; decorative painting, murals, interior & exterior gilding & wood graining; metal & stone cleaning.

Write in No. 5100



Canning Studios was responsible for the conservation, restoration and decorative painting of Battell Chapel at Yale University in New Haven, CT.

#### **Cedar Valley Shingle Systems**

800-521-9523; Fax: 831-636-9035 www.cedar-valley.com Hollister, CA 95023

Supplier of premium-grade architectural cedar shingle panels: exposures of 4.25-, 5.3- & 7 1/8-in.; straight or staggered butt lines; all are 96x21-in.

Write in No. 1832



Handy Panels from Cedar Valley are handcrafted with kiln-dried western red cedar shingles mounted over an integrated fiberglass moisture barrier onto plywood backino.

#### Chelsea Decorative Metal Co.

713-721-9200; Fax: 713-776-8661 www.thetinman.com Houston, TX 77074

Manufacturer of pressed-tin ceiling & wall panels: tin-plated steel has shiny silver finish, can be painted with oil-based paint; 3-, 6-, 12- & 24-in. patterns ranging from Art Deco to Victorian; easy-to-install 2x4-ft. sheets.

Write in No. 190



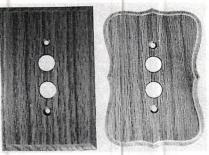
The Gothic Gold tin ceiling pattern from Chelsea Decorative Metal features a hand-painted finish.

#### Classic Accents, Inc.

800-245-7742; Fax: 734-284-7185 www.classicaccents.net Southgate, MI 48195

Manufacturer of reproduction push-button light switches: cover plates in 28 finishes & styles; molding hooks, tassel kits & picture cord.

Write in No. 4850



Switchplates are available from Classic Accents in a number of styles, including these two Early American oak models.

#### **Concealite Safety Products**

605-542-4444; Fax: 605-542-3333 www.concealite.com Elkton, SD 57026

Supplier of building safety products: emergency lighting, exit signs, fire-alarm signaling devices, emergency a/c power, central battery units & RT switches; almost invisible installation.

Write in No. 1759

#### **Country Road Associates, Ltd.**

845-677-6041; Fax: 845-677-6532 www.countryroadassociates.com Millbrook, NY 12545

Supplier of reclaimed wood: wide board & random width; chestnut, maple, white oak, white pine, heart pine, cherry, elm & walnut; distributor of reclaimed barn siding, hand-hewn beams, paneling & cabinetry.

Write in No. 7480 for flooring; 1416 for cabinetry



Country Road Associates remills and distributes reclaimed 19th-century barn siding that can be used for flooring or specialty items such as this handcrafted mirror.

#### **Decorative Hardware Studio**

914-238-5251; Fax: 914-238-4880 www.decorative-hardware.com Chappaqua, NY 10514

Manufacturer of drapery, cabinet, furniture & door hardware & stair rods: brass, bronze, nickel, crystal & ceramics.

Call for more information.

Write in No. 210

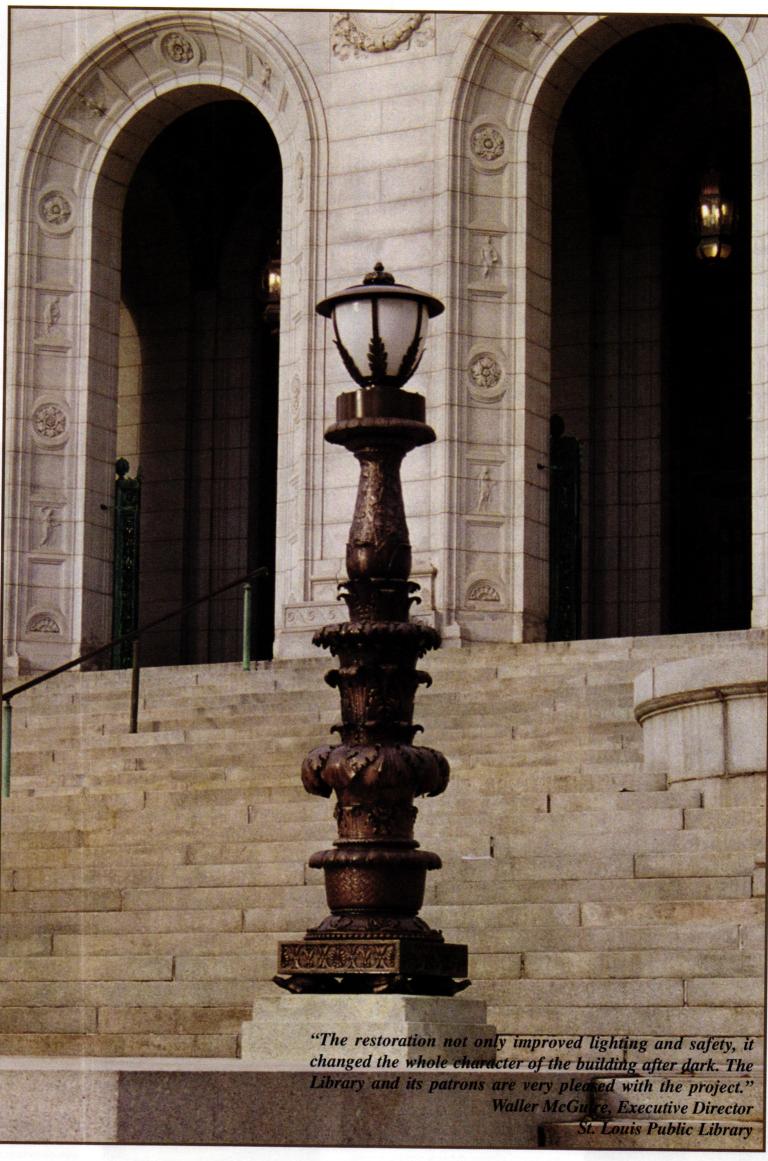
#### **Decorators Supply Corp.**

773-847-6300; Fax: 773-847-6357 www.decoratorssupply.com Chicago, IL 60609

Supplier of period architectural elements: ceiling medallions, mantels, cornices, columns & capitals; plaster of Paris, compo & wood; 14,000 patterns available.



Decorators
Supply created
this multilayered cornice
molding.





### ST. LOUIS PUBLIC LIBRARY

I.E.S. AWARD for use of Induction Lighting in Historic Fixtures

PROJECT ENGINEERS: WILLIAM TAO & ASSOCIATES HISTORIC LIGHTING CONSULTANT: GARY H. BEHM I.E.S.

# SAINT LOUIS ANTIQUE LIGHTING CO. RESTORATION • REPLICATION • INNOVATION

801 North Skinker Boulevard, St.Louis, MO 63130 Phone:(314)863-1414 FAX: (314)863-6702 Email: slaco@slalco.com



Entol's Biscaya System, shown in custom hand-rubbed butternut wood-grain finish with gold highlights, is one of the 11 ornamental ceiling systems comprising the company's Beaux Arts collection.

#### Entol Industries, Inc.

800-368-6555; Fax: 305-247-6211 www.entol.com Homestead, FL 33030

Manufacturer of architectural ornament: ceiling panels (more than 150 designs), moldings & more; polymer, wood, gypsum, GRG, FRP & more; primed or prefinished; stock & custom.

Write in No. 2950

#### **Gaby's Shoppe**

800-299-4229; Fax: 214-748-7701 www.gabys.com Dallas, TX 75207

Manufacturer of handcrafted decorative iron drapery hardware: for curved & angled bay windows & arches; 30 standard finishes; more than 100 finial options.

Write in No. 2520



Gaby's Shoppe offers a selection of drapery-hardware designs in six powder-coated finishes.

#### Jack Arnold - European Copper

800-391-0014; Fax: 918-494-0884 www.jackarnold.com Tulsa, OK 74136

Manufacturer of custom copper chimney pots: patina finish; UL listed & patented. **Write in No. 1719** 



Chimney pots with patina finishes are part of the European Copper line manufactured by Jack Arnold -European Copper.

#### **Kees Architectural Division**

800-889-7215; Fax: 920-876-3065 www.kees.com Elkhart Lake, WI 53020

Custom fabricator of architectural stamped, waterjet-cut & bar grilles & registers: baseboards & radiator covers in stamped & perforated metal; wide variety of patterns & thicknesses.

Write in No. 1335

#### Leo Uhlfelder Co.

914-664-8701; Fax: 914-664-8728 www.uhlfeldergoldleaf.com Mount Vernon, NY 10553

Supplier of genuine & imitation gold, silver & aluminum leaf: decorative painting & gilding tools, brushes, books, videos & related items; bronze & aluminum powders.

Write in No. 810



Leo Uhlfelder offers a variety of interior gilding products.

#### **Monarch Products Co.**

201-507-5551; Fax: 201-438-2820 www.monarchrad.com Carlstadt, NJ 07072

Supplier of all-steel radiator enclosures: baked-enamel finishes & grille fronts; stock & custom; for corporate board-rooms, offices, churches, institutions & private residences.

Write in No. 6060

#### NOMMA - Nat'l Ornamental & Misc. Metals Assn.

888-516-8585; Fax: 770-288-2006 www.nomma.org McDonough, GA 30253

Major trade association: membership of more than 1,000 metal craftspeople; goal is to improve levels of professional excellence in metalwork; visit website to find NOMMA members in your area.

Write in No. 5170



The members of the National Ornamental & Miscellaneous Metals Association (NOMMA) produce ornamental metalwork, such as this stair railing.

#### **Notting Hill Decorative Hardware** 262-248-8890; Fax: 262-248-7876

262-248-8890; Fax: 262-248-7876 www.nottinghill-usa.com Lake Geneva, WI 53147

Distributor of high-end hardware: knobs & pulls of hand-cast pewter or bronze, additional plating options, semi-precious stones, enameling & hand painting; Classical, old world, island & lodge motifs. Write in No. 319

#### Otteson Co.

972-317-3120; Fax: 972-317-2812 P.O. Box 293060 Lewisville, TX 75029

Supplier of fine glass for lighting fixtures: chandeliers, sconces, pendants & table lamps; Victorian, Turn of the Century, Art Nouveau & Art Deco; blown-glass shades (principally from Vianne, France); custom projects.

Write in No. 1045



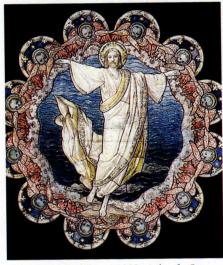
Otteson supplies glass lighting shades, including this multi-colored floral model.

#### Rambusch Decorating Co.

201-333-2525; Fax: 201-433-3355 www.rambusch.com Jersey City, NJ 07304

Designer & fabricator of ecclesiastical art & stained glass: altars, ambos, arks, crosses & more; decorative painting; commercial environments; since 1898.

Write in No. 8002



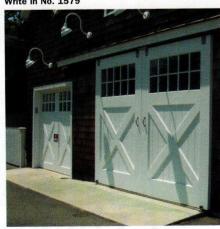
Rambusch restored this ca. 1898 window for St. Luke's Episcopal Cathedral in Portland, ME; it is attributed to White Friars of London.

#### Richards-Wilcox, Inc.

800-877-8456; Fax: 630-897-6994 www.rwhardware.com Aurora, IL 60506

Manufacturer of historical reproduction hardware: for slide, swing & slide-fold doors; strap hinges, door pulls, bolts, latches, trucks & tracks for doors weighing up to 5,000 lbs; Turn of the Century and other historical styles.

Write in No. 1579



Specialty door hardware from Richards-Wilcox was used for this bi-parting sliding doors.

#### St. Louis Antique Lighting Co.

314-863-1414; Fax: 314-863-6702 801 N. Skinker Blvd. Saint Louis, MO 63130

Manufacturer & supplier of architectural lighting: all styles; historical reproductions & custom lighting; restoration services; commercial & ecclesiastical projects.

Write in No. 6190



St. Louis Antique Lighting fabricated this historic custom eight-arm chandelier with etched-glass shades for a church in Minnesota.

#### Stairways, Inc.

800-231-0793; Fax: 713-680-2571 4166 Pinemont Houston, TX 77018

Designer & manufacturer of Victorianstyle spiral & straight stairs, stair parts, supplies & kits: steel, brass, stainless steel, wood & more.

Write in No. 4870



Stairways designed and manufactured this 55-ft.-tall spiral staircase with a bronze handrail.

#### Strom Plumbing by Sign of the Crab

916-638-2722; Fax: 916-638-2725 www.signofthecrab.com Rancho Cordova, CA 95742

Supplier of solid-brass plumbing fixtures & bath accessories: reproduction fixtures, clawfoot & period tubs, showers & fittings; period sinks.

Write in No. 153



Sign of the Crab's line of plumbing fixtures includes a number of traditional styles in various materials and finishes.

#### The Period Arts Fan Co.

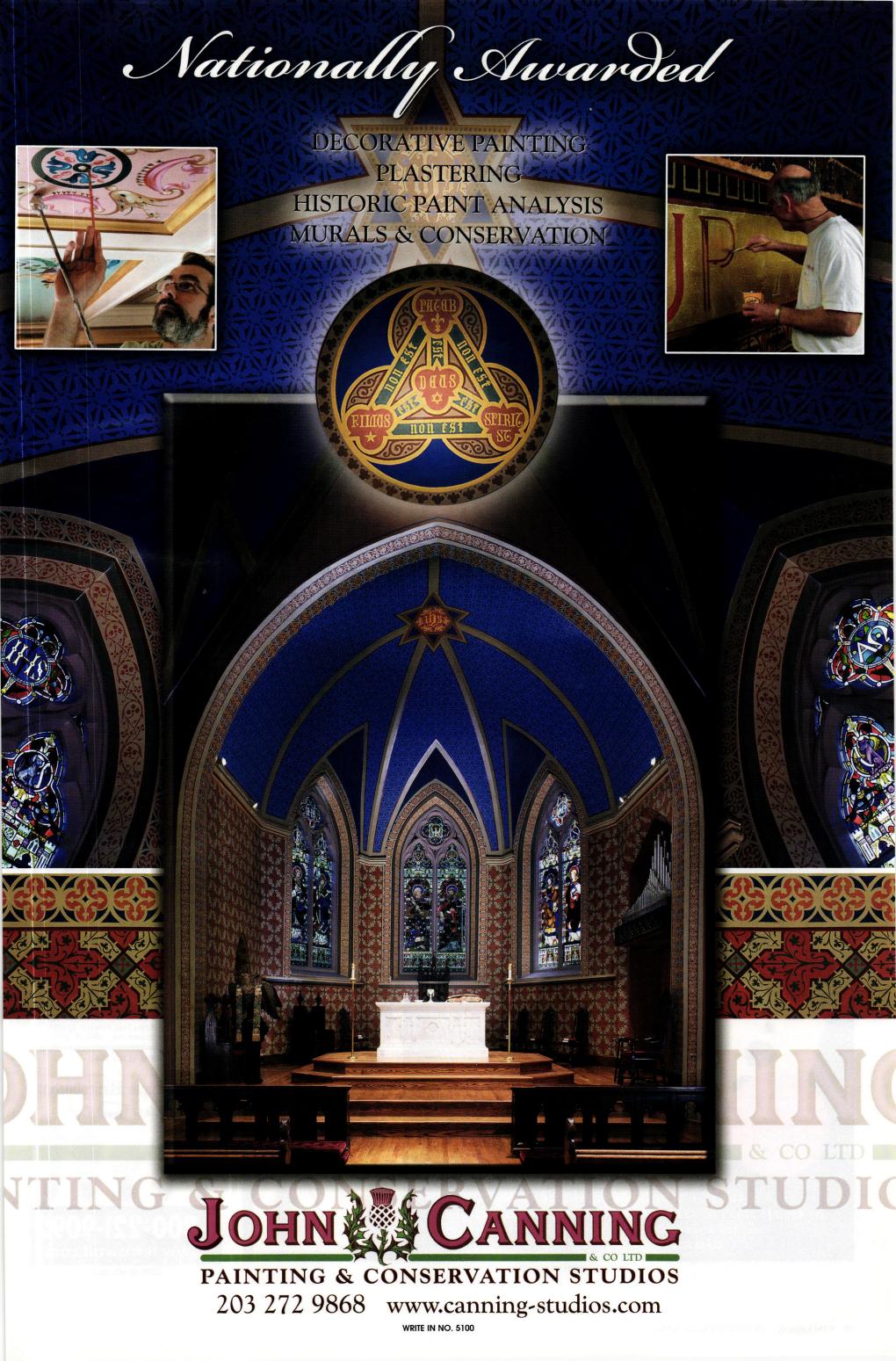
888-588-3267; Fax: 541-482-8418 www.periodarts.com Ashland, OR 97520

Supplier of traditionally styled ceiling fans: Arts & Crafts, Neoclassical, Art Nouveau, Bauhaus, French Art Deco & more styles.

Write in No. 1837

Reminiscent of the West Coast Art and Crafts movement, the Bodega fan from the Period Arts Fan Co. incorporates hammered metal and an exposed rivet assembly.





#### The Reggio Register Co.

800-880-3090; Fax: 978-870-1030 www.reggioregister.com Leominster, MA 01453

Manufacturer of grilles & registers: for forced-air & high-velocity systems; cast iron, brass, aluminum, zinc & wood; handcrafted to last for generations.

Write in No. 5810



Reggio Register offers a wide selection of metal registers and grilles in cast iron, brass and aluminum.

#### **Tremont Nail Co.**

800-842-0560; Fax: 508-295-1365 www.tremontnail.com Mansfield, MA 02048

Supplier of antique steel-cut nails: for flooring, siding, furniture & doors; decorative heads; heavy-duty & galvanized nails; 20 different patterns; Colonial hardware for doors & gates.

Write in No. 2669

#### **Vermont Timber Works, Inc.**

802-886-1917; Fax: 802-886-6188 www.vermonttimberworks.com North Springfield, VT 05150

Custom fabricator of timber frames & trusses: fir, oak, pine & hemlock; traditional mortise-&-tenon joinery & hardwood pegs; residential & commercial buildings.

Write in No. 927



Vermont Timber Works created this timber-frame addition to an alpine lodge in Vermont.

#### **Von Morris Corp.**

800-646-6888; Fax: 800-646-8988 www.vonmorris.com Camden, NJ 08102

Fabricator of architectural hardware: knobs, levers, locks, hinges & cabinet hardware; 30 different finishes.

Write in No. 1864



#### What It's Worth

512-328-8837; Fax: Same as phone www.wiwpine.com Austin, TX 78716

Supplier of antique longleaf heart-pine flooring, dimensional lumber, posts & beams: clear vertical-grain quartersawn cuts. Write in No. 1464



This wide-plank Old Reveal flooring was supplied by What It's Worth.

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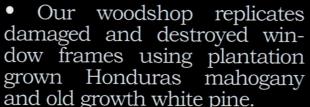
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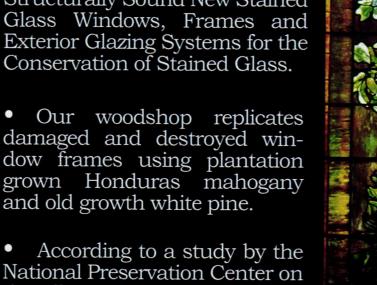
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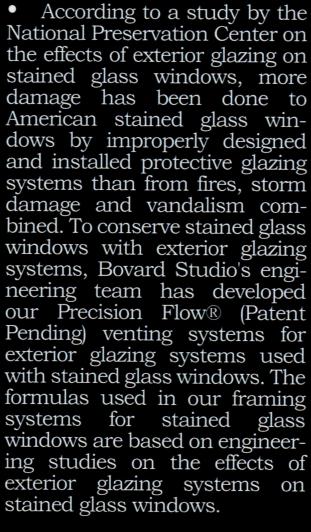
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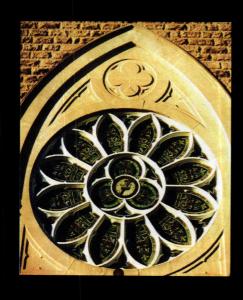




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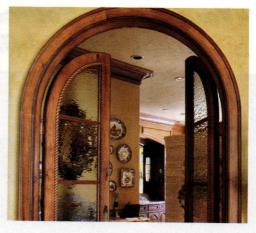
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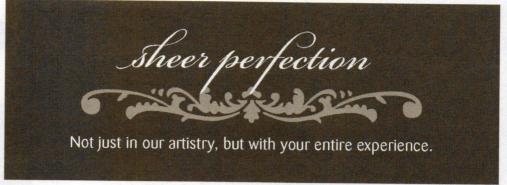


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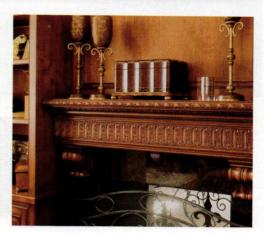


















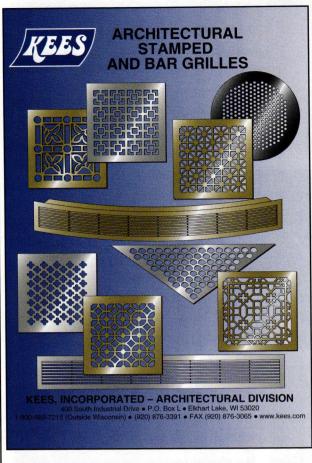
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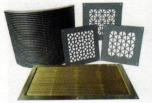
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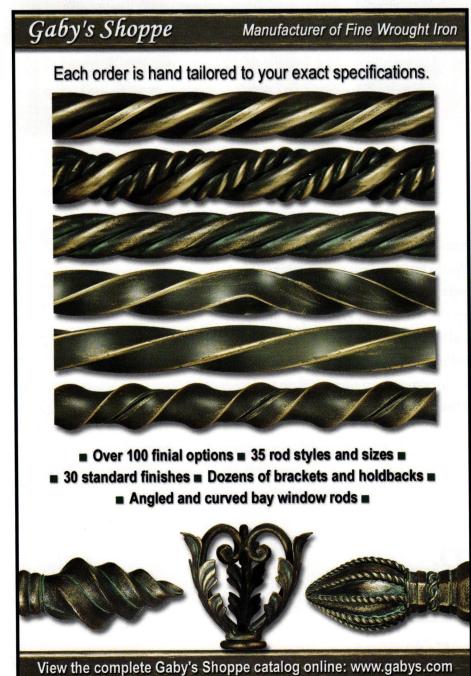






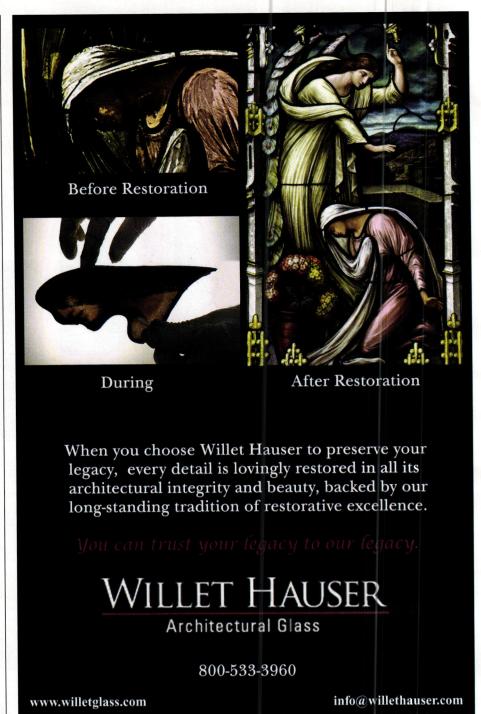
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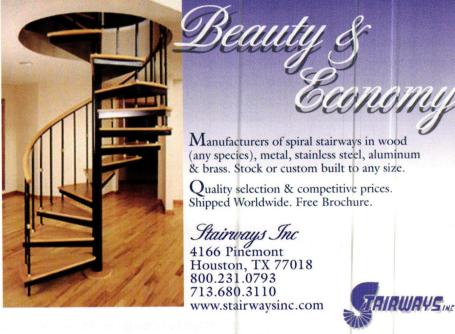


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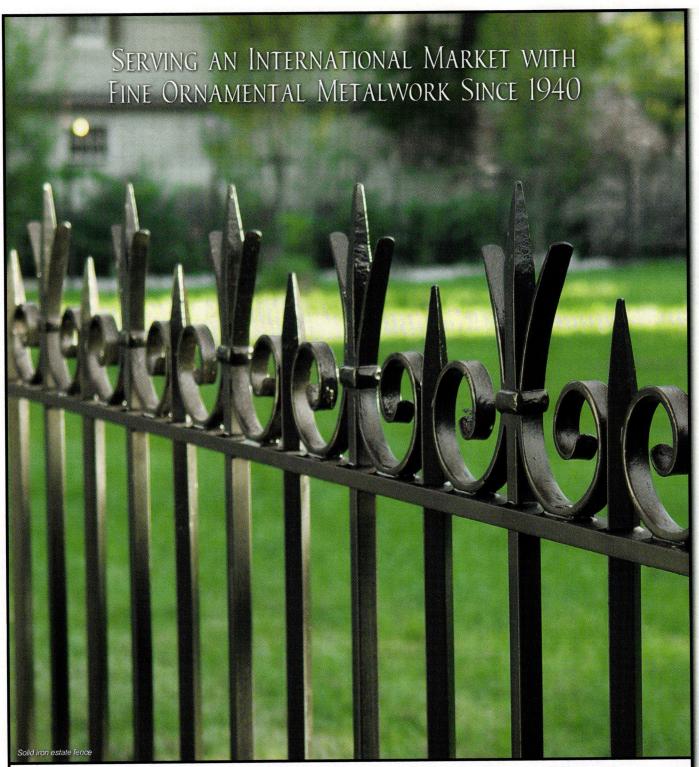
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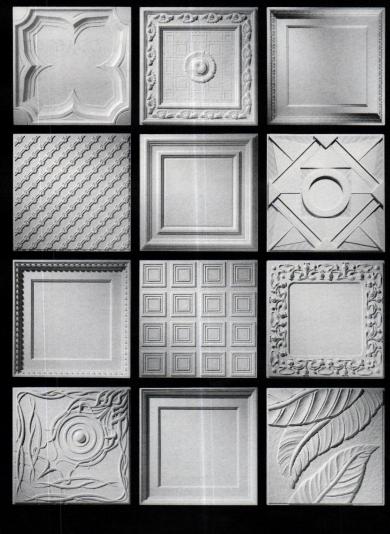
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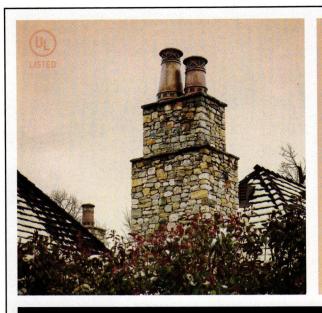


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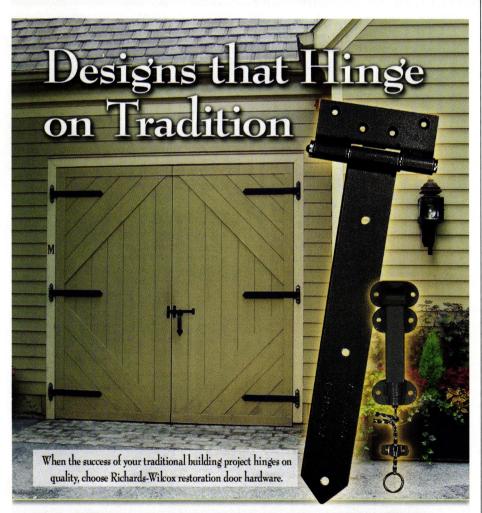
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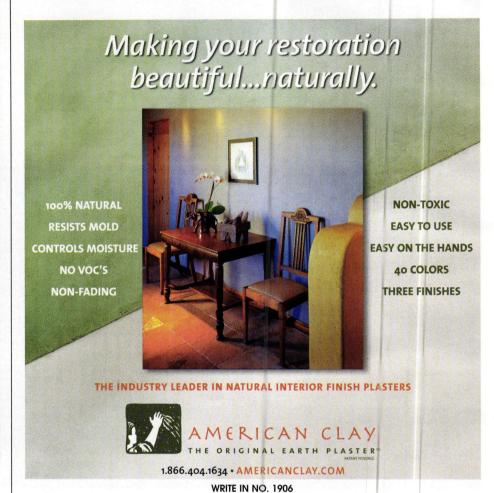


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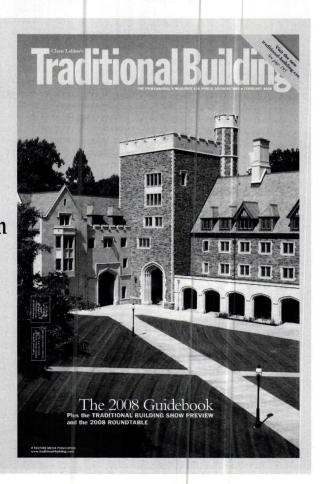
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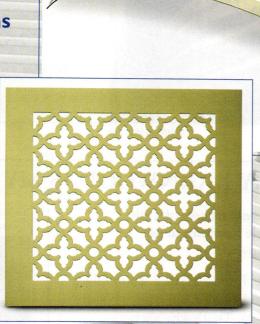
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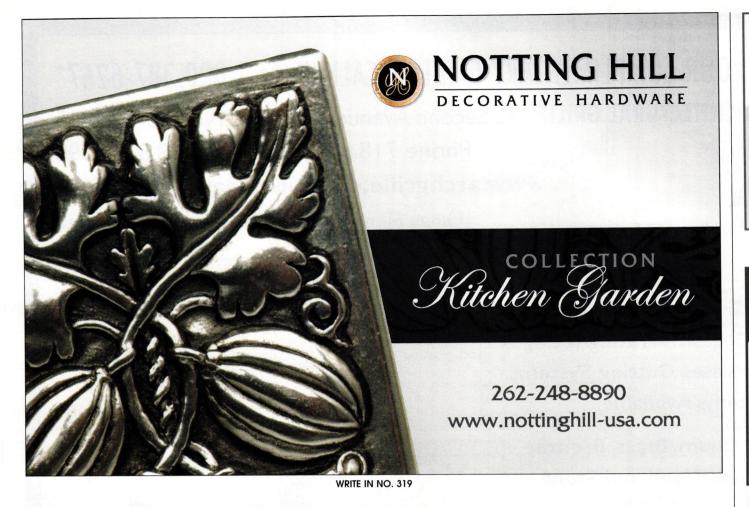
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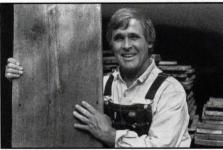
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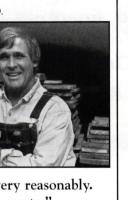
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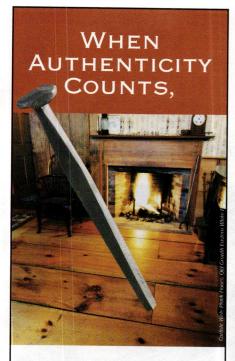
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# **Ageless Support**

Manufacturers offer exterior columns in a surprising array of traditional and contemporary materials.

By Nicole V. Gagné

oric, Tuscan, Ionic, Corinthian, Composite – the Classical orders of columns have been enshrined in architectural design since the days of ancient Greece, although their use can be traced back even further, to the Egyptian architect Imhotep in 2600 B.C.E. – who had the surfaces of stone columns carved to resemble bundled reeds – and beyond. The grandeur, solidity and beauty of columns have been design fundamentals throughout human history, and they show no signs of fading in the 21st century, least of all in commercial and institutional settings.

The revival of Classicism as an architectural language has meant a resurgence and revitalization in the manufacture of columns. For this survey article, we've set aside the vast topic of wood columns and narrowed our focus to suppliers of exterior columns in stone, cast stone, fiberglass and other composites. These firms produce columns in all orders; note too that all are manufacturers and remain uninvolved in column installation. What follows is an outline of five leading companies and the unique products they offer.

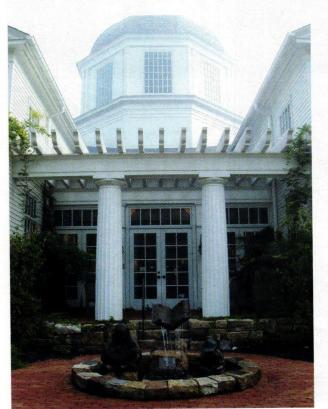
#### **Carved Stone**

Two of North America's most respected suppliers of cut- and carved-stone columns are Bybee Stone Co., Inc., of Bloomington, IN, and the Canadian firm Traditional Cut Stone, Ltd. (TCS), of Mississauga, Ontario. At both concerns, Indiana limestone is the material of choice. Bybee, founded in 1979, works exclusively in this popular stone; TCS, in business since 1998, also supplies columns in sandstone or marble, but the bulk of its production also relies upon Indiana limestone.

"Limestone is the most widely used dimensional stone in North America," notes TCS co-founder Richard Carbino, "and architects specify Indiana limestone the most." Both Bybee and TCS eschew stock columns and work exclusively on custom projects.

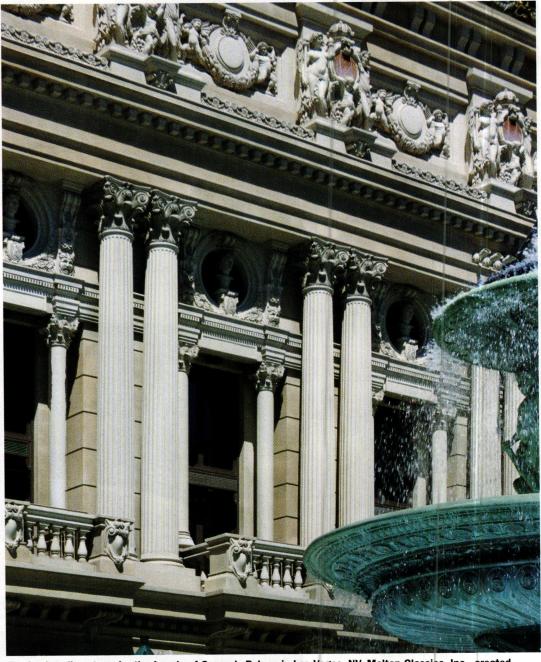
Originally a specialist in restoration projects, Bybee has changed over the decades along with its market, and today, according to Jeff Chitwood, the firm's chief estimator and contracts manager, Bybee's projects are "about 75 percent new construction and 25 percent restoration. There's a lot of new construction going on, which uses columns." Most of these new-construction clients are institutional, he adds. "We do probably only about 15 percent residential; most of our work, 65 percent or so, is colleges and universities – they're looking to attract top students, and one of the ways they can do that is with timeless buildings."

Carbino can also attest to a similar growth in the new-construction market for TCS. "Some years it would be 60 percent restoration; other years, 20 percent. But generally speaking, restoration is not the bulk of our work over a year," he says, noting that most of TCS's columns are purchased by homeowners: "I would say it's about 80 to 90 percent residential as opposed to commercial. We do a lot of work for what we call museum-style homes and large mansions."



Visitors to the Poland Branch Library in Poland, OH, are greeted by Colossal Greek Doric columns from Chadsworth Inc. These imposing columns, fabricated in fiberglass, were made with a filament-winding process that comes from the fabrication of rocket and missile cases. Photo: courtesy of Chadsworth Inc.

With both firms, the determining factors for cost are the column's size and style."The three basic orders are Doric, Ionic and Corinthian, but there are several different orders of columns, and the more complex its design, the more labor hours are involved, and so the cost goes up accordingly," says Chitwood. "But the size is a primary consideration. Some of the smaller columns - maybe a small colonnade, where the columns themselves are around 8 ft. tall - will go anywhere from maybe \$1,500 for a single column to... well, we've actually had a project where a single column was worth \$42,000. The longest block of limestone I've ever seen was about 17½ ft., and that's about as wide as our



To simulate limestone for the facade of Caesar's Palace in Las Vegas, NV, Melton Classics, Inc., created these elaborately textured GFRC columns, along with the FRP cornice and cast-stone balustrade. Photo: courtesy of Melton Classics

lathe will open. With the giant order columns that we did for the project at Market Square in Washington, DC, I think the drums were about 6x6x5½ ft. The bases on those columns were somewhere around 7 ft. 4 in."

Carbino details some of the additional complexities of producing oversized columns: "If you're making, say, a 20-ft. column, there are a couple of lathes in North America that can probably turn something like that, but usually it's a nightmare, so you'll want to break it into pieces. And when you split a column shaft into pieces, it always has to be an odd number – three, five, seven or nine – so that your eye doesn't go to the center joint."

As building codes vary nationwide, so does the necessity for an additional support within stone columns. "In some areas it's code for the columns to have steel reinforcement going through them," Chitwood observes. "We either make column wraps in that instance, or actually core them so they can be slipped over the top of tube steel."

"Where we are in Canada, you don't have to, but in Florida and in California, it's legislated that you have to have a steel column," Carbino points out. "A lot of people will split the column down the height, and then put the two pieces back together, but whenever possible, we prefer to core through the column and slide it over the steel. It looks nicest and you don't see any joints."

Of course, both firms take pride in the extraordinary longevity of their products. "No one really asks for a warranty," says Carbino. "As long as the column fits, it's fine." "There are hundreds of structures 2,000 years old, which have stone columns that are still intact," adds Chitwood. "In general, the only things that ruin them are either vandalism or war. If they're installed properly and they're level, they'll be there for a while!"

#### Cast Stone, Fiberglass & Composite

Melton Classics of Lawrenceville, GA, founded in 1994, offers standard and custom handcrafted columns in a variety of materials, including the MeltonStone(TM) cast-stone. This is an attractive and economical alternative to natural-stone columns that comes with a one-year warranty. The column shafts are dry-tamp manufactured, after the standards of the Cast Stone Institute, and provide the familiar look and durability of natural stone. Made in one-piece shafts or shafts in halves and sections to surround steel supports, they're also available in stacked sections that re-create the look of ancient classical columns.

Melton Classics also produces DuraClassic(TM) poly/marble columns, cast from fiber-reinforced polyester resinmarble compound, which are available with limited lifetime warranties. Melton's MarbleTex(TM) columns, made of marble/polymer composition, utilize an exclusive centrifugal casting process that permits these synthetic-stone column shafts to be manufactured in one load-bearing seamless unit, thus simplifying installation. Like the firm's cast-stone columns, these are also offered with a one-year warranty.

Melton's other notable non-wood column lines include FiberCrete(TM) columns in glass-fiber reinforced cement (GFRC) with a one-year warranty, and FiberWound Classic(TM) columns of load-bearing fiberglass (also with full-depth ionic flutes in the FiberFlute Classic(TM) line), with a limited lifetime warranty.

The South is home to two other celebrated manufacturers of quality fiberglass and composite columns: Chadsworth Inc. of Wilmington, NC, founded in 1987, and Timeless Architectural Reproductions, Inc., of Cumming, GA, launched in 1996. Both offer standard and custom lines of columns in fiberglass and polyester resin.

"The majority of the work is being done in standard sizes," comments Danny Gonzales, national sales manager for Timeless. "We have a lot of custom capability, but it's a smaller percentage, I'd guess maybe 15 percent."

Jeffrey L. Davis, CEO of Chadsworth, has experienced greater variety in the market. "We're moving into our third decade now, and it's fluctuated over the years," he says. "When interest rates are low and the construction market is on a rise, we sell more of the standard mass-produced columns. When the economy is in a downturn, projects with higher budgets come around and we do more custom work."

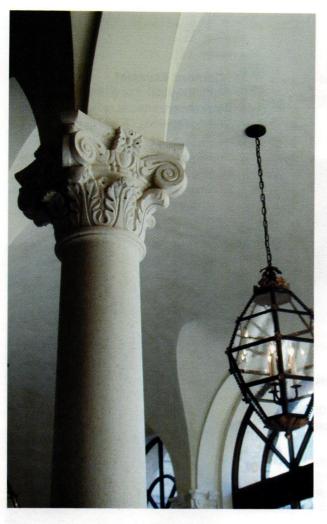
Cost is clearly the major consideration in the popularity of standard-design columns. "If your project calls for a custom profile but wood is not an option, we can create a new PolyStone(R) mold to your exact specifications, giving you the desired profile with all the benefits of the material," says Davis. "Keep in mind that creating these custom molds is costly, anywhere from \$10,000 to \$30,000, depending on the size and design required. This is in addition to the subsequent unit cost. If it's a large job – say, 30 units – the price will be spread out among each column and may indeed be cost-effective. On the other hand, if you can incorporate one of our stock products into your project, your bottom line will be much lower."

Timeless describes a similar range of costs. "The FRP columns, based on size and length, will run anywhere from \$100 all the way up to \$8,000 or \$9,000," Gonzales explains. "There are just so many different options – you can get them smooth, you can get them fluted, with a Tuscan cap or a Corinthian cap. We're also beginning to see a movement toward square columns across the country, in lower- and upper-end homes. They give the front elevation a different aesthetic look, a dimensional change. On certain style houses, a square column looks better aesthetically than a round column does."

Chadsworth takes pride in its innovations in column manufacture. "We have four different kinds of fiberglass columns – filament-wound, resin-infused, chopped or sprayed up and spun-cast," says Davis. "Filament-wound columns are great when you need a load-bearing capacity. When you touch them or rap on them, however, they sound hollow, so what I like to do with those is fill them up with sand or a sand-vermiculite mixture – you think of a column as holding up a lot of weight, you don't want it to sound as if it couldn't hold up anything. The true innovation would be the PolyStone(R), or spun-cast, column. We developed this line back in 1992, the result of many years of research and development, and it can hold detail a lot better and feels a lot thicker."

Chadsworth's fiberglass columns, according to Davis, are used mostly in new construction. "But we also do a big business in replacing wood columns," he says. "People don't understand that a wood column must be maintained, and when they buy an old house and it has a rotting wood column, the first thing they think is, 'I don't want to have that happen again,' so they replace it with an FRP column."

Most of Chadsworth's new-construction clients are institutions: "We sell massive amounts of them for large projects such as schools," he says. Gonzales likewise insists





Above: Completed in 2006, the Neoclassical-inspired Schermerhorn Symphony Center in Nashville, TN, is home to the Nashville Symphony, which performs over 100 concert events every season. It's also home to cladding, columns and capitals in Indiana limestone, supplied by Bybee Stone Co., Inc. Six 32-ft.-tall columns – each weighing just over 62,500 lbs. – adorn its main entrance. Photo: courtesy of Bybee Stone Co., Inc.

Left: Architectural ornament from Traditional Cut Stone begins life as a hand-drawn rendering that is turned into a computer-generated drawing, from which a three-dimensional clay model is hand-sculpted. Then the clay is used to create a plaster cast that provides an accurate and inflexible model, from which the final stone carving is produced. The end result is a work of art like this handsome Corinthian capital in French limestone. Photo: courtesy of Traditional Cut Stone, Ltd.

that, for Timeless, "New construction is a very large percent, I'd say at least 80. And in new construction, for us right now, we're seeing a big push in commercial projects – hospitality, retail, mixed-use, things of that nature; the church market as well. I think it's beginning to overtake the residential."

Both firms emphasize the load-bearing capacities of their fiberglass and composite columns. "When I'm selling, I like to get people to use it as a load-bearing piece," says Davis. "But most people get nervous with it and want to go ahead and put something in the inside, just to be on the safe side. On my own house, I did not. I used both filament-wound and FRP columns, and they hold my whole top floor. Of course, if the column is split so it can go around something, it loses its load-bearing ability and your warranty would not hold as a load-bearing member. In the fiberglass line, everything has a lifetime warranty, as long as the same user is in the same house."

Gonzales acknowledges the strength of Timeless's fiberglass-reinforced-polymer (FRP) columns: "They have incredible load-bearing capabilities; they're also impervious to weather, rot and insects – which makes them ideal for exterior applications – and come with a lifetime warranty. As long as they're installed correctly, as per our instructions, then these products will be warranted for life." TB



The North Carolina Appraisal Board, located in Raleigh, NC, licenses and certifies real-estate appraisers for the state; it's also a showcase for Timeless Architectural Reproductions, Inc., with its quartet of lofty columns supporting a majestic portico. Photo: courtesy of Timeless Architectural Reproductions, Inc.

# **Columns & Capitols**

To order product literature, go to www.traditional-building.com and click on "Free Product Literature" or fill out the card at page 34. To order literature from all of the companies listed here, enter **No. 9742.** 

#### 1.800.COLUMNS

800-265-8667; Fax: 910-763-3191 www.columns.com Wilmington, NC 28401

Catalog distributor of fine architectural products: Chadsworth Columns, Hartmann-Sanders Authentic Architectural Columns, PolyStone Columns, PolyStone Balustrade Series & Classic Pergolas; job-site delivery.

Write in No. 1580 for PolyStone; 180 for wood

#### Architectural Columns & Balustrades by Melton

800-963-3060; Fax: 770-962-6988 www.meltonclassics.com Lawrenceville, GA 30042

Manufacturer of architectural elements: columns, moldings, balustrades, door & window features, cornices & trim; wood, fiberglass, polyurethane, marble/resin composite, GFRC, GRG, cast stone & synthetic stone.



Architectural Columns & Balustrades by Melton manufactured the maintenance-free Marble Tex synthetic stone balustrades and columns for this building.

#### **Architectural Fiberglass Corp.**

800-439-2000; Fax: 631-842-4790 www.afcornice.com Copiague, NY 11726

Fabricator of reproduction ornament: cornice molding, columns, capitals, balustrades & themed interior environments; lightweight FRP; molded-in colors & textures; class-1 fire-retardant material; weather resistant; easy to install.

#### Architectural Products by Outwater, LLC

800-835-4400; Fax: 800-835-4403 www.outwater.com Bogota, NJ 07603

Manufacturer of 65,000+ decorative building products: architectural moldings & millwork, columns, capitals, wroughtiron components, balustrading, door hardware, lighting, ceiling tile, furniture & cabinet components & more.

Write in No. 1088

Write in No. 6400



Fiberglass, aluminum, wood, plaster, PVC and polyurethane columns are available from Outwater in many traditional styles.



This Roman Corinthian decorative capital sits on a 30-ft.-tall fluted column by Architectural Reproductions by Timeless.

#### Architectural Reproductions by Timeless

800-665-4341; Fax: 770-205-1447 www.timelessarchitectural.com Cumming, GA 30041

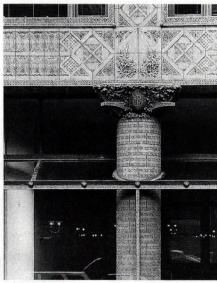
Manufacturer of architectural ornament: balustrade systems; interior & exterior architectural fiberglass & wood columns; decorative capitals, molding & millwork. Write in No. 1414

#### **Boston Valley Terra Cotta**

888-214-3655; Fax: 716-649-7688 www.bostonvalley.com Orchard Park, NY 14127

Custom fabricator of architectural terracotta products: roof tile & Terraclad (rain-screen system); columns/capitals, cornices, balustrades, garden sculpture & chimneys; standard & custom shapes & colors; replacements & new designs.

Write in No. 160



Boston Valley Terra Cotta replicated this intricate capital for the Guaranty Building in Buffalo, NY.

#### Bybee Stone

800-457-4530; Fax: 812-8876-6329 www.bybeestone.com Bloomington, IN 47402

Manufacturer of custom-cut &-carved stone: sculpture, columns & intricate carvings for exterior building restoration.



On its way to Samford University in Birmingham, AL, the Indiana limestone column on this flatbed truck was manufactured by Bybee Stone Co.

#### **Cantera Especial**

800-564-8608; Fax: 818-907-0343 www.cantera-especial.com Pacific Palisades, CA 90272

Custom hand carver of natural-stone products made from limestone, cantera, adoquin, travertine, marble & sandstone quarried in Europe & Mexico: fireplaces, fountains, planters, columns, balustrades, benches, molding & sculpture.

Write in No. 31



Cantera Especial produces columns from a variety of stones quarried in Europe and Mexico.

#### **Canterland of Mexico**

800-564-8608; Fax: 818-907-0343 www.canterlandmex.com Pacific Palisades, CA 90272

Factory-direct manufacturer of Yucatan limestone products: fountains, mantels, balustrades, stairs, columns, countertops & more; in Coquina, Ticul & Crema Maya stone.

Write in No. 1825

#### **Century Architectural Specialties**

877-262-1999; Fax: 770-590-3190 www.architecturalspecialties.com Marietta, GA 30066

Manufacturer of architectural specialty products: crown & cornice molding, ceiling medallions & domes, door & window surrounds, pilasters, capitals & more.

Write in No. 1698



Century Architectural Specialties' selection of interior molded ornament includes columns and capitols.

#### **Chadsworth Columns**

800-486-2118; Fax: 919-778-5177 www.chadsworth.com Wilmington, NC 28401

Manufacturer of authentically correct architectural columns: complete line of

columns, piers, pilasters & posts for interior & exterior use; variety of sizes, styles & materials, including wood; more than 20 years.

Write in No. 1580 for PolyStone; 180 for wood



Chadsworth Columns offers a wide selection of columns.

#### Columns.com

910-763-7600; Fax: 910-763-3191 www.columns.com Wilmington, NC 28401

Internet distributor & web-based mall for architectural products: columns, pilasters, decorative capitals, moldings, balustrades & pergola kits; can rate & compare various manufacturers; job-site delivery, worldwide shipping.

Write in No. 1899

#### DeAngelis Iron Work, Inc.

888-676-4766; Fax: 508-238-7757 www.deangelisiron.com South Easton, MA 02375

Custom fabricator & installer of ornamental metalwork: fences, gates, columns, capitals, benches, stairs & more; cast & wrought iron, bronze, brass, aluminum, stainless steel & more; cresting.

Write in No. 1023

#### **DMS Studios**

718-937-5648; Fax: 718-937-2609 www.dms-studios.com Long Island City, NY 11101

Custom fabricator of hand-carved stone elements: fountains, mantels, statuary, balustrades, capitals & landscape ornament; historically accurate.

Write in No. 9100

#### Fagan Design & Fabrication, Inc.

203-937-1874; Fax: 203-937-7321 www.fagancolumns.net

West Haven, CT 06516

Manufacturer of columns & turnings: stain grades in any wood species; Classical orders; stock & custom; worldwide supplier.

Write in No. 8210



Fagan Design replicated this 30-in.-dia. x 20-ft.-tall fluted column (foreground) to match existing columns.

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Whether you adhere to the classical interpretations (Vignola, Vitruvius, Scamozzi, Palladio, etc.) or prefer your own design, our team is fully prepared to assist you from concept to creation. Using our state-of-the-art CNC profiler, we are able to achieve incredible accuracy and detail, which is why our columns can be found in the White House and the Smithsonian Institute as well as high-profile projects in Germany, Japan, and Madagascar.

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#### www.columns.com

#### Fiberglass Specialties, Inc.

800-527-1459; Fax: 903-657-2318 www.fsiweb.com Henderson, TX 75653

Manufacturer of FRP steeples, domes, cupolas, columns, railings & baptismal pools: dozens of stock designs plus modifications, replication & custom solutions; architect on staff to assist with design.

Write in No. 7310

#### Haddonstone (USA), Ltd.

856-931-7011; Fax: 856-931-0040 www.haddonstone.com Bellmawr, NJ 08031

Manufacturer of Classical stonework: columns, balustrades, benches, planters, urns, pavers, fountains, gazebos, mantels, statuary & more; cast limestone resembling Portland stone; more than 500 designs.

Write in No. 4020



Haddonstone's cast-stone M1 columns were used with Doric capitals to create the Classical entryway for this

#### Historical Arts & Casting, Inc.

800-225-1414; Fax: 801-280-2493 www.historicalarts.com West Jordan, UT 84088

Designer & custom fabricator of ornamental metalwork: columns, doors, windows, hardware, stairs, balustrades, registers, fences, lighting, gutters, weathervanes, planters & more; iron, bronze, aluminum & steel; restoration services.

Write in No. 1210



Custom columns and capitals from Historical Arts & Casting can be found in many different types of buildings.

#### **Imperial Productions &** Distribution Inc.

800-399-7585; Fax: 416-264-6098 www.imperialdesign.on.ca Toronto, ON, Canada M1J 1A1

Supplier of architectural elements: columns & capitals in fiberglass/wood/ polymer/plaster; load bearing, tapered, smooth & fluted & square tapered; wood & resin moldings & carvings; balusters, domes & medallions; tin ceilings.

Write in No. 1407

#### **Michigan Ornamental Metals**

201-945-4930; Fax: 201-945-4931 www.michiganornamental.com Ridgefield, NJ 07657

Custom fabricator of metal ornament: columns, capitals, rosettes, wreaths, cornices & ceilings; cupolas, domes, gutters, finials, leaders & leader boxes; stamped/pressed sheet metal; replications & historic reproductions.

Write in No. 9520

#### **Pacific Columns**

800-294-1098; Fax: 714-630-4549 www.pacificcolumns.com Brea, CA 92821

Supplier of architectural millwork & more: columns, balustrades, wainscoting, door & window trim, metal ceilings &

walls, moldings, niches, brackets, medallions, wood carvings & louvers; variety of wood species; urethane millwork.

Write in No. 88



This cherry column with Roman Corinthian capital was supplied by Pacific Columns.

#### Robinson Iron Corp.

800-824-2157; Fax: 256-329-8960 www.robinsoniron.com Alexander City, AL 35011

Designer & installer of custom metalwork: fountains, columns, fences, railings, sculpture, benches, grilles, cupolas, cresting, street lighting & gazebos; wrought iron/steel, aluminum, bronze & cast iron; historical restoration.

Write in No. 3240

#### **Stone Decora**

818-986-1171; Fax: 818-907-0343 www.stonedecora.com Pacific Palisades, CA 90270

Custom hand carver of natural-stone products: limestone, cantera, adoquin, travertine, marble & sandstone quarried in Europe & Mexico; fireplaces, fountains, columns, balustrades, molding, sculpture & custom work.

Write in No. 3131

#### Stonex Cast Products, Inc.

732-938-2334; Fax: 732-919-0918 www.stonexonline.com Farmingdale, NJ 07727

Manufacturer of cast-stone architectural elements: baluster & rail systems, quoins, window sills & surrounds, columns, benches, wall copings, splash blocks, pier caps & more; 8 styles of balusters.

Write in No. 507

#### **Towne House Restorations**

718-497-9200; Fax: 718-497-3556 www.townehouserestorations.com Brooklyn, NY 11206

Manufacturer of molded ornament: columns, capitals, cornices, balustrades, sculpture & more; cast stone & GFRC; pattern restoration, color matching, field molds, field surveys, shop drawings & engineering; terra-cotta restoration.

Write in No. 545

#### **Traditional Cut Stone**

416-652-8434: Fax: 905-673-8434 www.traditionalcutstone.com Mississauga, ON, Canada L5S 1S1

European master carvers: architectural ornamentation & monumental statuary; columns; carved-stone mantels; restoration; historical reproduction in limestone, sandstone & marble; stone design with clay & plaster models; hand-drawn renderings.



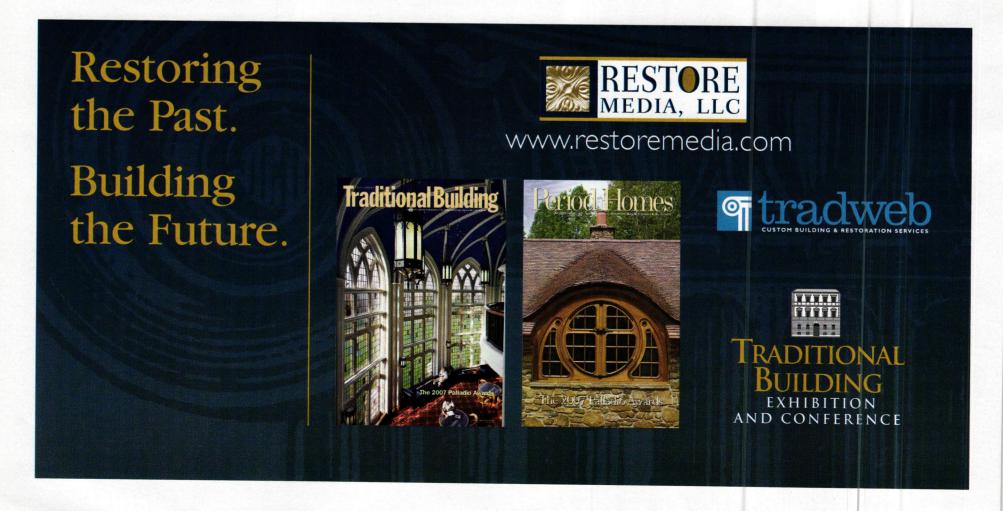
A column shaft of Indiana limestone is being turned on a lathe operated by a craftsperson in the 20,000-sq.ft. studios of Traditional Cut Stone, Ltd.

#### **Wiemann Ironworks**

918-592-1700; Fax: 918-592-2385 www.wiemanniron.com Tulsa, OK 74104

Designer, fabricator, finisher & installer of custom ornamental metalwork: capitals, railings, fences, gates, balustrades, lighting, grilles, furniture, doors & more; cast & wrought iron, bronze & aluminum; hardware; CAD services.

Write in No. 1223



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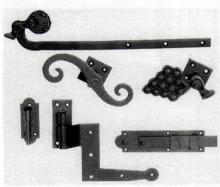
Acorn manufactures a wide range of hardware, including shutter hinges that are available in seven finishes.

**Acorn Forged Iron** 

508-339-4500; Fax: 508-339-0104 www.acornmfg.com Mansfield, MA 02048

Supplier of forged-iron & forged stainless-steel decorative hardware: cabinet, shutter, gate & interior & exterior door hardware; cast-iron registers & grilles; hand-forged bath accessories; handforged decorative-head nails.

Write in No. 1690



This collection of shutter hardware is available from Architectural Products by Outwater in wrought iron.

#### Architectural Products by Outwater, LLC

800-835-4400; Fax: 800-835-4403 www.outwater.com Bogota, NJ 07603

Manufacturer of 65,000+ decorative building products: architectural moldings & millwork, columns, capitals, wroughtiron components, balustrading, door hardware, lighting, ceiling tile, furniture & cabinet components & more.

Write in No. 1088



The Atlantic Classic Collection of historically accurate operable shutters from Atlantic Premium Shutters are available in various styles.

#### **Atlantic Premium Shutters**

866-288-2726; No fax www.atlanticpremiumshutters.com Wixom, MI 48393

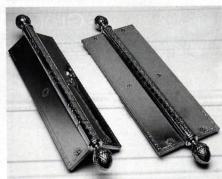
Supplier of exterior shutters: made of fiberglass composite material to look like wood; hand-crafted, operable; raised panel, louvered Colonial, board & batten, Bahama styles & more; 10-year warranty; 40 colors available.

#### **Ball & Ball Hardware**

610-363-7330; Fax: 610-363-7639 www.ballandball.com Exton, PA 19341

Custom manufacturer & supplier of ornamental metalwork & hardware: door, window, shutter & furniture hardware; fireplace tools; wrought iron, steel, aluminum, bronze, brass, copper & cast iron; custom reproductions.

Write in No. 2930



Ball & Ball Hardware supplies a complete line of hinges, bolts, thumb latches and shutter hardware in brass, cast iron and hand-forged iron.

#### E.R. Butler & Co.

212-925-3565; Fax: 212-925-3305 www.erbutler.com New York, NY 10012

Manufacturer of historically accurate, premium-quality hardware for doors, windows, shutters & furniture: brass, bronze, nickel, silver & wrought iron; complete design selections of Early American period hardware; many finishes. Write In No. 2260

#### Extrutech Plastics, Inc.

920-684-9650; Fax: 920-684-4344 www.epiplastics.com Manitowoc, WI 54220

Manufacturer of exterior & interior cellular moldings & trim: screen doors, shutters, custom wood-grain finishes; wall & ceiling panels; waterproof doors.

Write in No. 1892

#### Guerin, P.E.

212-243-5270; Fax: 212-727-2290 www.peguerin.com New York. NY 10014

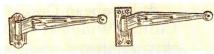
Manufacturer of high-end handcrafted brass & bronze hardware & accessories: for doors, windows, furniture, shutters, objets d'art & bathroom accessories; handcrafted sconces & lighting fixtures. Write in No. 1166

#### House of Antique Hardware

888-265-1038; Fax: 503-233-1312 www.houseofantiquehardware.com Portland, OR 97232

Manufacturer & supplier of vintage reproduction door, window, cabinet, shutter & furniture hardware & accessories:

Federal, Victorian, Colonial Revival, Craftsman & Deco styles; push-button switches & plates; registers & grilles. Write in No. 1096



James Peters & Son offers traditional shutter strap hinges with offsets up to 3/4 in.

#### James Peters & Son, Inc.

215-739-9500; Fax: 215-739-9779 www.jamespetersandson.com Philadelphia, PA 19122

Manufacturer of ornamental gate, shutter & barn door hardware: gate, barn & stable hinges; shutter bolts, shutter dogs & pull rings.

Write in No. 1240

#### Kayne & Son Custom Hardware

828-667-8868; Fax: 828-665-8303 www.customforgedhardware.com Candler, NC 28715

Manufacturer of forged- & cast-metal hardware: strap, H, HL, butterfly & butt hinges; thumb-latch locksets, gate hardware, shutter dogs & more; fireplace tools; bathroom accessories & kitchen equipment; restoration; catalog \$8.

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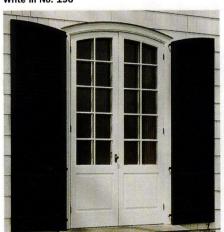
Shutter hooks from Kayne & Son are available in any length and have the option of twists in the center.

#### Kingsland Co. Shutters

860-542-6981; Fax: 860-542-1752 www.kingsland-shutters.com Norfolk, CT 06058

Manufacturer of exterior shutters in Honduras mahogany: louvered, raised panel, cutouts & reproductions; mortise-&-tenon construction; copper caps, fixed control rods & hardware; paneled & louvered arched tops.

Write in No. 196

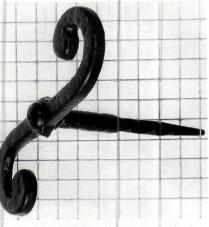


Exterior shutters from Kingsland Co. are available in a variety of styles, including louvered and raised panel.

#### Maguire Iron Corp.

510-234-7569; Fax: 510-232-7519 www.maguireironcorporation.com Richmond, CA 94801

Manufacturer & supplier of traditional hardware & lanterns: door, cabinet, window, gate, shutter & mailbox hardware; knobs & levers with compatible locks, various backsets & functions; wrought iron, pewter, rust, brass & bronze; grilles. Write in No. 7600



Historical shutter dogs are one of the many types of traditional hardware available from Maguire Iron.

#### Shuttercraft, Inc.

203-245-2608; Fax: 203-245-5969 www.shuttercraft.com Madison, CT 06443

Manufacturer of interior & exterior shutters: cedar & mahogany; all sizes; movable & fixed louvers, raised panels, board-&batten & cutouts; hinges, holdbacks; interior shutters in poplar, basswood & red oak; painting services.

Write in No. 1321



Shuttercraft offers a wide selection of shutter types and styles.

#### The Shutter Depot

706-672-1214; Fax: 706-672-1122 www.theshutterdepot.com Greenville, GA 30222

Supplier of shutters & shutter hardware: 2–1/2-in. movable, raised-panel & fixed louvers; interior & exterior; finished & unfinished; custom & stock.

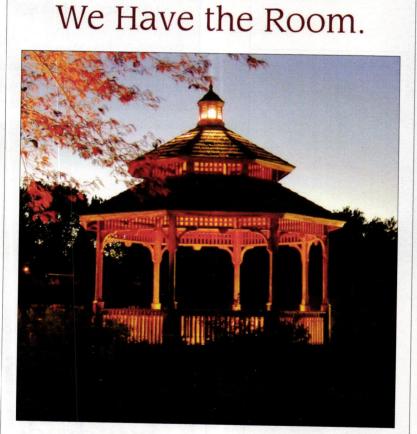
Write in No. 6830



The Shutter Depot supplies both custom and stock shutters as well as shutter hardware.



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WRITE IN NO. 1230





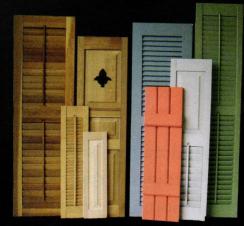
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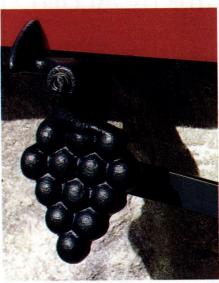
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Montgomeryville, PA 18936

Custom fabricator of handcrafted exterior shutters: more than 25 historically accurate styles & custom designs; available in maintenance-free Endurian or traditional western red cedar; large selection of exterior shutter hardware.

Write in No. 1056 for cedar; 1925 for Endurian

#### **Vixen Hill Shutters**

800-423-2766; Fax: 610-286-2099

www.vixenhill.com

Elverson, PA 19520

Custom fabricator of shutters: blind-pocketed & teak-pegged (no glue); old-growth red cedar; more than 26 styles; pair sizes to 6x10 ft.; shutter hardware.

Write in No. 1230



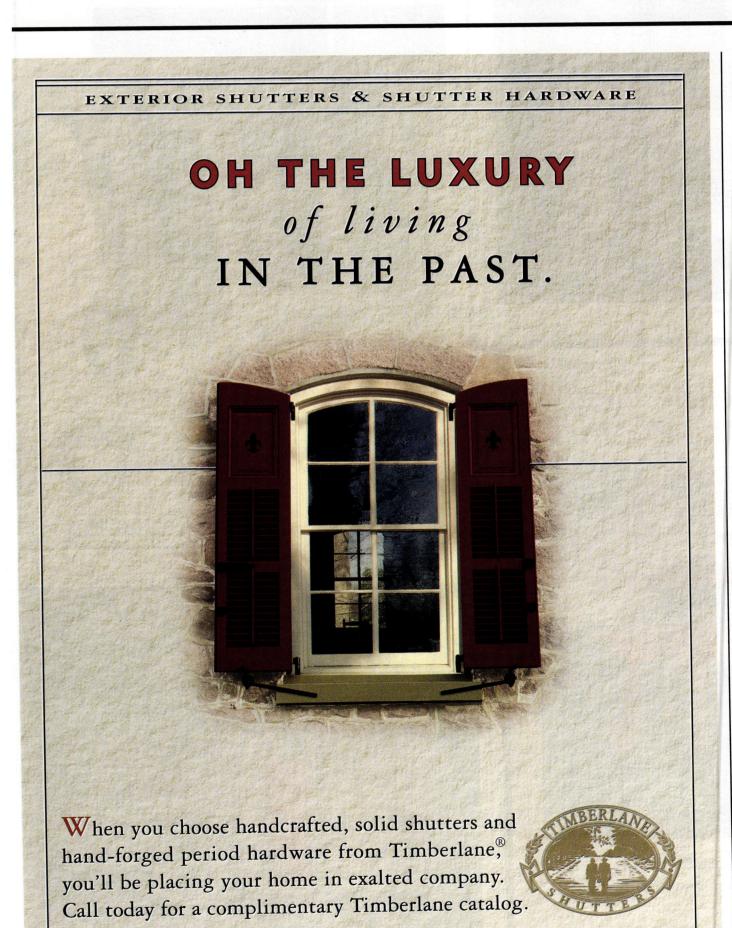
Shutters from Vixen Hill feature deep mortise-andtenon joints, using solid-teak through-pegs to secure the tenons.

#### **Woodstone Co., The**

802-722-9217; Fax: 802-722-9528 www.woodstone.com Westminister, VT 05158

Custom fabricator, distributor & supplier of doors, windows & shutters: paneled doors & complete entryways; storm & screen doors; screen windows; most wood species; coped mortise-&-tenon joinery; historical & landmark specifications

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# **Wood Windows**

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#### **Architectural Components, Inc.**

413-367-9441; Fax: 413-367-9461 www.architecturalcomponentsinc.com Montague, MA 01351

Manufacturer of reproduction & custom wood windows & doors: true-divided lites with insulated glass; wood-framed storm sash & screens; renovation & restoration projects & new construction; paneled walls & storefronts; catalog \$5.

Call for more information.



This reproduction 12/12 window with fan was fabricated by Architectural Components.

#### Custom Trades International, Inc.

203-531-3493; Fax: 203-532-9727 www.sorpetalerusa.com Greenwich, CT 06831

Manufacturer of custom wood windows & doors: any species, finish, glazing & hardware; aluminum- & bronze-clad wood window systems; architectural hardware in brass, bronze & more; for residences, institutions & historic properties.

Write in No. 1083

#### **De Groot Historical Restoration**

631-246-8194; Fax: 631-509-5238 www.dghistorical.com East Setauket, NY 11733

Custom architectural millwork: restoration & reproduction of windows, doors, leaded glass, shutters, sculpture, storefronts, paneling, cabinetry & furniture; ornamentation restoration & reproduction; pattern work, consulting.

Write in No. 1915



Grabill Windows & Doors specializes in custom wood windows, such as this mahogany awning window with stainless-steel hardware.

#### **Grabill Windows & Doors**

810-798-2817; Fax: 810-798-2809 www.grabillwindow.com Almont, MI 48003

Custom manufacturer of solid-wood, bronze & aluminum-clad windows & doors: lift & slide doors, casements, tilt-turn, European in-swing & historically accurate double-hung windows with weights & pulleys; residential & commercial. Write in No. 1910



Historic Doors fabricated this wood entryway fanlite.

#### **Historic Doors**

610-756-6187; Fax: 610-756-6171 www.historicdoors.com Kempton, PA 19529

Custom fabricator of wood windows & doors: casing; circular & crown moldings; complete entryways; wood storefronts; restoration & period-style construction.

Write in No. 3570



All-wood interior and exterior insert double-hung windows are offered by Marvin Windows and Doors.

#### **Marvin Windows and Doors**

651-452-3039; Fax: 651-452-3074 www.marvin.com

Warroad, MN 56763

Manufacturer of wood windows & doors: clad & clad/wood; special shapes; custom sizes & more than 11,000 standard sizes; historical replicas; interior & exterior storm windows.

Write in No. 1263



Parrett Windows duplicated the wood windows for this apartment building.

#### **Parrett Windows**

800-541-9527; Fax: 715-654-6555 www.parrettwindows.com Dorchester, WI 54425

Manufacturer of handcrafted custom wood & clad-wood windows: fixed or operating; any geometric shape; numerous wood species; custom wood doors; complete finishing capabilities; certified & tested; nationwide distribution.

Write in No. 3003



Weston Millwork replicated this Diamond Light double-hung window for the 1909 Jake Callen House, Junction City, KS.

#### Weston Millwork Co.

816-640-5555; Fax: 816-386-5555 www.westonmillwork.com Weston, MO 64098

Custom fabricator of wood doors & windows: sash & door-frame components

& complete units; storms & screens; historical reproductions & exact replicas; cornice moldings.

Write in No. 1316

#### **Wood Window Workshop**

800-724-3081; Fax: 315-733-0933 www.woodwindowworkshop.com Utica, NY 13501

Custom fabricator of wood windows, doors, storms & screens: any size, shape & species; full mortise-&-tenon construction, true-divided lite, hard-to-find hardware & restoration & insulated glass; factory finishes; reproductions.

Write in No. 9640



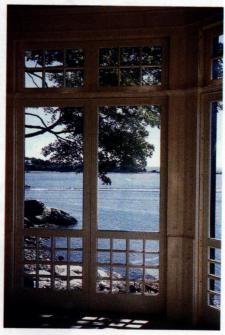
Custom wood windows such as this curved model are available from Wood Window Workshop.

#### **Woodstone Co., The**

802-722-9217; Fax: 802-722-9528 www.woodstone.com Westminister, VT 05158

Custom fabricator, distributor & supplier of doors, windows & shutters: paneled doors & complete entryways; storm & screen doors; screen windows; most wood species; coped mortise-&-tenon joinery; historical & landmark specifications

Write in No. 8430



Woodstone offers windows in a wide variety of species.

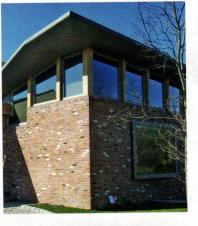
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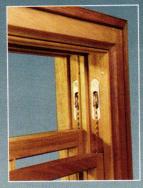
Tel 203.531.3493 Fax 203.532.9727

www.sorpetalerusa.com info@sorpetalerusa.com

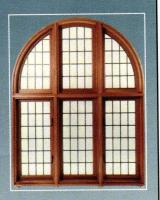
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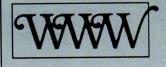
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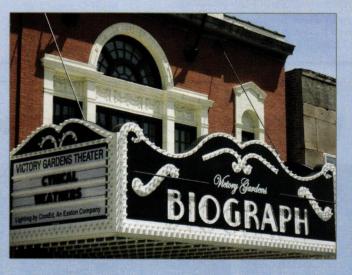
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# **Metal Windows**

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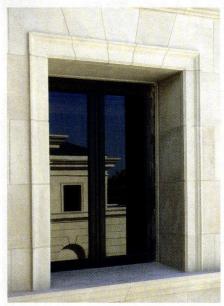
This hollow metal window was built by Heather & Little for the Robeling Museum in New Jersey.

#### **Heather & Little, Ltd.**

800-450-0659; Fax: 905-475-9764 www.heatherandlittle.com Markham, ON, Canada L3R 0H1

Fabricator & supplier of historical sheetmetal roofing & specialty architectural sheet metal: finials, cornices, leader heads, cresting, metal shingles, siding, cupolas, steeples, domes, reproductions; Kalemein & lot-line windows.

Write in No. 2470



This cast-bronze window from Historical Arts & Casting, model #DW027, comes in two sizes, 4 ft.-4½ in. x 3 ft. and 2 ft.-10½ in. x 2½ ft.

#### Historical Arts & Casting, Inc.

800-225-1414; Fax: 801-280-2493 www.historicalarts.com West Jordan, UT 84088

Designer & custom fabricator of ornamental metalwork: doors, windows, hardware, stairs, balustrades, registers, fences, lighting, gutters, columns, weathervanes, planters & more; iron, bronze, aluminum & steel; restoration services.

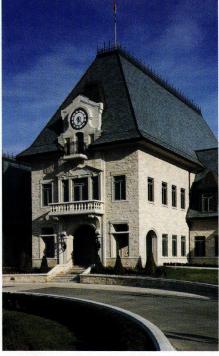
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#### **Marvin Windows and Doors**

651-452-3039; Fax: 651-452-3074 www.marvin.com Warroad, MN 56763

Manufacturer of wood windows & doors: clad & clad/wood; special shapes; custom sizes & more than 11,000 standard sizes; historical replicas; interior & exterior storm windows.

Write in No. 1263



Casemaster aluminum-clad casement windows with green-tinted glass from Marvin Windows & Doors were used for the Magna International headquarters building in Aurora, Ontario, Canada.



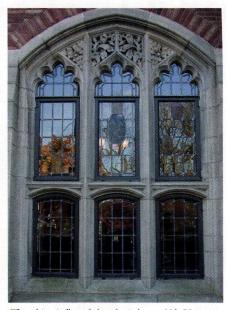
This vintage 1930s steel window was supplied and restored by Seekircher.

#### Seekircher Steel Window Repair 914-734-8004; Fax: 914-734-8009

www.seekirchersteelwindow.com Peekskill, NY 10566

Restorer of steel casement windows & doors: all work done on site; repaired & restored steel windows & doors at Frank Lloyd Wright's Fallingwater; vintage steel casement windows & doors; more than 6,000 windows repaired annually.

Write in No. 3590



These historically styled steel windows at Yale University were supplied by Steel Windows & Doors USA.

#### Steel Windows & Doors USA

203-579-5157; Fax: 203-579-5158 www.steelwindowsanddoors.com Bridgeport, CT 06607

Supplier of metal windows & doors: steel, bronze & aluminum; custom colors & variety of finishes available.

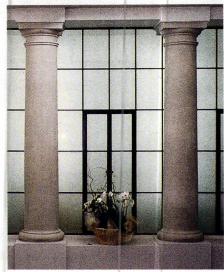
Write in No. 1933

#### **Torrance Steel Window Co.**

310-328-9181; Fax: 310-328-7485 www.torrancesteelwindow.com Torrance, CA 90501

Custom fabricator of steel casement windows, doors, storefronts & skylights: light-, standard- & heavy-intermediate grades; stock & custom sizes.

Write in No. 8330



Torrance Steel Window produced the steel casements for this columned opening.

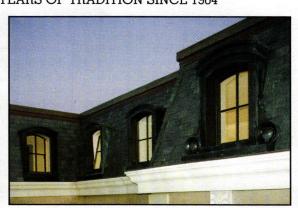
#### Wiemann Ironworks

918-592-1700; Fax: 918-592-2385 www.wiemanniron.com Tulsa, OK 74104

Designer, fabricator, finisher & installer of custom ornamental metalwork: capitals, railings, fences, gates, balustrades, lighting, grilles, furniture, doors, windows & more; cast & wrought iron, bronze & aluminum; hardware; CAD services.

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- Windows can also be shipped and restored at our facility
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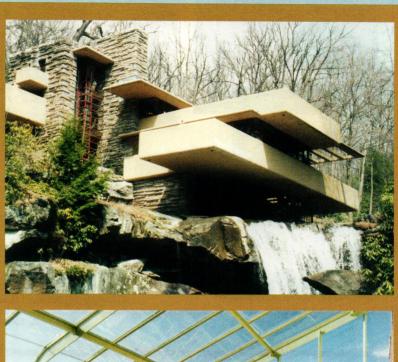


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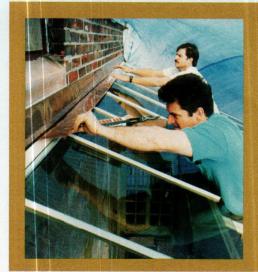
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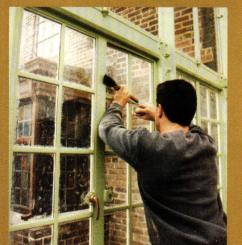




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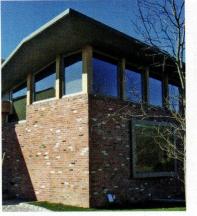
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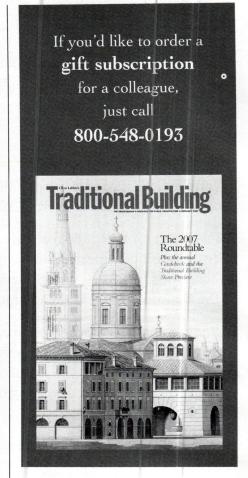




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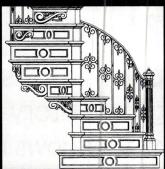
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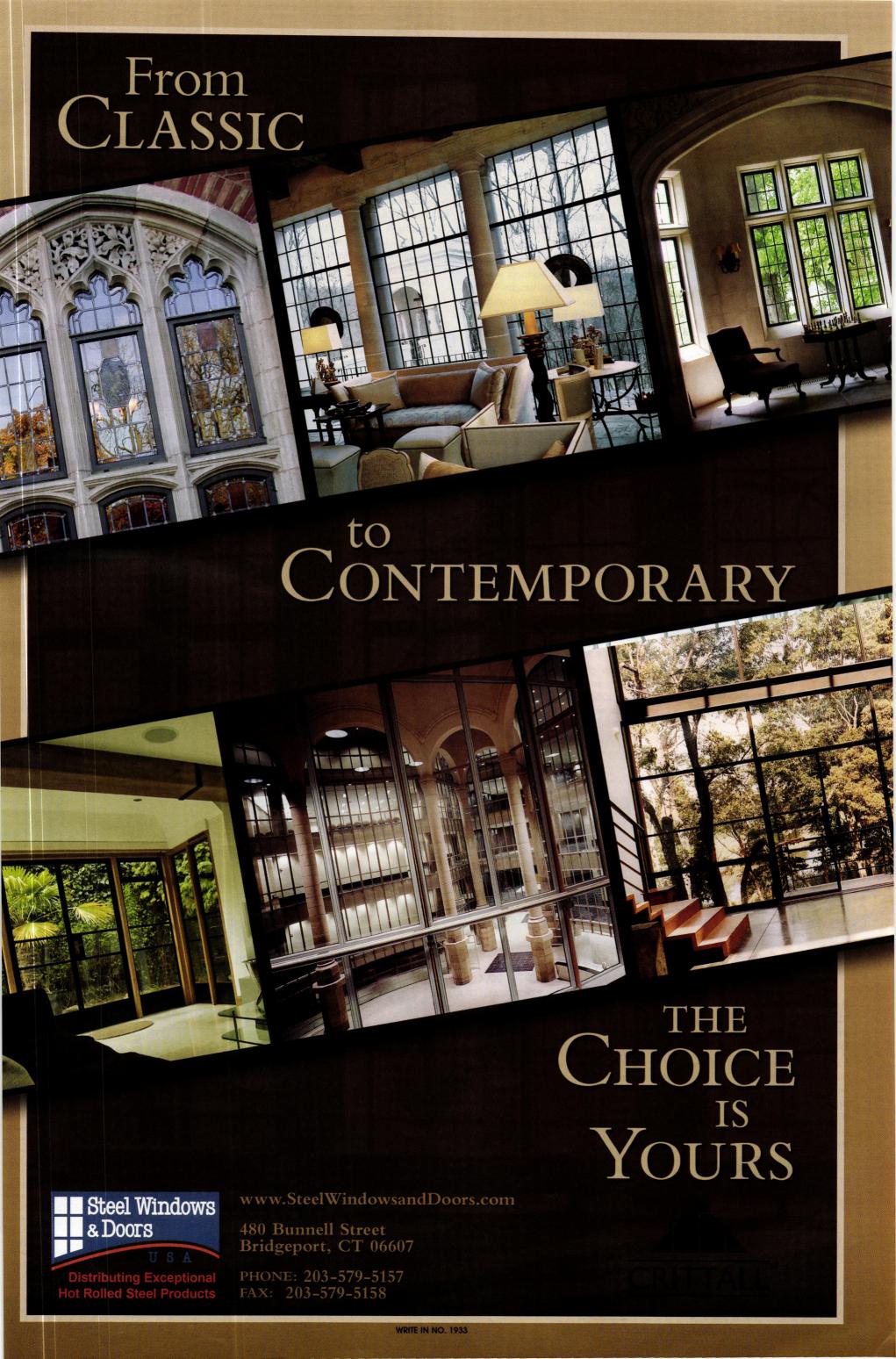






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#### **Al Bar-Wilmette Platers**

847-251-0187; Fax: 847-251-0281 www.albarwilmette.com Wilmette. IL 60091

Restorer of lighting fixtures & antique hardware: period crystal & metal light fixtures; bronze, brass, copper, nickel, pewter, gold, silver & chrome; matching of existing hardware in restoration projects; will match any finish.

Write in No. 2636



Al Bar-Wilmette installed this un-lacquered silver cremone set for a client on Lake Michigan.

#### **Architectural Resource Center**

800-370-8808; Fax: 603-942-7465 www.aresource.com

Northwood, NH 03261

Supplier of historically styled hardware: sash pulleys, lifts & locks, sash chain & rope; weather stripping; patented sash weights.

Write in No. 1670



Bronze and brass hardware, including this window lockset, is available from Architectural Resource Center.

#### **Ball & Ball Hardware**

610-363-7330; Fax: 610-363-7639 www.ballandball.com Exton, PA 19341

Custom manufacturer & supplier of ornamental metalwork & hardware: door, window, shutter & furniture hardware; fireplace tools; wrought iron, steel, aluminum, bronze, brass, copper & cast iron; custom reproductions.

Write in No. 2930



This cast-brass sash lift from Ball & Ball measures 2x1 in

#### **Barry Supply Co.**

212-242-5200; Fax: 212-675-7094 36 W. 17 St. New York, NY 10011

Manufacturer of replacement window hardware: sash pulleys, weights & locks; balances, guides, tilt latches, handles & operators; parts for awnings; patio, terrace & closet door parts; ventilator brackets;

#### **Bronze Craft Corp.**

44+ years; large inventory.

800-488-7747; Fax: 603-883-0222 www.bronzecraft.com Nashua, NH 03061

Manufacturer of sand-cast hardware for windows, plaques & specialty items: brass, bronze & white bronze; historical reproductions & traditional designs.



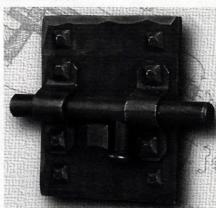
Window hardware is one of the specialties of Bronze Craft. Corp.

#### Craftsmen Hardware Co.

660-376-2481; Fax: 660-376-4076 www.craftsmenhardware.com Marceline, MO 64658

Supplier of Arts & Crafts-style hardware: door, window, cabinet & drapery hardware; hand-hammered copper; lighting.

Write in No. 6980



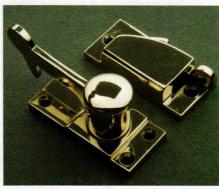
Craftsmen Hardware's 2-in. edge bolt comes with either the pyramid-head nails seen here or round-head wood screws.

#### **Crown City Hardware Co.**

626-794-1188; Fax: 626-794-2064 www.crowncityhardware.com Pasadena, CA 91104

Supplier of hardware: casement fasteners & adjusters; sash locks, lifts, balances & weights; screen fasteners & hangers; glass knobs, bin pulls, switch plates & more; iron, brass, glass & crystal; Victorian & Arts & Crafts styles.

Write in No. 432



This Boston window lock was fabricated by Crown City Hardware.

#### **Custom Trades International, Inc.**

203-531-3493; Fax: 203-532-9727 www.sorpetalerusa.com Greenwich, CT 06831

Manufacturer of custom wood windows & doors & hardware: any species, finish, glazing & hardware; aluminum— & bronze-clad wood window systems; architectural hardware in brass, bronze & more; for residences, institutions & historic properties.

Write in No. 1083

#### E.R. Butler & Co.

212-925-3565; Fax: 212-925-3305 www.erbutler.com

New York, NY 10012

Manufacturer of historica

Manufacturer of historically accurate, premium-quality hardware for doors, windows & furniture: brass, bronze, nickel, silver & wrought iron; complete design selections of Early American period hardware; many finishes.

Write in No. 2260



E.R. Butler custom manufactured this traditionally styled cremone bolt, available in brass, bronze and other metals.

#### Guerin, P.E.

212-243-5270; Fax: 212-727-2290 www.peguerin.com New York, NY 10014

Manufacturer of high-end handcrafted brass & bronze hardware & accessories: for doors, windows, furniture, objets d'art & bathroom accessories; handcrafted sconces & lighting fixtures.

Write in No. 1166

#### **House of Antique Hardware**

888-265-1038; Fax: 503-233-1312 www.houseofantiquehardware.com Portland, OR 97232

Manufacturer & supplier of vintage reproduction door, window, cabinet & furniture hardware & accessories: Federal, Victorian, Colonial Revival, Craftsman & Deco styles; push-button switches & plates; registers & grilles.

Write in No. 1096

#### James Peters & Son, Inc.

215-739-9500; Fax: 215-739-9779 www.jamespetersandson.com Philadelphia, PA 19122

Manufacturer of ornamental gate, shutter & barn door hardware: gate, barn & stable hinges; shutter bolts, shutter dogs & pull rings.

Write in No. 1240

#### Kayne & Son Custom Hardware

828-667-8868; Fax: 828-665-8303 www.customforgedhardware.com Candler, NC 28715

Manufacturer of forged- & cast-metal hardware: strap, H, HL, butterfly & butt hinges; thumb-latch locksets, gate hardware, shutter dogs & more; fireplace tools; bathroom accessories & kitchen equipment; restoration; catalog \$8.

Call for more information.

#### Maguire Iron Corp.

510-234-7569; Fax: 510-232-7519 www.maguireironcorporation.com Richmond, CA 94801

Manufacturer & supplier of traditional hardware & lanterns: door, cabinet, window, gate & mailbox hardware; knobs & levers with compatible locks, various backsets & functions; wrought iron, pewter, rust, brass & bronze; grilles.

Write in No. 7600

#### **Phelps Company**

802-257-4314; Fax: 802-258-2270 www.phelpscompany.com Brattleboro, VT 05301

Manufacturer of traditional hot-forged solid-brass window hardware: sash pulleys, weights, chains, lifts & locks; stop-bead adjusters, spring bolts, window ventilation locks, casement hardware, storm/screendoor latch sets & more.

Write in No. 6001



Traditional window pulleys are available from Phelps.

#### Pullman Mfg. Co.

585-334-1350; Fax: 585-359-4460 www.pullmanbalances.com Rochester, NY 14623

Manufacturer of counterbalances: for window sashes (to replace weights, chains, lifts & pulleys); residential, historical, commercial & industrial applications; since 1886.

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310-398-2848; Fax: 310-398-0605 www.thegoldenlion.com Los Angeles, CA 90066

Importer of European hardware & accessories in hand-forged iron & bronze: window & door hardware; bronze fountain spouts; traditional & period styles.

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#### The Nanz Company

212-367-7000; Fax: 212-367-7375 www.nanz.com New York, NY 10013

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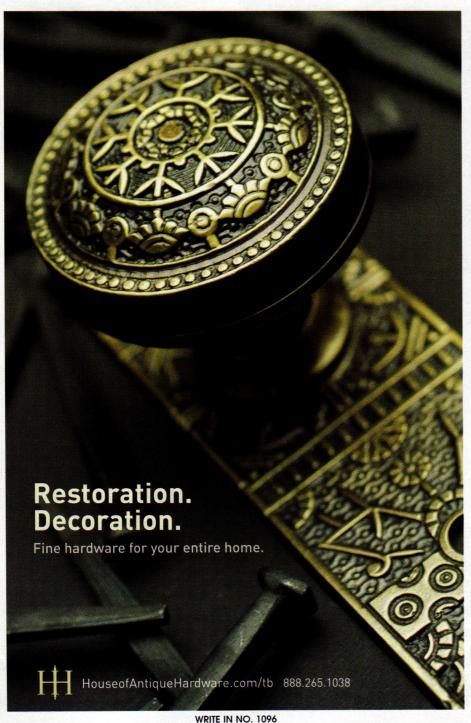
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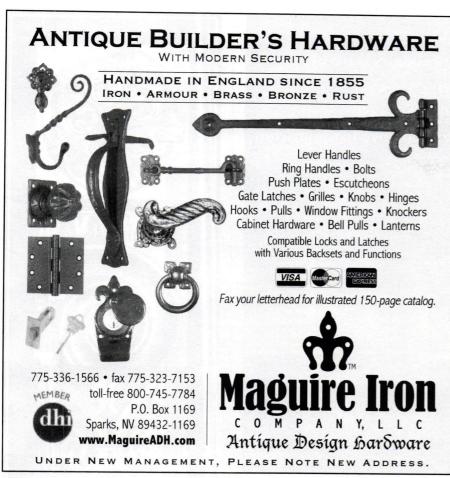


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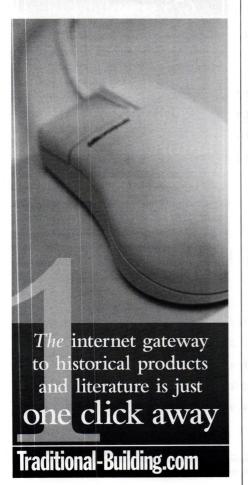


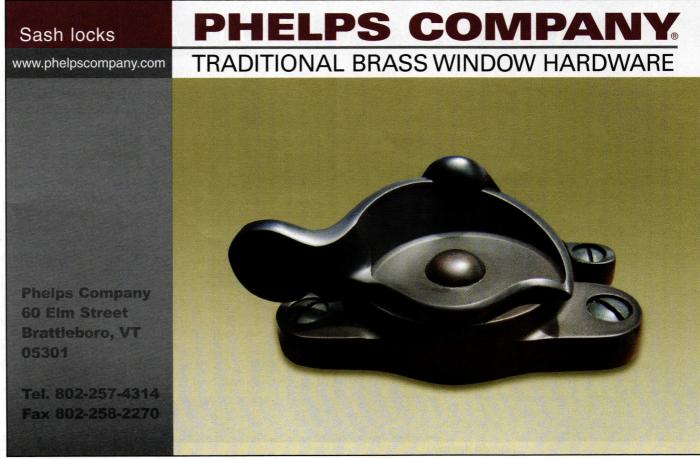












## **Exterior Molded Ornament**

To order product literature, go to www.traditional-building.com and click on "Free Product Literature" or fill out the card at page 34. To order literature from all of the companies listed here, enter **No. 9749**.

#### Abatron, Inc.

800-445-1754; Fax: 262-653-2019 www.abatron.com Kenosha, WI 53144

Manufacturer of products for restoration & repair: wood consolidation & repair, concrete patching & resurfacing, metal restoration, moldmaking & casting, structural adhesives, protective coatings, strippers & related products.

Write in No. 1300

#### **Architectural Fiberglass Corp.**

800-439-2000; Fax: 631-842-4790 www.afcornice.com Copiague, NY 11726

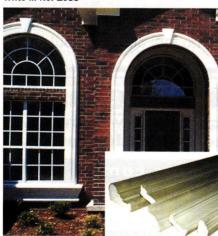
Fabricator of reproduction ornament: cornice molding, columns, capitals, balustrades & themed interior environments; lightweight FRP; molded-in colors & textures; class-1 fire-retardant material; weather resistant; easy to install. Write in No. 6400

#### Architectural Products by Outwater, LLC

800-835-4400; Fax: 800-835-4403 www.outwater.com Bogota, NJ 07603

Manufacturer of 65,000+ decorative building products: architectural moldings & millwork, columns, capitals, wroughtiron components, balustrading, door hardware, lighting, ceiling tile, furniture & cabinet components & more.

Write in No. 1088



Exterior high-density urethane millwork from Outwater provides the look of wood and is resistant to splitting, weather damage, decay and insects.

#### Architectural Reproductions by Timeless

800-665-4341; Fax: 770-205-1447 www.timelessarchitectural.com Cumming, GA 30041

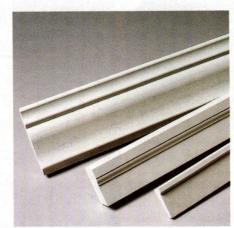
Manufacturer of architectural ornament: balustrade systems; interior & exterior architectural fiberglass & wood columns; decorative capitals, molding & millwork. Write in No. 1414

#### **AZEK Building Products, Inc.**

877-275-2935; Fax: 570-504-1215 www.azek.com Moosic, PA 18507

Manufacturer of PVC exterior trim products: trimboards, sheets, beadboards, cornerboards & millwork.

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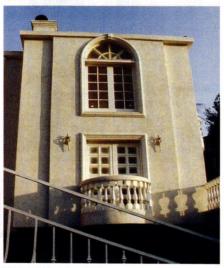
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#### **Ball Consulting, Ltd.**

724-266-1502; Fax: 724-266-1504 www.ball-consulting-ltd.com Ambridge, PA 15003

Supplier of moldmaking materials & casting compounds: alginate, latex rubber, polyurethane & silicone for moldmaking; GFRC, gypsum, polymer-modified gypsum, plaster & polyurethane casting compounds; terra-cotta substitutes.

Write in No. 7260



Exterior architectural ornamentation is the specialty of Ball Consulting.

#### **Boston Valley Terra Cotta**

888-214-3655; Fax: 716-649-7688 www.bostonvalley.com Orchard Park, NY 14127

Custom fabricator of architectural terracotta products: roof tile & Terraclad (rainscreen system); columns/capitals, cornices, balustrades, garden sculpture & chimneys; standard & custom shapes & colors; replacements & new designs.

Vrite in No. 160



Boston Valley Terra Cotta manufactured approximately 3,000 architectural terra-cotta units for the restoration of the Prospect Park Boat House in Brooklyn, NY.

#### **Cantera Especial**

800-564-8608; Fax: 818-907-0343 www.cantera-especial.com Pacific Palisades, CA 90272

Custom hand carver of natural-stone products made from limestone, cantera, adoquin, travertine, marble & sandstone quarried in Europe & Mexico: fireplaces, fountains, planters, columns, balustrades, benches, molding & sculpture.

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#### **Canterland of Mexico**

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Factory-direct manufacturer of Yucatan limestone products: fountains, mantels, balustrades, stairs, columns, countertops & more; in Coquina, Ticul & Crema Maya stone.

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#### **Century Architectural Specialties**

877-262-1999; Fax: 770-590-3190 www.architecturalspecialties.com Marietta, GA 30066

Manufacturer of architectural specialty products: crown & cornice molding, ceiling medallions, door & window surrounds, pilasters, capitals & more.

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#### Columns.com

910-763-7600; Fax: 910-763-3191 www.columns.com Wilmington, NC 28401

Internet distributor & web-based mall for architectural products: columns, pilasters, decorative capitals, moldings, balustrades & pergola kits; can rate & compare various manufacturers; job-site delivery, worldwide shipping.

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#### Extrutech Plastics, Inc.

920-684-9650; Fax: 920-684-4344 www.epiplastics.com Manitowoc, WI 54220

Manufacturer of exterior & interior cellular moldings & trim: screen doors, shutters, custom wood-grain finishes; wall & ceiling panels; waterproof doors.

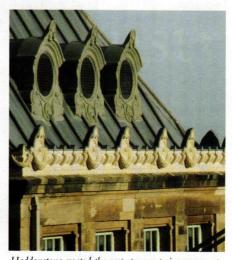
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#### Fiberglass Specialties, Inc.

800-527-1459; Fax: 903-657-2318 www.fsiweb.com Henderson, TX 75653

Manufacturer of FRP steeples, domes, cupolas, columns, railings & baptismal pools: dozens of stock designs plus modifications, replication & custom solutions; architect on staff to assist with design.

Write in No. 7310



Haddonstone created the cast-stone exterior ornament for this Victorian building in Scarborough, England.

#### Haddonstone (USA), Ltd.

856-931-7011; Fax: 856-931-0040 www.haddonstone.com Bellmawr, NJ 08031

Manufacturer of Classical stonework: columns, balustrades, benches, planters, urns, pavers, fountains, gazebos, mantels, statuary & more; cast limestone resembling Portland stone; more than 500 designs.

Write in No. 4020

#### Imperial Productions & Distribution Inc.

800-399-7585; Fax: 416-264-6098 www.imperialdesign.on.ca Toronto, ON, Canada M1J 1A1

Supplier of architectural elements: columns & capitals in fiberglass/wood/polymer/plaster; load bearing, tapered, smooth & fluted & square tapered; wood & resin moldings & carvings; balusters, domes & medallions; tin ceilings.

Write in No. 1407

#### **Stone Decora**

818-986-1171; Fax: 818-907-0343 www.stonedecora.com Pacific Palisades, CA 90270

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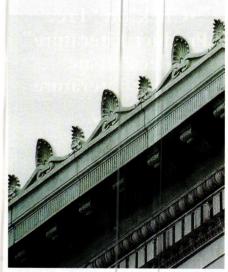
Write in No. 3131

#### Stonex Cast Products, Inc.

732-938-2334; Fax: 732-919-0918 www.stonexonline.com Farmingdale, NJ 07727

Manufacturer of cast-stone architectural elements: baluster & rail systems, quoins, window sills & surrounds, columns, benches, wall copings, splash blocks, pier caps & more; 8 styles of balusters.

Write in No. 507



Towne House Restorations replaced the terra-cotta elements on this building with new elements made of cast stone and fiberglass-reinforced concrete.

#### **Towne House Restorations**

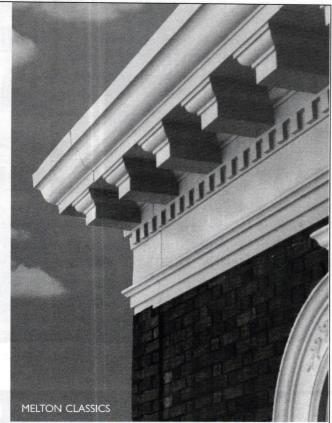
718-497-9200; Fax: 718-497-3556 www.townehouserestorations.com Brooklyn, NY 11206

Manufacturer of molded ornament: columns, capitals, cornices, balustrades, sculpture & more; cast stone & GFRC; pattern restoration, color matching, field molds, field surveys, shop drawings & engineering; terra-cotta restoration.

Write in No. 545







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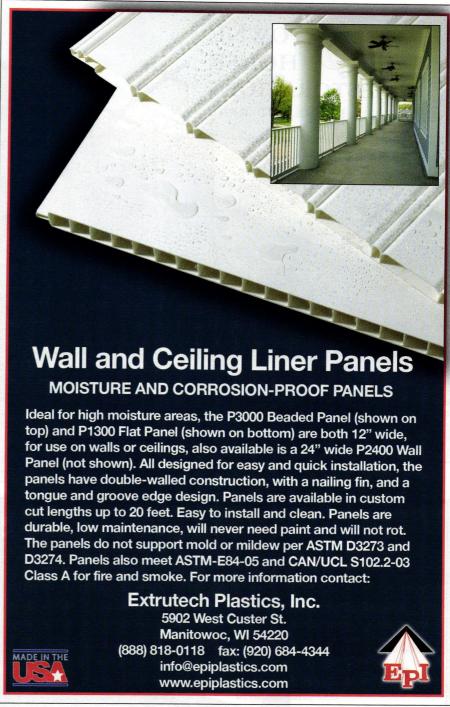
#### www.traditional-building.com

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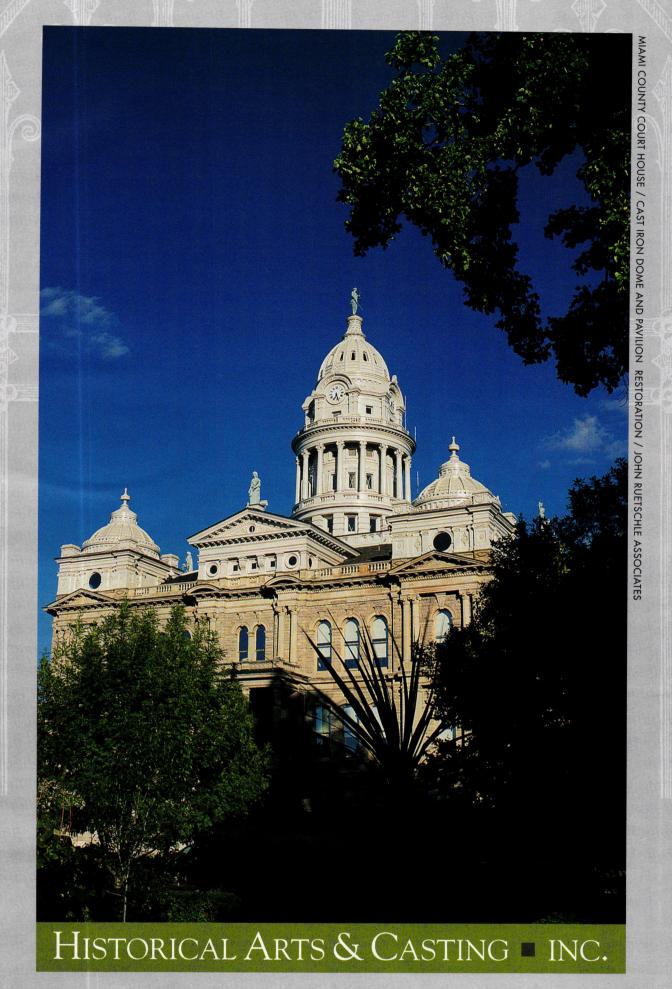
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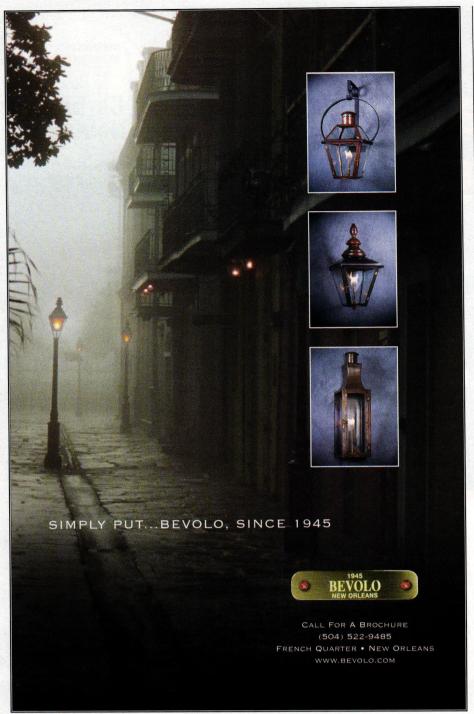


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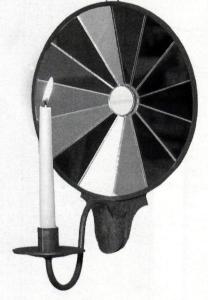
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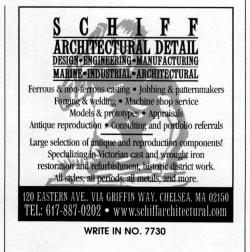


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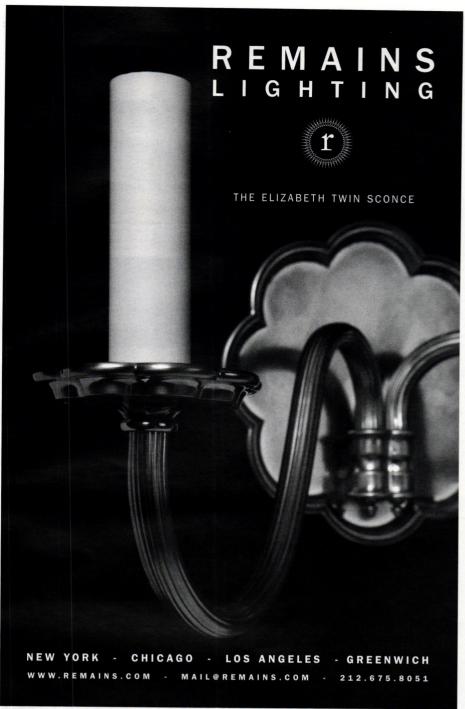
Corresponding awards will also be given for residential projects.

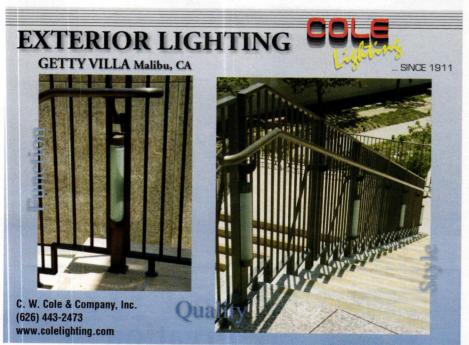
Judging will be by a panel of distinguished architectural designers selected by the editors of *Traditional Building* and *Period Homes*.

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For details on the awards program, judging criteria and submission requirements, go to

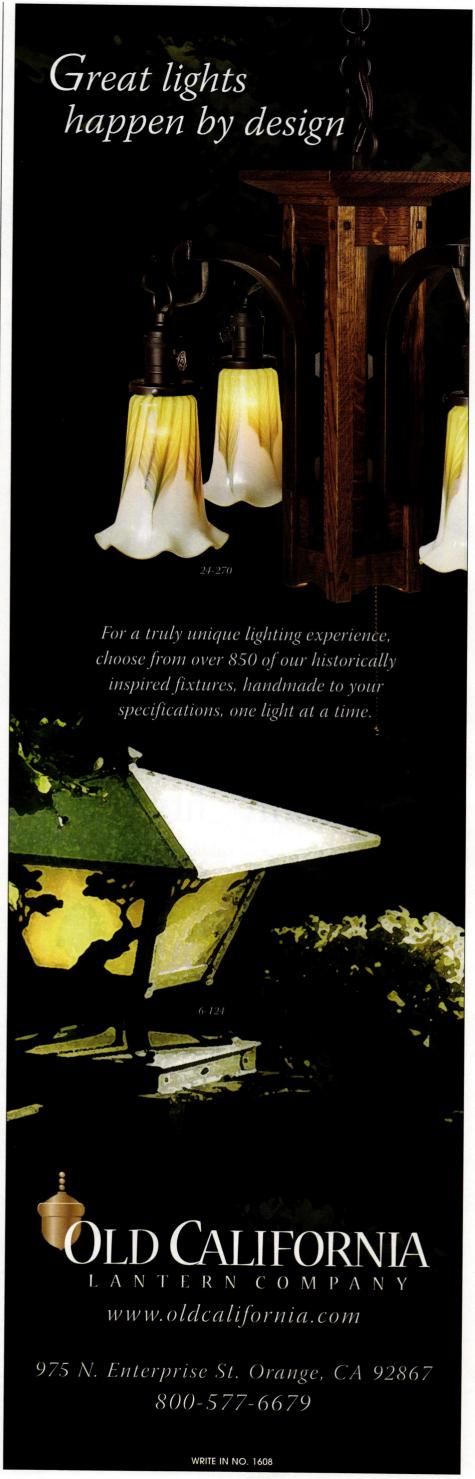
www.palladioawards.com

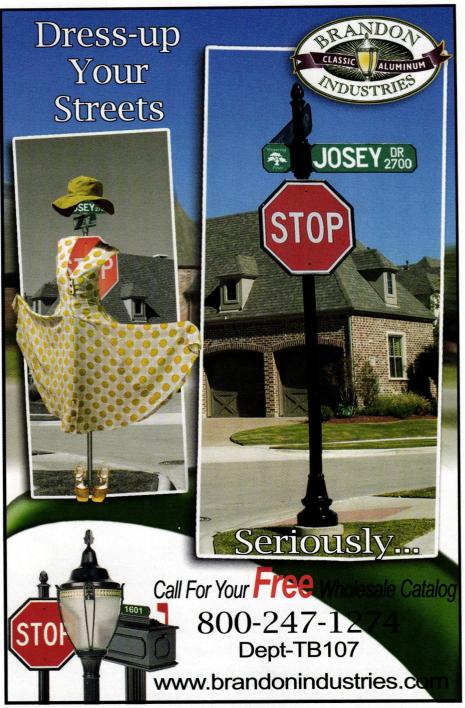




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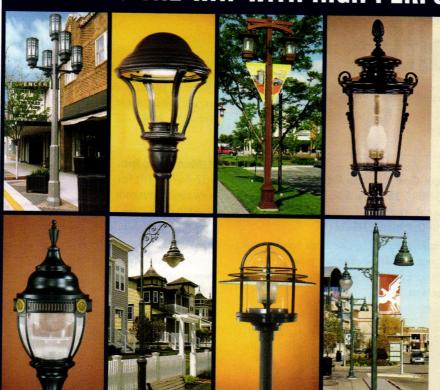
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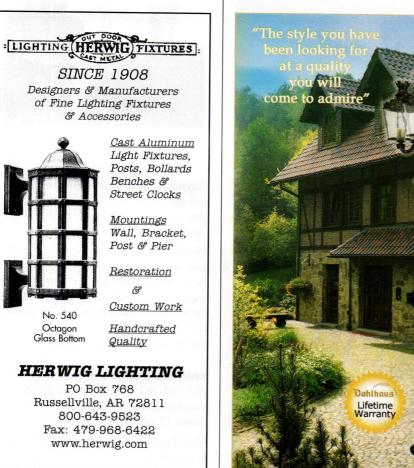
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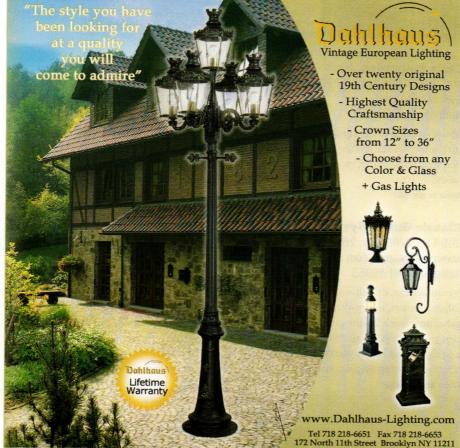
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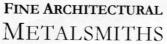
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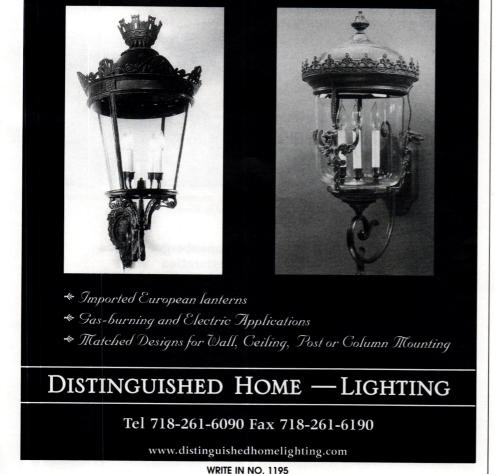
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800-204-3858; Fax: 256-761-1967 www.allenmetals.com Talladega, AL 35161

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Write in No. 1005

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#### Architectural Fiberglass Corp.

800-439-2000; Fax: 631-842-4790 www.afcornice.com Copiague, NY 11726

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#### Baschnagel Brothers

718-767-1919; Fax: 718-767-5141 www.baschnagel.com Whitestone, NY 11357

Manufacturer & installer of metal roofing: fabrication & installation of all types of ornamental copper gutters, leaders & more; metal repairs & restorations; works with New York Landmarks Conservancy. Write in No. 1012

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508-994-2119; Fax: 508-997-2511 www.capecodcupola.com North Dartmouth, MA 02747

Manufacturer of cupolas: with windows or louvers; available in finished pine or maintenance-free PVC; weathervanes & finials.

Write in No. 1514



The model #3CC-G windowed cupola, shown here with a #GE-MVD30 weathervane, is one of many styles available from Cape Cod Cupola.

#### Chris Industries, Inc.

800-356-7922; Fax: 847-729-0340 www.chrisind.com Northbrook, IL 60062

Manufacturer & distributor of architectural sheet metal, gutters & flashing: copper, steel, galvalume, zinc, aluminum & more.

Write in No. 687

#### Classic Gutter Systems, LLC

269-665-2700; Fax: 269-665-1234 www.classicgutters.com Kalamazoo, MI 49053

Manufacturer of half-round gutters: heavy 20-oz. copper, heavy-duty aluminum & galvalume with baked-enamel finish; hidden nut-&-bolt adjustable hanger system; cast fascia brackets & decorative components; solid brass & aluminum.

Write in No. 1280



Classic Gutter Systems fashioned this elaborate halfround copper gutter with gold-patinated solid-brass trim and a rain deflector.

#### DeAngelis Iron Work, Inc.

888-676-4766; Fax: 508-238-7757 www.deangelisiron.com South Easton, MA 02375

Custom fabricator & installer of ornamental metalwork: fences, gates, columns, capitals, benches, stairs & more; cast & wrought iron, bronze, brass, aluminum, stainless steel & more; cresting.

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#### **East Coast Roof Specialties**

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#### Historical Arts & Casting, Inc.

800-225-1414; Fax: 801-280-2493 www.historicalarts.com West Jordan, UT 84088

Designer & custom fabricator of ornamental metalwork: doors, windows, hardware, stairs, balustrades, registers, fences, lighting, gutters, columns, weathervanes, planters & more; iron, bronze, aluminum & steel; restoration services.

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Historical Arts & Casting supplied this roof finial, model RC010; it is 13 ft. 10 ½ in. tall.

#### Kayne & Son Custom Hardware

828-667-8868; Fax: 828-665-8303 www.customforgedhardware.com Candler, NC 28715

Manufacturer of forged- & cast-metal hardware: strap, H, HL, butterfly & butt hinges; thumb-latch locksets, gate hardware, shutter dogs, weathervanes & more; fireplace tools; bathroom accessories & kitchen equipment; restoration; catalog \$8.

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#### Kenneth Lynch & Sons, Inc.

203-264-2831; Fax: 203-264-2833 www.klynchandsons.com Oxford, CT 06478

Manufacturer of ornamental metalwork & cast-stone products: planters, urns, benches, fountains, statuary, topiary, sundials & weathervanes; cast stone, cast & wrought iron, lead & bronze; stock & custom designs.

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This ornamental weathervane was designed and fabricated by Kenneth Lynch & Sons.

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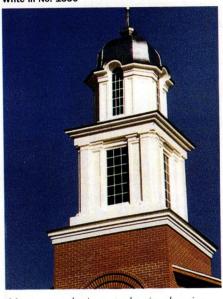
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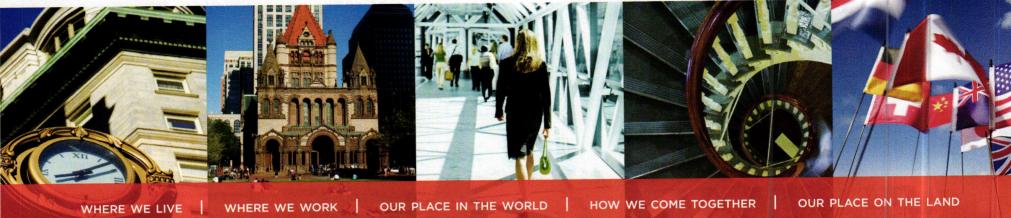
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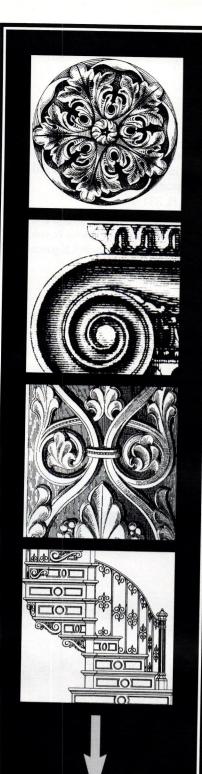


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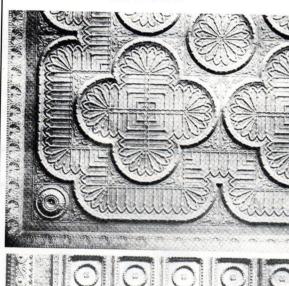
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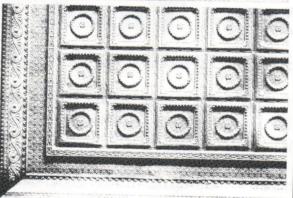
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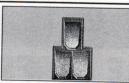


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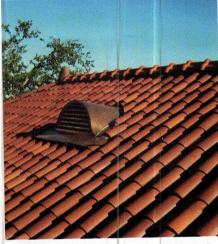
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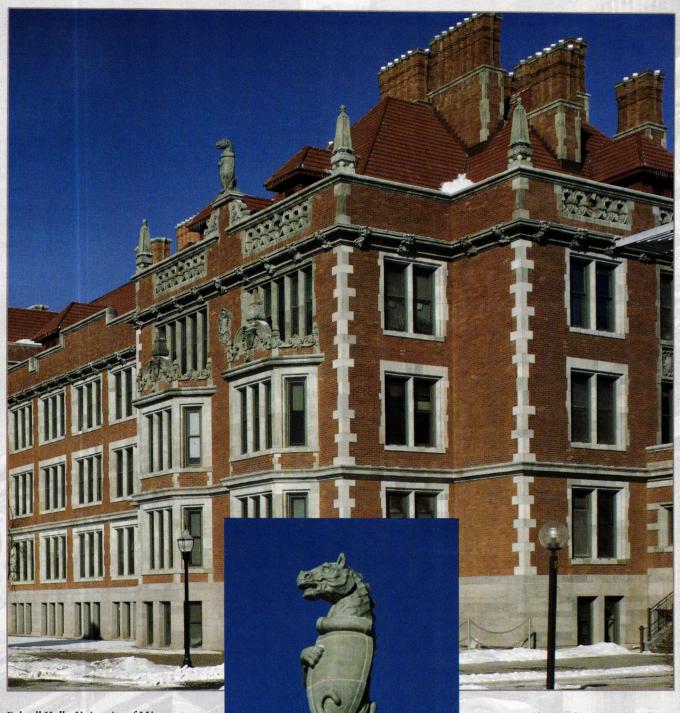
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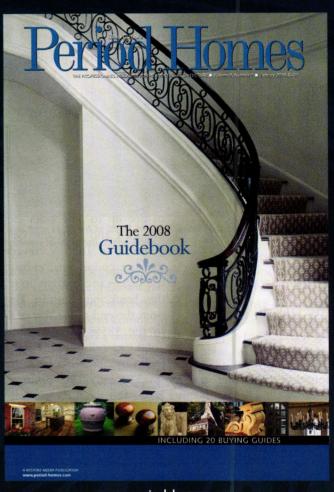


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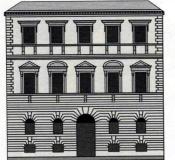
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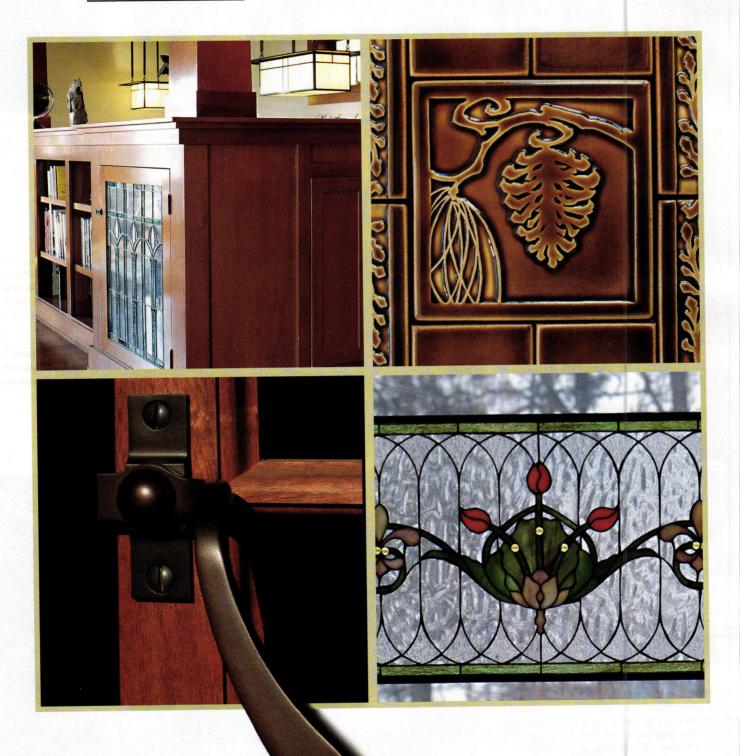
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## Holistic Landscapes?

By Charles A. Birnbaum, FASLA, FAAR

MUSEUM CONSULTANT RANDI KORN, WHOSE WORK IS DEDICATED TO USINGVISITOR STUDIES to guide museums in improving their practices and achieving their missions, recently noted that many museums today "work within a cycle of intentionality that has created an inclusive, process-oriented infrastructure so it can write a purposeful mission and measurable intentions, and can demonstrate the value of the museum in people's lives and in its community through repeated assessment, while offering continuous learning opportunities for all staff." Is the same goal for "holistic intentionality," to use Korn's term, achievable in our nation's historic parks?

If so, was I daydreaming in a museum café sipping a dopo macchiato when someone decided that the way we measure success in our public parks and open spaces is based on head count? When did we stop placing a value on strolling under the dappled light of mature canopy trees casting long winter shadows over a sloping lawn; the calming, rhythmic sound of a gurgling water feature; the humanizing scale and tactile texture of naturalistic understory plantings (see the related story about TCLF's Heroes of Horticulture on page 150, which aims to make these often forgotten jewels visible); the antiquity of authentic, historic fabric as reflected in moss-decorated walls and stone washed paths; or, unique site-specific, regional responses to a place, as reflected in a designer's original handcrafted furnishings? Sound familiar? Perhaps, the delicious eye candy found in a crowd-pleasing blockbuster museum show of impressionist paintings dedicated to the works of Monet, Van Gogh or Seurat?

Well, step outside of the new museum big boxes by such architects as Renzo Piano, Zaha Hadid, Santiago Calatrava and Rafael Vinoly for a moment and move out into their contiguous public landscapes and cityscapes. Today, if you want to spend Sunday in the Park with George, more times than not, as pioneered in our museum environments, our nation's public open spaces are becoming increasingly more programmed and filled-up with destination-dedicated new uses. Aside from the café with

movable chairs, these outdoor activities reflect such "check the box" wish list requests as dog parks, sculpture gardens and splash pools. For those interested in balancing management decisions in our historic parks, it is precisely these new uses that are bringing about change, which is usually not sympathetic to a landscape's historic significance and surviving character-defining fabric.

Where have I heard these challenges before? Where have I seen this play out? Can quantity (people) and quality (design) go hand in hand? If you build it will they come – is that enough? I found myself considering this question during a recent visit to MoMA (Musuem of Modern Art, NYC) where a small number of visitors were actually looking at the art. I have been to MoMA many times since they reopened and every time I go it is packed. Does this mean that MoMA is successful as a museum experience? If so, how do we measure success for a museum or a park? Is it density, numbers, richness of experience, adjacent real-estate values, good coffee, people watching, playgrounds for dogs and kids, the feeling of being renewed and refreshed? Opportunities for reflection? All of these, some of these, or does it depend on the location, audience and program?

Within this dilemma, where are those who care about change and continuity – a holistic systems approach to park analysis – to turn? What is the role for those history, historic preservation, and design professionals who are often marginalized and deemed



A novel juggling act at the Cleveland Museum of Art in Cleveland, OH, where its museum expansion by architect Raphael Vinoly boasts more parks, gardens and parking. Photo: courtesy of TCLF

irrelevant by the debate "spin?" Well, here we go again — it appears that the only role landscape architects and historians who are concerned with change and continuity can play in this often controlled debate is to assume the stereotypical role of those "standing in the way of progress" and "being out of touch" with what people want. So we call in the troops and the battle cry is sounded. But aren't we tired of this? I know that I am.

Perhaps, for insight we can look at the challenges museum curators and directors have been wrestling with in recent decades. The evolution of museums has been on a parallel track with the urban park renaissance in big cities like New York, Chicago and Los Angeles, and which coincidentally, parallels smaller ones too, such as Milwaukee, WI, Toledo, OH, and Beacon, NY. The debates playing out in the museum world can inform this present-day discourse between park managers, stewards and their often-empowered vocal communities.

Some museums, such as at the Walker, the Denver Art Museum and the Isabella Stewart Gardner Museum aspire to, and are succeeding in, becoming community centers — places where learning, flexibility and innovation are integrated parts of their organizational culture.

Consider these parallel trends: Stephen Weil, a noted museum and art law expert told The New York Times in 2002 that museums "used to be primarily about things and defined by objects" and "now they're often about processes, including historical processes." Thanks to the scholarship of Weil and many others, the myriad opportunities afforded museum management and social responsibility research at a graduate and post-graduate level reflect a generational shift and maturation of the discipline. A similar pattern and opportunity is mirrored in the landscape history and landscape management professions. In the landscape arena, such educational explorations are part of a welcome surge in PhD programs dealing with landscape history, landscape preservation and landscape ecology - not to mention the essential burgeoning scholarship that is readily available from university presses and scholarly journals. The essential foundational research and best practices knowledge is now accessible to guide change and can result in educated management decisions for our nation's historic parks.

Another part of the debate about museums and parks is relevancy (e.g. do we value pastoral open space or does it have to be filled with stuff?). Weil suggests the ultimate goal of a museum is to improve people's lives, describing the shift in the museum world as "being about something to being for somebody." This foundational concept of being part of a larger community was recently echoed by David Brooks in *The New York Times*: "The awareness that we are not self-made individualists, free to be you and me, but emerge as parts of networks, webs and communities; that awareness is back again today." What better places to consider this idea of holistic, interconnected networks and systems than at our community centers of energy: our public museums and parks.

Today, art museums are becoming less event-driven and more focused on enlarging their audiences and providing them deeper, richer services – and on becoming places where all people, not simply those who are knowledgeable about art, gather to learn, discuss and debate, share experiences, socialize and be entertained.

While many museums strive to creatively enhance the quality of the visitor experience by expanding their service to their communities, they often ignore their physical and historical context. For example, what is interesting about many of these new museums is that they are often adjacent to distinctive, authentic historic parks and open spaces, and yet their planning, design and management does little to reconcile or address the potential this contiguity offers.

For example, Loring Park in Minneapolis, MN, one of Minneapolis' first parks, is across the street from the Walker; the Denver Art Museum in Denver, CO, is next to the city's Beaux Arts Civic Center (a potential National Historic Landmark and currently contested terrain); and the Gardner Museum in

Boston, MA, like Boston's Museum of Fine Arts, is adjacent to the Back Bay Fens, part of the Emerald Necklace Parks – the first urban greenway in the world and as such, a potential World Heritage candidate. Therefore, if these museums strive to act holistically, the time has come for present-day stewards to embrace their landscape legacy by acknowledging and embracing their contiguous historic designed landscapes, significant works of art in their own right.

Some museums, such as at the Walker, the Denver Art Museum and the Isabella Stewart Gardner Museum aspire to, and are succeeding in, becoming community centers – places where learning, flexibility and innovation are integrated parts of their organizational culture. This central concept, put forth by Bonnie Pitman and Ellen Hirzy in *New Forums: Art Museums and Communities* (2004), tells the story of how a diverse group of 11 art museums (including the three noted above) underwent this

transformation. The work, funded by the Pew Charitable Trust, is not only essential reading for the communityminded museum professional, but for those ideas surrounding change being juggled and balanced by the museum leadership community.

Outside of the museum environment, this same idea has been echoed in the writings and built works of

landscape architect Laurie Olin, who refers to many significant public parks and open spaces on which he has worked, like Bryant Park and Columbus Circle in New York City and Fountain Square in Cincinnati, OH, as centers of energy. Olin says these urban spaces should be reclaimed and revitalized to serve the community.

Olin's own quest for sympathetic change and continuity can also be evidenced in present-day projects in cities including Chicago and Louisville, KY. These cities' extraordinary legacies of historic parks and boulevards by pioneering landscape architects Jens Jensen, Frederick Law Olmsted, Sr., and the Olmsted Brothers are not only being reclaimed, celebrated (e.g. listed as National Register and National Historic Landmark properties), and serving as community centers, but like the holistic museums of the present-day, are engines for neighborhood revitalization, pride and energy centers.

Randi Korn notes in *The Case for Holistic Intentionality* that museums today "appear to be searching for themselves, presenting a range of public programs to see which ones might bolster attendance and attract new audiences while also retaining existing ones." Korn sees these actions as haphazard and unfocused, rather than deliberate, and her quest illustrates the bottom-up planning of the "me-first" generation – who, like park users, want to "check the box" and tell us what they want. This too mirrors Weil's ideas that museums are about something for somebody.

The results playing out in our parks: plop and drop destinations are splayed throughout former open-spaces, resulting in disconnected and disjointed visitor amenities and a degradation of park character. This situation is all the more perplexing when numerous park user analysis studies over the past two decades have concluded that 70 to 80 percent of American park users visit public parks for passive, reflective, introspective experiences. In addition, a recent analysis undertaken by real estate and economic development consultant Donald Rypkema for the National Trust for Historic Preservation conclusively demonstrates that an overwhelming majority of people want places that possess "authenticity."

Perhaps our nation's legacy of historic parks, like our museums, can work within a cycle of intentionality – one that balances natural, scenic and cultural values. In the process, present-day stewards could not only affirm the unique value of these dynamic resources, but also create an inclusive, process-oriented infrastructure that revisits their purposeful missions and measurable intentions, and in the process demonstrates the value of these great civic places in people's lives and their affiliated communities.

And maybe, just maybe, we can all work together in the future to create a symphonic whole. **B** 

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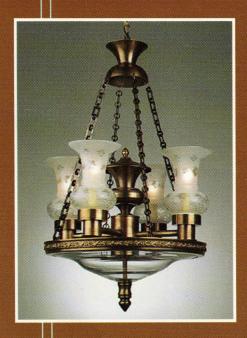


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