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AN AFRICAN-AMERICAN LEGACY

The passage of legislation last month to build a national museum of African-American history and culture in Washington, D.C., has rekindled several discussions, not the least of which is the choice of an architect for this plum commission. The project offers a unique platform for the country’s best African-American designers; we must take care not to squander the opportunity.

If ever a project cried out for an architect-leader of color, this is the one. The choice would ensure that the design is inherently meaningful—a built work of art that genuinely embodies “the full story of the African-American experience, from slavery to the present day,” as Rep. John Lewis of Georgia, advocate of the project, described the museum to me.

So, who should be entrusted with such a significant cultural monument? If you’re having trouble coming up with a name, you may be (at least temporarily) forgiven. Rare is the African-American architect that has broken out onto the national scene. The issue is by no means a lack of talent, although the numbers aren’t favorable: one percent of our fellow practitioners are black, according to the National Organization of Minority Architects. Statistics are telling, but beside the point. For architects of color, the main issue today is access to public works. Current architect selection practices for a national museum, according to NOMA, would entail a request for qualifications from a preselected list of the nation’s most “celebrated architects” that are known for cultural projects. And, no, there isn’t a single black-owned firm or African-American designer on the list.

The first issue for Dr. Robert L. Wright, a prominent Virginia businessman who now leads the presidential commission for the museum, should be to help craft a sensible selection process for this monumentally meaningful project. Ideally, the commission should set up an invited competition of the best African-American practitioners and either choose a winner or let its handpicked jury select one. It won’t be easy: high-profile federal projects easily fall prey to political and bureaucratic wrangling, and in this case there’s the specter of an affirmative-action backlash. Still, the commission can find ample precedent for limiting the pool of candidates.

Well planned and well juried, this national competition will also serve as a critical barometer of contemporary African-American design—something that is truly needed, based on comments by leading observers like William Wesley Taylor, Howard University’s new architecture department chair. What constitutes an architecture grounded in black American social movements and structures, Taylor says, “is still under negotiation.” It’s hard to disagree; on one hand, there’s an unsatisfying literalism these days that appropriates African forms and palettes to disparate ends; on the other hand, we’ve seen stirrings of a sensitive and uniquely American modernism taking shape in several cities.

Neither movement has found much momentum yet—a fact that has deep roots in U.S. architectural history, contends Melvin L. Mitchell in his seminal book, The Crisis of the African-American Architect (iUniverse, 2001). At critical junctures over the last century, he says, aesthetic and professional shifts have inhibited the development of an architectural language that fits black economic and cultural realities.

To confront our legacies and to encourage an honest, perhaps painful telling of the African-American story, the designer of this national museum should be from a black-owned firm. Too many local projects of the genre recently have gone to white-owned establishment firms. In their formal expression, we’ve seen evidence of good design; what’s really needed is depth of connection with the black experience.

The new national museum of African-American history and culture needs a strong African-American architect that owns, in its entirety, the project. This architect will continue in the great tradition of such legendary designers as the Beaux Arts-trained Julian Abele of Philadelphia (1881-1950) and the prolific Californian, Paul R. Williams (1894-1980). Fortunately, this legacy is poised for a renaissance. A solid core of brilliant black designers is quietly synthesizing their uniquely American experience into a language that transcends anything we’ve seen before. Their work must be supported, and celebrated. The new national museum offers us a rare opportunity to do so.
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LETTERS

BLURRED LOGIC
Ned Cramer's references to "playing God" in his article on Diller + Scofidio's Blur Building (July 2002, page 53) are a little passé. They weaken the argument that projects seeking to celebrate natural conditions are necessary and should occur on a more regular basis.

Brian Martin
Columbia, Maryland

DEFENDING STAMFORD
While the 1970 bombing incidents may have been a catalyst in triggering some of the corporate migration to Stamford (June 2002, page 45), the Xerox move was planned and executed well before 1970. Also, it was never the original intention of the company to relocate to Stamford. It was only after the Greenwich town fathers [sic] rejected our zoning-variance appeal for a new corporate headquarters.

Robert H. Goodenow
Havre de Grace, Maryland

Andrew Rice's article on Stamford, Connecticut, is a half-empty view of one of the most successful U.S. "edge cities." For example, the 2,500 new apartment units built around the downtown (with many more in planning) represent the only large area of middle-class, urban housing north of New York City. Also, Stamford is a complex, racially diverse community where both the local government and the public school system work.

Bradford Perkins
Perkins Eastman Architects
New York City

AALTO, REMEMBERED
Much to my surprise, in the text about Armi Information Center in Helsinki, Finland (June 2002, page 40), I could not find a single word about Alvar Aalto's Enso-Gutzeit office building, which dominates the left half of the picture. The presence of the building was probably the prime reason behind the design competition.

M. Numan Cebeci
Izmir, Turkey

CORRECTION
In the article "After-school Architecture" (July 2002, page 39), the designer of the Lucy Craft Laney School project was incorrectly identified. The school, and the kente cloth patterning in the masonry, were conceived by Paul Bauknight of Bauknight Associates. The editors regret the error.
Isozaki’s Loggia Limps Along

> DESIGN Arata Isozaki’s proposed entrance canopy for the Uffizi Museum is having trouble getting off the ground and into the air. Isozaki, who won the Florence commission in a government-sponsored competition in 1998, ran into serious opposition from the Italian media this spring; Vittorio Sgarbi, then national undersecretary for the arts and a notorious critic of contemporary architecture, publicly compared the structure to the “springs of a large mattress.” Now the new superintendent of architecture, Domenico Valentino, who inherited the project when he took office in March, is pressing Isozaki to lower the height of the loggia from 279 feet to 243 feet, an alteration that Isozaki has refused to make.

To complicate matters even further, valuable archaeological remains were discovered on the site when excavations for the project began in July, a development that seemingly brought the loggia plans to an end for good. However, the ruins will pose no problem, according to Andrea Maffei, Isozaki’s project manager. “If they ask us not to touch the walls in the basement,” says Maffei, “We think we can do that.”

The issue of the loggia’s height may not be so easily resolved. In June, at a press conference in Florence, Isozaki stated that “the loggia cannot be lowered as it would make the overall effect heavy.” According to Maffei, Isozaki still stands firm on this point. There has been no indication that the superintendent has had a change of heart either. Valentino and Isozaki are hoping that a meeting scheduled for early this month will allow them to settle on a course of action. JULIA MANDELL
In response to the public criticism of the six plans for the World Trade Center unveiled last month, the Lower Manhattan Development Corporation has announced an open international competition for a new design. The LMDC and a local design coalition will select up to five design teams by the end of this month. The LMDC has also announced a competition for the World Trade Center site memorial—a call for submissions will be issued early next year.

Office for Metropolitan Architecture, headed by Rem Koolhaas, has won a competition to develop the government-owned Vestbanan area of Oslo, Norway—one of the city's few remaining undeveloped sites—with a master plan that beat out finalists including Toyo Ito, Norman Foster, and Atelier Jean Nouvel.

Skidmore, Owings & Merrill has announced the formation of SOM Seismic, a San Francisco-based design group that will offer a wide range of services—including analysis, design, restoration, and retrofitting—for projects requiring upgrade or that are sited in areas with much seismic activity.

Sasaki Associates' plan for Olympic Green, the Beijing 2008 Summer Olympics site, has been awarded first prize in an open international competition. The plan for the 2,800-acre site includes 22 million square feet of recreational, commercial, and institutional development.

Michael Graves' Snyderman House in Fort Wayne, Indiana, burned down on July 30. The house, completed in 1972, was

Holl and Cornell Part Ways

> CONFLICT Cornell University and Steven Holl announced on July 11 that they have mutually agreed to end their design relationship, which began in April 2001 when the architect won a competition to design the school's new architecture department building, Milstein Hall. Holl's proposal—a seven-story cubic building, clad in glass on three sides, and situated as a northern gateway to the campus—had won by unanimous decision of a jury chaired by James Polshek, and including Kenneth Frampton, Toshiko Mori, Carme Pinós, Terence Riley, and Heinz Tesar.

The architect and client cited an inability to agree on changes to design, program, and budget. However, there were also irreconcilable ideological differences. First was the issue of the building's height. "I think that it would be impossible to have studios of a school of architecture on a vertical level as opposed to a horizontal structure," says the department's new chair, Nasrine Seraji, who believes that multiple levels would inhibit student interaction in hallways and across studios. Holl's partner Chris McVoy states that the scheme "had great interaction vertically between floors—spatially and with circulation," by way of vertical openings between levels.

Second was the building's relation to the site. "[Holl's] solution was such an ingenious one in relation to the campus," asserts Frampton, praising the scheme's strategic connections with university circulation, as well as its formal and positional nods to I.M. Pei's art gallery across the campus. Seraji counters, "I think Pei's building is already not very sensitive to the site. The landscape and the geography of Ithaca is strong enough not to need too much of an architectural gesture." Seraji maintains that, with the addition of another similarly proportioned building, "the quad would completely lose its scale."

University architect Peter Karp will chair a selection committee that he says will choose a new architect for the project some time this month. ANNA HOLTZMAN

The Family with the Biggest House Wins

> HOUSING While the average American family may be smaller than it used to be, the house it inhabits is bigger than ever before, according to two studies conducted recently by the National Association of Home Builders (NAHB).

In a presentation revealing brand-new consumer and construction data to the Window and Door Manufacturers Association in Montreal last month, NAHB research specialists Gopal Ahuwalia and Ed Hudson showed that average U.S. home sizes have steadily grown from 1,500 square feet in 1970 to 2,330 square feet in the past year. In 1971, only 9 percent of our houses were over 2,400 square feet in size; by 2001, more than 38 percent were. During the same period, the size of the average family has actually dropped by 20 percent. Hudson went on to describe our fin-de-siècle appetite for space: from 1995 to 2001, the typical square footage for a single-family home shot up from 2,060 to 2,272. Back in 1995, 17 percent of houses had a three-car garage; today, more than a quarter do.

While the NAHB researchers acknowledge that there are more luxury residences in the national stock (22 percent now, up from 12 percent in 1995), starter homes, too, are keeping pace with the expanding American dream. In 1995, first-time purchasers were buying homes costing $70 per square foot to build and averaging about 1,440 square feet. By 2001, sticker shock was tempered by elbow room: the cost was $84 for the average 1,570-square-foot home.

Of course, breadth isn't everything: homeowners are aspiring to greater ceiling heights, too. By 2001, says NAHB, the housing market broke the 50-percent mark overall for new houses with ceiling heights of more than 8 feet on the first floor. C.C. SULLIVAN
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unoccupied at the time. Local authorities suspect that arson is the cause.

American landscape architect Kathryn Gustafson has won the competition to design a memorial fountain in honor of the late Diana, Princess of Wales. Gustafson was chosen over British artist Anish Kapoor for the $4.7 million project, which will be located in London's Hyde Park.

A developer has subdivided the Wayzata, Minnesota property containing Philip Johnson's Richard Davis house (1952) and Frank O. Gehry's Winton guesthouse (1987). Concerned by their uncertain future, local architects have called for moving the Winton house to the property of the newly opened Minnetonka Center for the Arts, designed by former Gehry associate, James Dayton.

The American Craft Museum has selected four finalists to redesign its new home at Two Columbus Circle, the infamous 1964 "jolypop" building. Allied Works Architecture, Zaha Hadid, Toshiko Mori, and Smith-Miller & Hawkkinson Architects. The winner will be announced this fall.

Michael Maltzan Architects has been hired to design a new wing for the Sonoma County Museum. The $27 million, 40,000-square-foot expansion project is expected to be completed in 2005.

The Sarasota Herald Tribune will be getting a new facility to be designed by Arquitectonica. Construction is set to begin in 2003 with completion expected a year later.

Benjamin Thompson, 84

Obituary As a leading figure in twentieth-century American design who integrated an appreciation for art, food, fashion, and urban design (not to mention architecture) one might have called Benjamin Thompson a real Bauhaus man. The architect died last month after a prolific career.

After attending Yale University and serving in the Navy during World War II, Thompson co-founded The Architects Collaborative in Cambridge to be later joined by Walter Gropius. In the 1970s, his minimalist Design Research International stores reintroduced European modernism to home furnishings and fashion, with imports like Marimekko with its Pop Art boldness.

But Thompson is perhaps best known for resurrecting Boston's flagging downtown in the mid-1970s by redesigning Quincy Market and Faneuil Hall into a thriving upscale festival marketplace. He emulated Boston's success in historic urban areas across the country, including Baltimore's Harborplace and New York's South Street Seaport, two waterfront projects he completed with developer James W. Rouse in the 1980s. BAY BROWN

Two Design Leaders Exit Capital Jobs

Departures The rather small community of design leaders in Washington got considerably smaller in late July as two influential people resigned their posts.

Mark Robbins, the director of design at the National Endowment of the Arts (NEA) since 1999, announced in a July letter to colleagues that he would be leaving his post at the end of August. Robbins has accepted a one-year visual-arts fellowship at Harvard University's Radcliffe Institute for Advanced Study. "I get to focus on my own work," says Robbins, who specializes in installation art.

Robbins leaves behind an activist legacy at the arts endowment. During his tenure, the NEA helped to push other federal agencies and state and local officials nationwide toward more informed design decisions in their public works.

Sources inside the NEA say that it is unlikely that the NEA will replace Robbins with a director of equal rank. Insiders say that under acting chairman Eileen Mason, several divisions, among them design, dance, and film and video, have been "demoted" to having deputy-director status and will enjoy far smaller operating budgets.

Robbins declined to comment on the agency's internal fluctuations. "I must be an optimist, or I wouldn't have taken this job," he says.

Within a day of Robbins' resignation announcement, Susan Henshaw Jones, president of the National Building Museum since 1994, announced her resignation, effective at the end of January. Jones plans to return to New York, where she had previously been president of the New York Landmarks Conservancy, to rejoin her husband, Richard Eaton, who left Washington to become a federal judge in New York two years ago.

Jones, who oversaw the museum as its annual attendance quadrupled (to nearly 400,000 people annually) and public programs burgeoned, nearly resigned in 1998 to spend time with her family, but the museum's board made it possible for her to stay on in a less intensive capacity. "I am proud to have directed this remarkable organization," Jones said upon announcing her resignation.

The building museum's chair, Carolyn Brody, will lead a search committee to find Jones's successor. "This is an exciting juncture for the museum," Brody says. "The museum will conduct a vigorous national search for a new leader to build on Susan's success." BRADFORD MCKEE

Economic Indicators

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<tr>
<td>Consumer Price Index</td>
<td>180.1, up 1.5% from July 2001</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>5.9%, down from July 2001 (6.5%)</td>
</tr>
<tr>
<td>Construction unemployment</td>
<td>10.3%, up from June 2002 (9.1%), and from July 2001 (7.1%)</td>
</tr>
<tr>
<td>New Construction Starts (June 2002)</td>
<td>$512.9 billion, up 4% from May 2002 ($496.6 billion)</td>
</tr>
<tr>
<td>Housing Starts (June 2002)</td>
<td>1,849,000, down 2.7% from revised June 2002 figures (1,695,000)</td>
</tr>
</tbody>
</table>
Building, Dwelling, Rethinking

For the most part, despite its cover shot of the post-9/11 New York skyline, After the World Trade Center isn't really a book about architecture—or even, more generally, about urban planning. It's an unabashedly leftist and class-based analysis of New York City and of lower Manhattan. Its authors, many of them academics in high Marxist dudgeon, are generally more interested in trying to slay the dragons of capitalist excess than mourning the victims of terrorism or suggesting specific plans for rebuilding Ground Zero. From time to time, the entries seem to miss the forest for the dialectical trees. David Harvey, for example, remembers the period immediately following the September 11 attacks as "a wondrous experience." Why? Because Americans got to enjoy "three days of noncommercial television." Even the punctuation gets a little shifty: one essay is titled "Whose Downtown?!?" Luckily, a few of the writers, including co-editor Michael Sorkin and historian Mike Wallace, take a somewhat less fevered approach. Chapters on immigration and other spasms of violence in Lower Manhattan help sketch in the area's long view. And Mark Wigley's terrific essay "Insecurity by Design" may well be the most eloquent obituary yet written for the twin towers and the complex relationship they symbolized between humans and shelter. "It is the sense that buildings outlive us that allows us to have a life," Wigley writes. "To lose a building is to lose not simply an object that you have been living in or looking at but an object that has been watching over you." CHRISTOPHER HATHORNE

Walking on Unbreakable Glass

In 1486, Duke Ercole I d'Este of Ferrara, Italy staged a comedy from ancient Rome, for the first time since antiquity, in the open courtyard of the Palazzo della Corte. The play by Plautus was performed on a wooden stage in front of five houses across from a set of bleachers. With such a precedent, it is fitting that present-day Ferrara Mayor Gaetano Sateriale asked noted director Luca Ronconi for a new theatrical event to rival the earlier spectacle and celebrate the 500-year anniversary of the arrival of the Duke's daughter-in-law, Lucrezia Borgia, Duchess of Ferrara. Having selected a subtle and delightful comedy, Amor nello specchio (Love in the Mirror, 1622) by Giovan Battista Andreini, Ronconi chose as his stage set a magnificent example of Renaissance urbanism, the Corso Ercole d'Este, from the Este castle to the Porta degli Angeli. For the seven performances, Ronconi chose the point where the street is framed by Biagio Rossetti's most renowned building, Palazzo dei Diamanti (1439-99) and by Palazzo Turchi-Di Bagnolo (1493-1511). A mock brick wall and steep bleachers further closed off the street, but the touch of genius came with Ronconi's decision to carpet this stretch of street with 200 feet of unbreakable mirrors, doubling buildings, sky, actors, and lights, and holding illusion and reality in dynamic tension—and not incidentally, giving form to the play's complex themes. DIANE GHIRARDO

Flora and Silicon-a

Architects always seem to be waiting for the landscape to fill in around their new projects. World Construction Set 6, however, lets designers create complex virtual landscapes to surround their building models. The program was developed by 3D Nature, the makers of the landscape-modeling program Visual Nature Studio, which has been used by clients like NASA, the U.S. Geological Survey, PBS, and Boeing.

World Construction Set 6 runs on Mac or PC, and can import live building models from 3D Studio Max or Viz. Still images can be created, as well as animations. The software is designed to create models with relatively low polygon counts (so every leaf and blade of grass is not its own entity), for quicker rendering.

Version 6 also has more photorealistic capabilities—like transparent water and volumetric clouds—more advanced lighting controls, more importing capacity, and, best of all, a joystick, so users can literally fly through their ideal landscape. SARA MOSS
Camera Bravura

> EXHIBIT


In contrast to the image-heavy digital cacophony of everyday life, it is a relief to view the exhibition Taken by Design: Photographs from the Institute of Design, 1937-1971, on view at the San Francisco Museum of Modern Art. Focusing its lens on light, form, and material, the early Institute of Design—founded in 1937 as Chicago's New Bauhaus by Laszlo Moholy-Nagy—took the radical step of integrating photography and design. Via abstract photograms and "montages without scissors," students and faculty struggled with the thoroughly modern experiment of making art in an industrialized society.

The show's second of three sections documents the shift in 1946 from studio concepts to the Chicago streets led by Harry Callahan and Aaron Siskind. Students turned the city into their chiaroscuro laboratory. A westward expansion in the 1960s marks the final section. Panoramic images expand the limits of the camera and, because the school trained many noted twentieth century artists and teachers, expose the school's profound impact on photographic history. MIMI ZEIGER

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### EXHIBITIONS

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<td><strong>CHICAGO</strong></td>
<td>Greuze the Draftsman and Painter</td>
<td>Works by 18th-century French artist Jean-Baptiste Greuze, at the Getty Center, opens September 10 (312) 440-7300</td>
</tr>
<tr>
<td><strong>MINNEAPOLIS</strong></td>
<td>Marcel Breuer in Minnesota</td>
<td>An exhibition marking the centenary of the architect and designer's birth, featuring his Minnesota projects, as well as furniture designs, at the Minneapolis Institute of Arts, opens September 7 (612) 870-3131</td>
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<tr>
<td><strong>DENVER</strong></td>
<td>Metamorphosis: Modernist Architects</td>
<td>Through October 27 (303) 443-3600</td>
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<td><strong>HOUSTON</strong></td>
<td>Asian Pacific American Art</td>
<td>At the Holocaust Museum, through October 6 (210) 629-4690</td>
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<tr>
<td><strong>NEW YORK CITY</strong></td>
<td>Design of the 20th Century</td>
<td>Featuring the work of Modernist Architects, through October 6 (212) 935-3960</td>
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<td><strong>HUMLEBÆK, DENMARK</strong></td>
<td>Arne Jacobsen: a retrospective of the Danish architect and designer</td>
<td>At the Louisiana Museum of Modern Art, through January 12 (45) 4919-0719</td>
</tr>
<tr>
<td><strong>LONDON</strong></td>
<td>Serpentine Gallery Pavilion 2002: Toyo Ito with Arup</td>
<td>The pavilion designed by Toyo Ito is located on the roof of the Serpentine Gallery, September 29 (44) 20-7298-1515</td>
</tr>
<tr>
<td><strong>SAN DIEGO</strong></td>
<td>Christo and Jeanne-Claude in The Vogel Collection</td>
<td>A retrospective of the artists who have wrapped, covered, and drapped everything from trees to the Pont Neuf, at the Museum of Contemporary Art, San Diego, opens September 22 (858) 454-3541</td>
</tr>
<tr>
<td><strong>VENICE</strong></td>
<td>8th International Venice Biennale of Architecture</td>
<td>Featuring an exhibition of design proposals for a new World Trade Center organized by Max Protetch gallery, opens September 8 (39) 041-521-8906</td>
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### COMPETITIONS

- **Redesigning the Modern City** - International competition to upgrade the Rozzano Melara quarter of Trieste, Italy. Entry deadline is October 16. [More information](http://www.expo2002.ch)

- **Rome Prize 2003** - Entries limited to six months two years in Rome, sponsored by the American Academy in Rome. [Deadline November 1](http://www.aarome.org)

- **National Green Building Awards** - Given in four categories: green advocate, green project, green building program, and outstanding green product. [More information](http://www.nahbrc.org)

### CONFERENCES

- **World Workplace 2002 Toronto** - Conference sponsored by the International Facility Management Association, will focus on green building issues, location to be announced, October 6-8 [www.worldworkplace.org/northamerica/2002](http://www.worldworkplace.org/northamerica/2002)


Even isolated buildings are connected to each other by the land in between. Landscape is literally our common ground. In their designs for both the Greentree Foundation’s Center for Peace in Manhasset, New York, and the Seattle Olympic Sculpture Park, Weiss/Manfredi Architects prove this, relying on landscape to connect disparate physical elements into a unified whole, and to create connections between people and communities.

The architects have just begun work on the Center for Peace, a meeting place where the United Nations and other organizations can consider issues of human rights and international relations. Weiss/Manfredi’s design for the center, chosen in an international search and set for a 2004 finish date, opens an existing building to the landscape, reorganizing its cellular structure into a cohesive series of interior and exterior spaces. The 1917 structure, which previously housed a stable, garage, and staff quarters, will be wrapped with a glass liner on its courtyard side, opening views to a new garden. Through a strategic blending of inside and outside, the architects hope to promote communication, contending that “it is often within the context of the unplanned encounter and conversation that the most important ideas and understandings are initiated.”

Weiss/Manfredi also use landscape to promote interaction and community in their design for the Seattle Olympic Sculpture Park, a new 8.5-acre outdoor addition to the Seattle Art Museum slated for completion in 2004. For the sculpture park, the architects are creating a new landscape from scratch, nestling the park—and by extension the museum’s presence—in the messy layers of the urban fabric.

The site, situated in densely populated Belltown, is the last remaining undeveloped waterfront parcel in the city, and is divided into thirds by roads and train tracks. To unite the segmented site, the park takes the form of a sculptural topography that weaves over and around the existing infrastructure, leaving the roads and rail lines intact. This new landscape zigzags from the city down to the water, creating an accessible connection between the urban center and the waterfront and providing multiple paths for pedestrians and cyclists.

The invented landscape will be assimilated into the area ecologically as well through the design of three native garden precincts: An archetypal forest of the Northwest, an urban garden, and shoreline terraces of native water plants that will also serve as a regenerative area for fish and underwater wildlife—reviving the Puget Sound shoreline and introducing native greenery to an industrial area. JULIA MANDELL
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Competition Rules

BY RAYMOND W. GASTIL

For those who believe in the power and utility of design in making our public places, the first anniversary of the September 11 attacks offers a mixed menu of promise and frustration. Washington, D.C., has forged ahead with a competition for a memorial at the Pentagon, and in Shanksville, Pennsylvania, the memorial process is well underway. In mid-August, the World Trade Center site's chief planning organization, the New York State-chartered Lower Manhattan Development Corporation (LMDC), announced its timeline for a memorial in New York, with an international design competition beginning next spring, leading to a final design by the second anniversary of September 11.

The memorial schedule assumes that a master plan for the entire site will be in place by spring 2003. Here, too, the LMDC is moving ahead, although their docket's clarity is clouded by talk of a land swap between the Port Authority of New York & New Jersey (PA) and the City of New York that could lead to the city taking title to the Ground Zero site, and the PA rising from leaser to owner of La Guardia and Kennedy airports. Assuming the LMDC retains a leadership role, and putting aside timelines, what hopes can we have for the master plan's originality and vision? There is the positive sign that the LMDC has put out an RFQ for architects, landscape architects, and planners with a record of "innovative designs." After their public flogging following the release of six planning alternatives in mid-July, it is no surprise that the LMDC and the PA are seeking to open up the process. While the RFQ leads to a competitive selection, it is not a design competition. For eight weeks ending in early November, five teams, each paid $40,000 (an honorarium significantly less than a firm's likely costs), will develop alternatives, with no guarantee of any future role in the project.

The good news is that design is being given a role early on, breaking with the false premise that design is the dessert, following the planning banquet of deal-making and stakeholder review. This illusion is held fast by many; in a talk given to the New York Building Congress early last spring, New York City Mayor Michael Bloomberg said "now is a time for planners, not for architects." It was, is, and will be a time for urban designers, whatever their professional moniker. An urban design approach is the only "visionary" one possible—it recognizes that the way things look is part of the way things work. Millennia ago, Helen of Troy's face changed the course of civilization. A public space on the WTC site would be the city's new face. Badly designed, it could, like Helen, launch a thousand ships, but they'd be sailing away, leaving behind a diminished Lower Manhattan.

At its best, urban design is about strengthening, not weakening, the relationship between planning and design disciplines. We are entitled to hope that the LMDC's plans will make the connection, and that reason volunteer groups like New York New Visions have assisted in developing the criteria for this process. But there will have to be more innovative urban design work than eight weeks can produce.

For all their inherent flaws, design competitions have an isn't vital that RFQs and design services contracts don't. We've already seen what happens when urban designers try to present schemes generically. Equally problematic are the limited resources allocated to conceptual development of the site. Millions of dollars are being spent on planning in the initial phase of rebuilding, including essential baseline work. But $200,000 for "innovative" design out of an LMDC budget of $2.5 billion is simply not enough.

The LMDC has not announced how it will arrive at a master plan by spring 2003, beyond indicating that the work of the five RFQ finalists will be more grist for the mill. There needs to be more breadth—the kind that an open competition would provide—and more depth—the kind that integrated urban design teams would yield. Such a competition may be possible if, as planned, local civic organizations launch, with or without official sanction, an international ideas competition as early as this month. Done right, with some programmatic boundaries and the aid of forthcoming transportation and economic reports, their competition can be both grounded in reality and open to a diverse range of ideas that the LMDC's handpicked firms, however imaginative, cannot deliver.

Such an open ideas competition, together with the work of the RFQ finalists, will set the stage for an official urban design competition that goes beyond ideas to policy and implementation. This phase should be one of well-funded inter-disciplinary teams—with everyone from economists, planners, architects, landscape architects, ecologists, and artists to community activists and entrepreneurs—to develop and defend genuinely alternative scenarios for the site. Such an in-depth approach would be expensive (at least $2 million per team) and time-consuming in media and political time (but easily done before the end of 2003). In the real time of building cities, both the freedom and expansiveness of the open competition, and the focus and depth of the competitive urban design teams, are imperative if New York is to thrive and compete with the other great urban centers of the world.

RAYMOND W. GASTIL IS DIRECTOR OF VAN ALEN INSTITUTE, WHOSE CATALOG OF ITS 2002 EXHIBITION, RENOWING REBUILDING MEMORIALS, WILL BE AVAILABLE THIS NOVEMBER. HE SERVED AS CO-CHAIR OF THE NEW YORK NEW VISIONS MEMORIALS PROCESS TEAM.
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Urban Rebirth
Cities coping with disaster offer lessons for rebuilding New York’s World Trade Center site

BY JOAN OCKMAN

HISTORY Last spring, as the nation continued to reel from the events of the preceding September, and as the mountain of rubble and remains continued to be cleared at the World Trade Center site in Manhattan—widely referred to as “ground zero”—many New Yorkers found themselves torn between a sense of the tragedy’s inevitability and an increasingly clamorous debate (not least engaging the architectural community) about how to rebuild. It seemed useful to try to put the situation into a broader historical and cultural perspective. Presumably there were lessons to be derived from the example of other cities and the way they coped with similar catastrophes.

Indeed, while each of the instances of “urban reinvention” under examination in Out of Ground Zero is unique, it offers a suggestive way of thinking about the situation in New York. It may be cold comfort to realize that the magnitude of suffering in Manhattan is no greater than that endured in other places and times. Yet the spectrum of responses offers not just a set of variations on the theme of urban destruction, but a sense of the manifold meanings of urban experience. For the most part, these responses confirm the perennial resilience of cities in the face of drastic events; a couple, however, also offer more cautionary tales.

LISBON
The Lisbon earthquake of 1755 was a truly world-shaking event. As Kenneth Maxwell, a scholar of Portuguese history, relates, it is estimated to have registered 9.0 on the Richter scale. The quake and its aftershocks were felt as far east as Venice, where Casanova, imprisoned in the Ducal Palace in Piazza San Marco, seized the opportunity to escape from his cell. In Lisbon, the epicenter, as many as 15,000 people were killed and about one-third of the city was destroyed. But what is distinctive about the case of Lisbon is the emergence of what Hegel would call a “world-historical individual.” Stepping in for a weak and fearful monarch, the Marquês de Pombal lost no time in taking charge of the situation.

Pombal was one of those visionary—and ruthless—personalities through whose agency an entire urban fabric was transformed, a figure comparable to a Baron Haussmann or Robert Moses. Under his oversight, Lisbon went from being an aristocratic, Jesuit outpost with a jumbled medieval plan to become a modern bourgeois and commercial city embodying Enlightenment values and boasting functional planning and a fireproof, sanitary system of construction. Almost 250 years later—as a comparison between the drawings signed by Pombal and contemporary photographs reveals—his intervention remains legible in the neo-Palladian architecture of the city’s principal squares and streets.

CHICAGO
Chicago presents the opposite scenario. In the heartland of America, pragmatic opportunism reigned supreme after Mrs. O’Leary’s cow kicked over a lantern in 1871. Historian Ross Miller describes the enormous real-estate boom that followed the Great Fire and the frenzy of rebuilding, almost all of it shoddy and undistinguished. Meanwhile, a peculiarly American mix of doomsday prophecy and thinly veiled capitalist celebration combined to give the city a new founding myth as a dynamic, tabula rasa metrop-
Olis. Just two years later, a national economic depression put a halt to the derricks and further conspired to keep Chicago from erecting any significant buildings.

Fascinatingly, however, it was this negative experience of post-fire rebuilding rather than the fire itself that, by the early 1880s, engendered the city's great period of architectural modernism. Architects like John Wellborn Root, Daniel Burnham, and Louis Sullivan witnessed the effects of speculation-driven design and construction at a formative moment in their careers, and they were inspired to design a different sort of building: high-rise frame structures in the solid, fireproof, and commercial but civic-minded style that would become Chicago's seminal contribution to world architecture.

### HIROSHIMA

If the havoc wreaked by natural and accidental disasters like earthquakes and fires ultimately tends to be received with a sense of apocalyptic acceptance, that caused by war and human instrumentality elicits a rather different range of emotions. These emotions are further inflated by the historical outcome: whether the city is on the side of the winners or losers. Not surprisingly, a myth of victimhood coalesced in Japan after World War II around the fact that Hiroshima and Nagasaki were the first cities on which an atomic bomb was dropped.

Hiroshima was not a very well known city prior to the attack in August 1945 by the American airplane Enola Gay, which was responsible for the deaths of upward of 180,000 people as the radiation continues to work its long-term effects even today. Afterward, however, the Japanese ground zero became a universal symbol of this horrific and unprecedented form of modern warfare and the focus, both nationally and internationally, of an important project of memorialization.

As architectural historian Carola Hein points out, Hiroshima's rebuilding and the role played by a visionary young architect, Kenzo Tange, were exceptional in the Japanese context. In a country that still has little tradition of monumental or comprehensive urban planning, typically resorting to pragmatic forms of "readjustment" in the wake of frequent fires, earthquakes, and floods, Tange's solution to the competition brief for a "peace city" melded Western concepts of modernism with Eastern (specifically Shinto) forms of commemoration. While the full scope of his ambitious master plan went unrealized—and while the rest of Hiroshima has been developed in the intervening years like most other postwar Japanese cities—Tange's architectural centerpiece still resonates with poetic dignity.

### ROTTERDAM

Rotterdam, which lost 11,000 buildings to Nazi bombs in 1940, offers another story, as urban planner Han Meyer recounts. Here, forward-looking planners, businessmen, and politicians soon welcomed the extensive damage as an opportunity to rebuild the antiquated and dense port city—in fact, this had been the objective of many well before the war. In 1944, the compact urbanism favored by Rotterdam's first reconstruction...
architect, W. G. Witteveen, was jetisoned in favor of the more modernist and "American" ideas of his successor, C. van Traa, who embraced the functionalist zoning of the International Congresses of Modern Architecture (CIAM) and the type of open, "democratic" space in the city center called for by Sigfried Giedion and others in the name of a "new monumentality."

Among the most innovative and celebrated projects to come out of the postwar building program was the Lijnbaan shopping center by the architects Van den Broek and Bakema, hailed as a model of progressive planning. In subsequent years, however, particularly as postmodernist revisionism set in during the 1960s, Rotterdam's citizens took a dimmer view of the new commercial development.

In recent decades, a succession of strategies has been adopted to reconstruct the city along more traditional European or Dutch lines.

PLYMOUTH
In Plymouth, England, the reconstruction undertaken after the air raids of 1941 was an object of disdain almost from the start. Here, under the engineer James Paton Watson, the mayor Waldorf Astor, and the elderly London planner Sir Patrick Abercrombie, an idealistic but neotraditionalist plan was adopted. Largely reflecting Abercrombie's thinking, as architectural historian Alan Powers relates, the plan was a loose amalgam of the regionalist ideas of Patrick Geddes, the formality of the American City Beautiful movement, and the Garden City philosophy of Lewis Mumford.

Implemented over the next two decades, the reconstruction suffered from poor-quality execution, compromises with respect to some of its basic features, and a general shift in British taste away from Abercrombie's penchant for the grand axial vista toward the picturesque English aesthetic of "townscape."

Despite efforts to remedy some of the scheme's defects in subsequent decades, the honorific city center has succumbed over the years to banal development. Abercrombie's emphasis on integrating the plan with the surrounding region finds an interesting echo, however, in some of the more audacious discussions that took place early on with respect to the World Trade Center site, and constitutes the plan's chief contribution to urban thought.

BERLIN
Berlin is another city whose fate was decisively changed by World War II, but whose full-blown transformation—the hyperaccelerated redevelopment it is currently experiencing—had to await the city's reunification in 1989 at the end of the Cold War. German filmmaker Hubertus Siegert's 2001 film "Berlin Babylon" offers a vision of a city in the throes of reinventing itself. As architectural historian Ralph Stern points out, Siegert's interpretation defies the usual "city film" genres. Neither a documentary nor a celebration of architectural achievement as such, it rather captures in vivid and poetic imagery the arbitrary, brutal, and frequently banal process of city building. In this process the urban construction worker figures at least as heroically as the municipal planner and
features

architect (a role perhaps similar to that played by fire fighters and policemen in New York City). Siegert's view of urban processes and protagonists, more curious than cynical, is personified by Walter Benjamin's angel of history—evoked in a voice-over in the film—who is helplessly blown backward into the future. The film's central metaphor of Babel/Babylon further dramatizes the mythic dimensions of the city's reconstruction and its architectural hubris.

THE BALKANS
The violence carried out in cities in the Balkans has different implications for New York, from the perspective of another eyewitness to recent historic events, the Belgrade architect, educator, and dissident Milan Prodanovic, who uses the term "urbanicide" (coined by his compatriot Bogdan Bogdanovic) to characterize a widespread and festering hostility to cities and civic culture in the Balkans. Harbored by the region's multitudinous ethnic groups, this hostility was stoked over the last decade with murderous consequences by corrupt "postmodern dictatorships" armed with a lethal mixture of conventional weapons and modern media technology (in particular, television).

Whether one speaks of the assault on the cosmopolitan life of Sarajevo by local warlords goaded by Serbian commanders, or the destruction of architectural patrimony (including a renowned sixteenth-century bridge) in the former Herzegovinian capital of Mostar by Croats, the perpetrators shared a hatred of urban and democratic values and a fundamentalist belief in the primacy of ethnic heritage. In Prodanovic's view, the only chance of overcoming these entrenched prejudices and constructing an open, civil society in the Balkans lies in basic educational reform and a rapprochement between local culture and the new forces of globalism.

JERUSALEM
Another desperate urban situation today is contemporary Jerusalem, an intensely symbolic and just as intensely contested place where the potential for tragedy remains ever present. Iraqi-born political writer and former architect Kanan Makiya offers a rather different form of response to the question of urban reinvention in his recent novel, The Rock, a historical fiction about the building of the Dome of the Rock. Makiya views this monument, located on a site in Jerusalem sacred to three religions since ancient times, as "a lightning rod for complete and total disaster in the Middle East"—and as such, a place comparable to the World Trade Center.

In Makiya's telling, the monument's construction reveals a complicity and connectedness between ancient Islam and Judaism as it also refutes the absolute claims of either side to ownership. In the face of intransigence and despair, Makiya thereby gives expression to a hope for coexistence and conciliation as if, through an act of utopian imagination, it might be possible to anticipate and avert historical destiny.

continued on page 114
What Works, What Doesn’t

Master-planning Ground Zero makes the pragmatic Alexander Garvin a local lightning rod

BY MICHAEL Z. WISE / PHOTOGRAPHY BY MICHELE ASSELIN

>PROFILE Reviewing the first edition of Alexander Garvin’s book The American City: What Works, What Doesn’t six years ago, the New York Times hailed it as “an Encyclopedia Urbanica.” Newly reissued this summer, the already sweeping survey has been expanded to cover over 250 U.S. urban and suburban revitalization projects across the United States. Now, Garvin—a 61-year-old adjunct professor of urban planning at Yale University and a member of the New York City Planning Commission—is putting his expertise to the test at the world’s most closely watched construction site. As vice president for planning, design, and development at the Lower Manhattan Development Corporation (LMDC), Garvin is set to play a decisive role in whatever replaces the destroyed World Trade Center.

“Not since Robert Moses imposed his single-minded mark on the region decades ago,” The (New York) Daily News commented on his appointment last February, “has an individual been asked to lead the recreation of such a crucial swath of real estate.”

Garvin, seated in his cramped office next to the gaping hole where the twin towers once stood, grins at the comparison and then brushes it aside. Since taking up his duties at LMDC, Garvin has been obliged to work in tandem with an extraordinary array of interest groups battling to influence what’s built on the contested spot. He also answers to multiple bosses from city and state government and, for the moment at least, the Port Authority of New York and New Jersey, together with leaseholder and developer Larry Silverstein.

The public outcry against the LMDC’s first six land-use proposals has already upended the planning process and may eventually eliminate the Port Authority’s influence. At the same time, this seems likely to give Garvin’s market-oriented approach to urban redevelopment greater sway. In his writings and in courses at Yale, Garvin argues that
the best planning involves "public action that will produce a sustained and widespread private market reaction." To be truly successful, according to Garvin, a planning initiative must alter the adjacent area as well. "If all you build is some office space and you're not improving the surrounding community then you've failed," he says, "no matter how many billions of dollars you've put in."

Garvin has himself worked as developer and as a planning consultant for several cities including Charlotte, North Carolina, Baton Rouge, Louisiana, Palm Beach, Florida, Stamford, Connecticut, and Markham, Canada. In each case, he has urged strategic public investments aimed at triggering a far more significant market response. "He looks at the tragedy of the World Trade Center as more than how to deal with a 16-acre Chinese puzzle and sees how it relates to the economy, open space, and the transit issues of the whole region," says Rick Bell, executive director of the New York chapter of the American Institute of Architects.

Rather than advocate any particular architectural approach, Garvin says he's not interested whether a design is modernist or neotraditional, but in whether it works. "I also care if it's great; quality is what matters," he quickly adds. "I'm not going to tell you that Rockefeller Center is better or worse than the Federal Center in Chicago by Mies. I'm very hopeful that whoever builds on this site is going to do something at least as good. It would not surprise me if a number of the world's finest architects and some of the smaller firms around the world ended up doing individual buildings here."

Stressing pragmatism, he continues: "The concern I have always had is that it has to work. We have a train station there. We have subways there. We have to worry about buses and trucks and we have to move large numbers of people. We have to have a memorial.

Whatever the schemes are have to take into account all those things." But this nuts-and-bolts planning stance has sparked fears that compelling new architecture has little chance of rising on the trade center's ruins. Despite his record as a foot soldier in the study of cities—Garvin personally took the hundreds of photographs illustrating the case studies in his 560-page book—"is he enough of a risk-taker to be a midwife to great design?"

The terms of the LMDC's request for proposals issued this spring, which favored established New York-based firms, has raised concerns among some foreign observers. After hearing Garvin speak at an international conference in Lower Manhattan last May called "New York Talks to London and Berlin," British architect Will Alsop, who helped draw up the new Jubilee Line of the London Underground, demurred, "I've never seen such a display of complacency.
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in all my life.” Michael Mönninger, architecture critic of the German weekly Die Zeit, concluded that Garvin “totally refused to hear or learn anything from abroad.”

New York gallery owner Max Protetch, who last January exhibited an array of proposals to rebuild at Ground Zero, terms Garvin “less open than I am to architecture that speaks for this particular moment in time.” Protetch says that when he and Garvin talked about the show—to go on view this month as the U.S. entry at the Venice Biennale for architecture—“Alex was clear that he judges architecture on built projects, but did not seem to be open to people whose way of thinking speaks of this time unless he could see built examples. In situations like this, I don’t think you need that kind of proof. This is a moment when we have to reach out of those constraints.”

Billie Tsien, the sole architect on the LMDC board, counters in Garvin’s defense, “He’s under tremendous pressure. As a planner, he’s most excited about infrastructure,” she says, “but he’s a valiant warrior who does believe deeply in the importance of good design.”

Today, Garvin expresses certainty that there will be an international competition for the memorial, as well as for institutions like the proposed Museum of Freedom and Tolerance and individual buildings like a major new transit center. “I’m assuming that some of the greatest architectural talents in the world are going to have something to do with these things,” he says. “The trick here is to get a public realm that’s great, streets that are great, great squares.”

He further envisions that the central rail station for the area would be a twenty-first-century variant of Grand Central Terminal. “I have always assumed we would have something quite grand,” he explains, “something akin to the Galleria in Milan with restaurants, movie theaters, stores, and art galleries.”

Garvin’s hope is that after the public spaces are created, individual blocks would become the purview of private developers hiring their own architects.

Garvin got the LMDC job just weeks after being touted as a lead candidate for the chairmanship of the New York City Planning Commission, of which he’s been a member for the past seven years. While Garvin doesn’t hide his disappointment that Mayor Michael Bloomberg awarded the chairmanship to another commission member, Amanda Burden, he’s still poised to have a strong, if more focused, hand in shaping a key component of New York’s future.

The son of Latvia-born refugees who fled to New York in 1939, Garvin studied architecture at Yale and traces his passion for planning to the moment when his college roommate gave him a copy of Jane Jacobs’s book, The Death of the American Dream.
The Death and Life of Great American Cities, as a senior-year Christmas gift. After graduation in 1962, he worked for Philip Johnson before joining the New York City Planning Department's housing division.

More recently, as planning director for the drive to bring the 2012 Olympics to New York, Garvin drafted an innovative scheme locating nearly all the competition venues along two intersecting transportation axes to easily convey athletes around the city, while also using ferries and new infrastructure to revitalize the waterfront. The founder of the Olympics campaign, Daniel Doctoroff—now deputy mayor for economic development in New York City—recruited Garvin to help devise a plan for the games after coming across his writings at a bookstore.

"He's a hero for a lot of people," the AIA's Bell says of Garvin. "He's not the effete Ivy League intellectual some people assume from looking at his bow ties. He cuts through smokecreens and is a navigator of bureaucracy." Garvin counts among his former students Los Angeles city planning director Con Howe, former New York City Planning Commission chairman Joe Rose and The New Yorker's architecture critic, Paul Goldberger. The most recent Yale Daily News course critique gives high ratings for his class, "Introduction to the Study of the City."

Although New York Times architecture critic Herbert Muschamp has scolded Garvin for favoring a "New Urbanist retro theme park approach" at the World Trade Center site, Garvin's supporters see the charge as unfounded. Garvin did work with New Urbanist Andres Duany in 1998 to draw up a new plan for Baton Rouge, but took a critical view in the latest edition of The American City of the New Urbanist community at Kentlands, Virginia. "Alex is very much of an iconoclast," says Carol Willis, an architectural historian and director of the New York Skyscraper Museum. "It's not easy to peg him as one thing or the other." Municipal Arts Society President Kent Barwick concurred, "He's not looking out for any particular school of thought, other than the genius of the place."

In any case, avant-garde creations by independent-minded practitioners hardly seem Garvin's thing. This becomes clear when the subject turns to Rem Koolhaas, who teamed up with Davis Brody Bond and the engineering firm Arup to vie in the Ground Zero concept-plan selection process this spring. "I have great respect for him as a writer and as a thinker about cities," Garvin says. Pausing to choose his words, he summed up what he wants to avoid at all costs. "This is not a project for Howard Roark, a sole artist who decides—indepen dent of the city and all its players—what happens and then, when the city disfigures the great artwork, blows it up. We've had one tragedy already. We don't need another one."

Of course, knowing what he himself does not want and satisfying the popular demand for bolder and more innovative designs are two different things. With a watchful public now placing extraordinary demands on the powers of architecture and planning, Garvin could well find that the lessons of reinventing downtown Manhattan warrant yet another edition of his book on cities—and what works and what doesn’t.

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Running Behind the Times
Is Amtrak in trouble, or are we?

BY BRADFORD MCKEE

> HISTORY On or about October 1, the national hue-and-cry machine will heat up. The subject is the fate of Amtrak, the government-owned passenger railroad monopoly with an impossible congressional mandate: to make money. Amtrak has consistently lost billions of dollars (an estimated $1.1 billion in 2001 alone, and another $1 billion loss expected for this year) since it began running in 1971, pushed along by President Richard Nixon, who wanted to get financially troubled freight-rail companies out of the passenger-rail business.

In early July of this year, Amtrak threatened to shut down if Congress didn’t intervene to get it through the next fiscal year; then, a last-minute deal awarded Amtrak a $100 million loan to make it through August. The Bush administration was expected to propose floating the railroad another $170 million to keep it running through the fiscal year that ends September 30.
Both fans and detractors of rail travel seem to agree that this is a turning point for Amtrak. Either the company has to improve its management structure, accounting, and service—for starters—and act like a competitive enterprise, or lawmakers are going to introduce competition in the form of private passenger carriers.

While Amtrak's troubles offer a sobering moment for American urbanism, this is not by any means a turning point in ridership numbers; that is ages past. Long ago, American—and global—society opted for the faster, cheaper, and often more stressful alternatives that cars, buses, and planes offer. Amtrak's crisis, however, provides a long-delayed reckoning with what this country has become versus how it was built, which had everything to do with the passenger railroad.

TERMINAL ROMANTICS
When it comes to trains, most old-fashioned urbanists are terminally romantic, so to speak. The development of the railroad in this country literally drove the design and growth of our nineteenth-century cities. Before there was ever a jet set, there was the legendary Pullman car. By the end of World War II, trains carried 790 million passengers a year, which equaled two-thirds of commercial travelers among cities in the United States. But automobiles and airlines quickly caught up during the 1950s and 1960s. In 1956, Congress passed the Federal Aid Highway Act, which created 40,000 miles of interstate roads. The next year, airlines surpassed the railroads in passenger volume for the first time with the routine use of jet aircraft. In 1958, the Federal Interstate Commerce Commission declared passenger rail travel obsolete and compared this former engine of a youthful, urbanizing nation to the stagecoach.

The actual death of the American passenger railroad has yet to occur, but the problems swirling around Amtrak crystallize a set of controversies that have occupied urban-minded people in this country for years: What are the most efficient and environmentally sound ways to move people about this enormous land? And is there a public impulse to invest in those means of travel? Amtrak's critics gripe about the seemingly bottomless government subsidies paid to the railroads, but tend to overlook the state and federal billions poured into road and airport construction.

"If you put money into train systems, that's a 'subsidy,'" says Andy Kunz, an urban planner in Alexandria, Virginia, and director of the advocacy group Newurbanism.org. "If you put it into highways, that's an 'investment.' It's doublespeak."

RAILING FOR REFORM
Still, even rail romanticists find it hard to rationalize the company's perennial losses. Although the Metroliner and Acela Express lines running along the Northeast Corridor routes between Boston and Washington, D.C., are popular and profitable (they earned an estimated $19.33 per customer in 2001), their success cannot help to sustain the losses of Amtrak's 19 long-haul routes, which bleed an average of $138.71 per customer, according to an analysis by the Amtrak Reform Council, an 11-member independent body established by Congress to study ways to restructure the railroad's operations.

"Long-distance trips can be more efficient, but they can't be expected to make money," says Milwaukee Mayor John O. Norquist, a member of the Amtrak Reform Council. "They're not going to. A train that takes 17 to 20 hours to go from Chicago to New York is a tough sell. It can compete with Greyhound, but it can't compete with the airlines."

Approximately 60,000 people ride Amtrak daily, a small fraction of the 980,000 intercity bus riders and nearly 2 million airline passengers per day. Countless millions more jump in their own cars and drive.

"Our underwriting of gasoline and the automobile is shameless," notes David Childs, a partner at Skidmore, Owings & Merrill who, with partner Marilyn Taylor, has done extensive planning and design work along Amtrak's Northeast Corridor lines. "In no other place do they do that. It seems so relentless-

ly logical to reconsider the value of train travel. It's such an efficient form of transportation, moving a huge amount of people very quickly."

The Amtrak Reform Council's final recommendations, delivered to Congress last February, proposed breaking Amtrak into two companies: one to manage the Northeast Corridor and another to oversee operations in the rest of the country. The latter would run on a contractual model like that of Amtrak's various regional commuter franchises, such as those operated by the Maryland Rail Commuter, the Massachusetts Bay Transportation Authority, and Caltrain in the San Francisco Bay area.

CONTRACT WITH THE PUBLIC
Indeed, Amtrak is the largest provider of contract commuter rail service in the nation, which would make even a temporary shutdown a transportation catastrophe—just over 61 million passengers use the commuter services each year. And after the turmoil of September 2001, people began boarding passenger trains in droves, logging a record 23.5 million customers for the year.

There's no doubt that demand for passenger train service remains significant at all levels of Amtrak's operation, but many political observers doubt that Amtrak needs to run every one of its scheduled trains at their current frequency. For instance, the cross-country trains could run every three or four days rather than daily. But the notion of dismantling Amtrak's services altogether and not replacing them would be a disaster for smaller cities and would seriously affect the life of larger towns as well.

So it seems that the passenger railroad, which used to be the mainstay form of long-distance transportation in this country, has bifurcated into two separate creatures. It remains a vital necessity in places like the Northeast, the West Coast, and certain interior routes. But in other regions it has become a financial curio—not a workhorse but a hobbyhorse, kept in service by a few vocal special interests.

In spite of this geographic split, Americans support continued financing for Amtrak. A survey last month by the Washington Post showed that more than half of the respondents favor the subsidies. Beyond such popular support, there is still no more appealing (or safe) way to see the land than by train. A ride doesn't force the traveler into the vortex of anxiety that has become the staple of airline travel. Rather, it proceeds at what we could call a human pace and operates at what we know as a human scale. Europeans, as proponents of the train like to point out, haven't lost track of the rails. Ridership and investment in train service is as high as it ever been. Amtrak's problems in this country aren't with the trains themselves, but with the easy wastefulness of its alternatives.
Old City > New City

Civic architecture challenges architects, in part because it finds its roots in so many places: commerce, history, politics, the arts. When we make architecture in the city, we build upon the work and remains of our ancestors. We do so with a sense of tradition and history, even when we choose to reject formal expressions of the past. Near Rome, the construction of a three-hall performance space and park designed by Renzo Piano was delayed—and reshaped—several times: by economic necessity, by political forces, and the unearthing of the ancient remains of a city.
A MONUMENTAL NEW MUSIC PARK BY RENZO PIANO BUILDING WORKSHOP TAKES ITS PLACE BESIDE ROME’S ANCIENT TREASURES. BY RICHARD INGERSOLL
The lush green Parco della Musica bridges a former gap in Rome's urban fabric between the Flaminio district and the Villa Glori park. Adjacent to the site lie the long bar buildings of the lyceum Village (Adalberto Libera, et al., 1960) raised on pilotis above continuous gardens—Rome's most ambitious adventure in Modernist housing. Piano's three structurally distinct "music boxes" are connected by a sweeping 3,000-seat amphitheater (preceding pages) that serves as a fourth performance space, and the dramatic focal point of the site. Each theater is uniquely configured to accommodate specific types of performances. The mid-sized theater (above) can house a large orchestra with choir, ballets, or contemporary music.

On April 21, the legendary date of the founding of Rome 2,755 years earlier, two of the three theaters in Rome's new Parco della Musica were inaugurated. The uncanny scarab-shaped hoods of the three halls by Renzo Piano Building Workshop project a stunning new iconic identity for Rome's northern entry point, an image as remarkable as the glistening domes that characterize the city center. Hemmed in on two sides by the roaring traffic viaduct of Corso Francia, the difficult site is tamed by hanging gardens elegantly inserted as a landscaped sound barrier. The acoustics of the concert halls, controlled by a series of movable and static cherry-wood panels, were tested during a two-month period of sold-out concerts, and unanimously declared peerless by musicians and the public alike. But the greatest surprise of this ambitious cultural enclave—beyond the high quality of architectural detail, the comfort of its spaces, and the intelligent distribution of its functions—is that such a major public project was completed at all. For the past 30 years, political infighting, struggles between state and local authorities, and a general malaise between professionals and contractors has exerted a crippling effect on Italy's architectural culture. Many works, such as the Palace of Justice in Florence, have been held up for decades because of financing disputes. Other works have been subject to contracting scandals, which have typically led to compromises in quality and program. Despite Italy's overall economic well-being, the nation's capital has little to show in terms of architectural progress aside from the copious work of conservationists on its historical treasures. With the "Auditorium," as the project is known, there is finally hope that great new built works will once again be possible in the city that was for so many centuries the architectural capital of the world.

The program for a new Auditorium for classical music has been afoot since 1936, when the old theater, which had been improvised inside the cylindrical mass of the Mausoleum of Augustus, was demolished in coordination with a series of "disembowelings" carried out by Mussolini's planners. Piano's project, won in competition in 1994, was preceded by competitions in the 1930s and 1950s for different sites that never got beyond the concept phase.
The coving eaves of the middle hall’s roof are held up with elegant V-shaped metal supports. The site plan (below) and sections and plans show the layout of the 1,200-seat theater (right top to bottom).

1. 2,700-seat theater
2. 1,200-seat theater
3. 700-seat theater
4. outdoor amphitheater
The politically center-left former mayor, Francesco Rutelli, took the current Auditorium project as a challenge to demonstrate the viability of a new method of fast-track agreements to usher public works to terms. Despite the best intentions, obstacles arose. The excavation of the site—previously a parking lot for the adjacent Palazzetto dello Sport and Flaminio Stadium, designed by Pier Luigi Nervi for the 1960 Olympics—revealed the foundations of a second-century villa, and legally archaelogical find had to be made available for study. A year’s delay resulted, as the positions of the three theaters had to be redesigned to accommodate study of the villa.

The design change has proved beneficial to the n-shaped arrangement of the theaters, allowing more space between each and much improving the landscaped terracing of the site. Other delays, however, were politically motivated: a squabble with the superior Council of Public Works, which extended the wooden roof as structurally untenable, and an impasse between the director of works and contractors that required renegotiated contracts.

Still, a three-year delay in Italy is considered miraculously short. In the end, the political reputation of Rutelli (he ran unsuccessfully for prime minister last year) and the professional reputation of Piano, who has built most of his major public buildings outside Italy, have emerged with greater luster. When the 2,015-square-foot Auditorium complex reopens in December, with its third theater operational, Rome will have one of the best centers for classical music in the world, on par with Berlin and Paris.

The monumental, lead-coated carapace roofs jut far more than a gratuitous formal gesture. They may bear a greater resemblance to giant insects than to the upturned mandolins that Piano had in mind, but they work commendably well as protective fields, like the arching plates of gracefully jointed armor worn by Japanese warriors. Each of the roofs’ two sections was generated as a fragment of a torus, fit at its peak for better drainage, and joined by edges by five segments of coving eaves that further conceal the side elevations. The eaves, held in place by slender steel flanges, offer the only views of the controversial wooden roof structure of glued-laminated beams and pine planks; they also hide emergency stairways. Reveals between the seven grooved plates of each roof create an intriguing series of sinuous gaps. Beneath these metallic hoods the buildings assume an entirely different feel, characterized by solid brick walls rendered in traditional thin Roman brick, and large plate-glass planes. The physical gap between the internal architecture and the exterior shells takes the form of formidable crawl spaces serving the performance halls.

The approach to the Auditorium complex is defined by a glass-covered pergola lined with shops, leading from the major parking lot under the viaduct. While the effect of the transparent ceiling of the entry pergola is exhilarating and continues one of the recurring themes in Piano’s work, it may not be practical, as it will need constant maintenance and additional protection from the sun during the hot summer months. Most of the offices and rehearsal spaces are located behind this arcade on the upper level of a two-story structure beneath the three theaters, dissipated with hanging gardens. Planted with olive trees and ivy, the gardens are occasionally interrupted by small bamboo-planted courtyards that bring natural light to the ground-level interiors. The entry sequence turns a right angle and proceeds with the glass-covered pergola into a 3,000-seat outdoor amphitheater.

At the base of the fan-shaped amphitheater are the entries to the interior foyer that connects the three indoor theaters in a single 180-degree sweep. Each of the theaters is accessed from this foyer by a monumental stairway lined with continuous brick walls and paved in smooth travertine. Between the small theater for 700 and the midrange theater for 1,200 are a museum of musical instruments and a library; between the middle theater and the grand symphony hall for 2,700 is an archeological museum with the preserved ruins of the Roman villa. The two smaller theaters are perfectly orthogonal in layout, while the symphony hall is geometrically more complex, its polygonal shape a conscious reference to Hans Scharoun’s 1963 Philharmonie Hall in Berlin. As with the Berlin building, the seats wrap around the stage, placing the musicians toward the center of the hall. The giant cushions of the creased ceiling are suspended from the wooden roof structure to create the infinitesimal fracturing of sound required for optimal orchestral acoustics.

In all three theaters, Piano has drawn upon his extensive acoustical experience, dating back 25 years to the IRCAM experimental music center designed for Pierre Boulez, next to the Centre Pompidou in Paris. Piano’s collaborators, Susanna Scarabichi and Maurizio Varratta, have applied their own experience to the Auditorium from six other music halls, each with its own timbre. The auditorium’s middle theater works with solutions used in Turin for the 1995 Auditorium of Lingotto, with permanently splayed vertical panels and horizontal, rounded “chips,” both of cherry wood, that can be adjusted according to changing needs. Light cones and other technical devices can be dropped or raised from the ceiling. The stage area is surrounded by seating on the upper level, and can be altered for a variety of spectacles, including dance. The raw brick surfaces in this hall give the space character, and subtly affect its acoustics. The smaller theater uses similar cherry panels and chips, and also includes adjustable hanging fabric screens. The ceiling and all seating and staging areas are moveable. The rehearsal halls have likewise been luxuriously equipped with acoustic paneling, and have been calibrated as recording studios.

The Auditorium project is indicative of Piano’s practice of always providing more than what was asked for in the brief. In addition to a new concert center, Rome has also gained an exceptional public garden, dominated by the sculptural roofs of the halls, and adorned with freestanding stones that emit sound when touched; the ensemble is girded by terraced olive orchards and earthen paths. On the east, the raised levels of the garden conceal underground parking and meld effortlessly with the sloping gardens of the nearby Villa Glori park, using pines and cypresses. On the other two sides, the hanging gardens banked up against the noisy viaduct of Corso Francia protect the area from the unpleasantries of traffic. Together with the glazed pergola and terraced gardens, the effect of the imagery from outside is spectacular, while upon entry Piano’s assemblage of spaces provides an oasis from an otherwise noisy and chaotic city. Like the other great rounded spaces of Rome—St. Peter’s, Piazza Navona, and Piazza del Popolo—the Auditorium and its theatrical plaza create an undeniable sense of place, to bask in and enjoy beyond its designated functions.
SIGN OF THE TIMES
With its magnum opus under construction in Manhattan, the Museum of Modern Art’s temporary home in Queens suggests that less can indeed be more.

Procession trumps all at MoMA QNS, the temporary facility set up by the Museum of Modern Art to show its collection and temporary exhibitions for the next three years as its midtown Manhattan complex undergoes the largest expansion in its 63-year history. Housed in plush, centrally located digs since its founding on the 12th floor of the Heckscher building on Fifth Avenue, the museum now has to convince art-lovers to make their way to a warehouse district adjacent to the rail yards in Long Island City, Queens.

Easily accessible by subway, as the museum relentlessly mentions in its promotions, the temporary MoMA is also reachable on foot: To celebrate its opening, artist Francis Alÿs staged his own procession, leading volunteers on the three-mile interborough walk carrying palanquins with reproductions of Picasso’s Demoiselles d’Avignon, Marcel Duchamp’s Bicycle Wheel, and even a live artist, Kiki Smith. This sort of movement was very much on the mind of Los Angeles architect Michael Maltzan when he set out to design the public face and public spaces for the 153,000-square-foot museum.

The visitor’s first view of the museum is meant to be from above, on the elevated transit line connecting Manhattan to Long Island City. As the No. 7 train nears the museum, a scattered composition of geometrically patterned black-and-white panels screening rooftop mechanical systems resolves—like a Cubist painting unlocking itself—into the familiar MoMA logo. From the 33rd Street stop, the way is guided by a stretch of overhead fluorescent lights mounted on the façade, which, like the rest of the warehouse, is clad in blue stucco. An oversize MoMA QNS logo, sandblasted into a glass curtain wall and painted on the stucco, signals the entry. Once inside, visitors are guided along an internal ramp, first catching a view of the rotating coat-racks that were moved here from Manhattan, then moving past the mezzanine-level bookshop and café to the admissions counter, well inside the building. This smoothly modeled ramp seems an extravagantly sculptural flourish for a temporary art space. But it’s actually a hard-working object: First, it creates indoor space for the line of visitors awaiting entry, something that will certainly be appreciated come the February opening of the blockbuster Matisse Picasso touring exhibition, currently keeping London’s Tate Modern open until 10 P.M. to accommodate the crowds. Second, the ramp makes the ADA-compliant entry sequence a synthetic element, not an awkward add-on—a surprisingly uncommon trick that should be emulated. And third, it
everly and efficiently reveals every major public area of the museum, including the galleries, obviating the need for elaborate signage.

“A lot of my work has been developing this idea movement as the primary animating structure of the buildings,” says Michael Maltzan, whose firm designed the public areas, exterior, and signage for the museum. Up to the point of admission, the procession concept—realized as a series of ramps—as served the building very well, but its utility dissipates in subsequent spaces. A long, slowly rising ramp turns back on itself to take visitors up to a café, while a second ramp, opposite the galleries, is an enclosed precinct that occupies the middle of the U-shaped ground-floor plan. Used as project space whose rear wall doubles as a copy over the admissions desk, this gallery is mingly assembled—a floating, right-angled form at barely touches the ramp itself—but the Guggenheim Museum in Manhattan should have served as a reminder that a sloping floor is poor support for the act of viewing art.

Maltzan was inspired by Alfred Barr, MoMA’s founding director, whose famous diagram of the museum’s collection envisioned “a torpedo moving through time, its nose the ever advancing present, its tail the ever receding past ....” Of course, if Barr’s plan had been followed in the way he meant it, there would have been no Demoiselles d’Avignon to carry across the 59th Street Bridge—when art reached fifty or seventy-five years of age, it would have been sold to pay for contemporary acquisitions.

But the museum has always collected aggressively and guarded its treasures, creating a near constant need to increase its space: from 1929’s six rented rooms in a high-rise to a row-house at 11 West 53rd Street and, in 1939, the purpose-built museum at the same address designed by Edward Durrell Stone and Philip Goodwin, which has been added to six times since 1950, topping out at 380,000 square feet with the last expansion, designed by Cesar Pelli, in 1984. What began as a place to show Barr’s didactic essays on modernism had evolved into a sprawling encyclopedia.

The current decision to expand again—to 630,000 square feet, on a design by Yoshio Taniguchi of Taniguchi & Associates, Tokyo—followed a process of long-range planning sessions attended by the museum’s director, representatives of its board, several curators, and, among others, Scott Newman of Cooper, Robertson & Partners, which serves as MoMA’s architectural and planning consultants and designed the library and collections areas in Queens. “It became clear the museum couldn’t accommodate everything it needed to do on site,” says Newman. “The real estate is too expensive and there are legal constraints on floor area. For that reason we looked at options for moving some functions off site.” The museum was renting in 11 different buildings, so consolidation was in order.

The warehouse that is now MoMA QNS was originally earmarked for use as a warehouse—holding the museum’s library, its imaging labs, several conservation labs, and collection storage; the galleries take up only about a sixth of the building’s square footage. The $50 million budget reflects those programmatic requirements. (The swooping ramps, rooftop signage, and gallery space were accomplished on the cheap.) MoMA
Museum of Modern Art, New York

CLIENT: Museum of Modern Art, New York
ARCHITECT: Michael Maltzan Architecture Los Angeles—Michael Maltzan (principal); Kurt Sattler (project signer); Brian Cavanaugh (project manager); Dana Duruer; Nora Gordon; Michael Schulman (project team)

ARCHITECT (library, collections areas, building exterior): Robertson & Partners, New York—Scott Newman (partner in charge); Adele Finer (project manager); Ken Tracht, Anh Truong-Montgomery, Hiro Hayakawa, Eric Horstyn, Hasti Azar, Weifang Lin (project team)

ENGINEERS: De Nardis Associates (structural); ldman Copeland Associates (MEP) CONSULTANTS: George Sexton Associates (lighting); Lori Weatherly & Partners (interior design); Base Design NYC (graphic design); Two-Twelve Associates (architectural signage); Associated Construction Consultants (building envelope); Garrison / Lull (conservation); Shen & Wilke (AV, data, telecom)

EXHIBITION DESIGN: Museum of Modern Art
GENERAL CONTRACTOR: Turner Construction COST: $35 million

OTOGRAHER: Christian Richters

I completely replaced the HVAC, plumbing, and security systems, rebuilt the roof, and reclad the exterior walls, to make an impregnable fortress of art where water would never drip, the wet August heat and dry February cold would be kept at bay, and elaborate tripwires, cameras, and sensors would foil art thieves. But visitors are not meant to look at the trip wires running lengthwise across the blank exterior walls of the museum. They are meant to see the bright blue skin and the distinctive façade lighting that leads to the front door, through which the treasures of international modernism and contemporary art await.

And once inside, we get that: a tight display of six automobiles, reflecting MoMA's catholic vision of modern culture; a sprawling, tepid show of contemporary art concerned with time; a small solo show of photographs of 1940s Queens by Rudy Burckhardt; and a knockout set of five galleries where Cézanne rubs up against Picasso, Duchamp mingles with Matisse, and Pollack's One fills its own wall, sublime as ever within the warehouse. The art will shift in October, bringing a show of visionary architecture from the 1960s and 1970s and another on contemporary drawing, but the impression will remain: this is an exciting, distilled experience of art. It lacks the pedagogic formality of Barr's Modern, but maintains the scale and speed with which he worked. It will be tempting to prefer the inconsistency, imperfection, and excitement of these hangings to the marathon that may fill the beefed-up museum on West 53rd Street when it opens in 2005. Fans of QNS hope that it will stick around, like the well-loved, Gehry-designed Temporary Contemporary, which wound up a permanent part of the Los Angeles Museum of Contemporary Art. The sense of nimbleness it conveys in Queens could prove a necessary antidote to the museum's sometimes-sluggish mothership.

Eric Fredericksen is a former Associate Editor at Architecture.
THE POLSHEK PARTNERSHIP'S SENSITIVE MODERNISM AGAIN ENRICHES A HISTORIC MILIEU. BY BRADFORD MCKEE

The new William and Lynda Steere Herbarium at the New York Botanical Garden is a vitally important structure in the world-renowned 250-acre oasis, yet few of the garden's 600,000 public visitors each year will ever see its interior. Although the herbarium, which opened in May and is the largest facility of its kind in the Western Hemisphere, occupies prominent real estate within the 111-year-old garden grounds in the Bronx, its function—the storage of millions of plant specimens—demands that it be a kind of closed vault.

The herbarium's completion is also an act of preservation; the building integrates itself with the garden's recently restored library building, a massive, copper-domed beaux-arts building designed by Robert Gibson and completed in 1901. In the hands of the Polshek Partnership, the herbarium's character, however, is avowedly modern.

The design team, led by partner Susan Rodriguez, once again proves its fluency in introducing sensitive modernism to a historic milieu, much as it did in 2000 with the Rose Center for Earth and Space at the American Museum of Natural History in New York City. For all the competing prerogatives of the site and the program and intangible factors like institutional memory and scientific protocol, the herbarium embodies a most confident attitude about the ways in which a new building might stand honorably next to an old landmark.

The original neoclassical library, with 22,000 square feet allotted for its collections, faces south with two heavily dressed wings surrounding a domed entrance pavilion. The herbarium addition, which rises to the same height, attaches to the library's northwest corner and continues the axis of its west wing northward, with a slight extrusion beyond the library's western facade. Its position rationalizes the ragged left edge of the library by hiding an earlier addition and makes a reparative urban overture toward the garden's entrance from the landscaped Mosholu Parkway.

The new façade's ordering suggests a hard modern squint at the historic library's exterior; Polshek and Rodriguez's design liberally abstracts the tripartite formula of the old one. The herbarium's skin of limestone-colored precast concrete reflects the color of the library's brick, limestone, and terra-cotta envelope, which was recently restored by Cabrera/Barricklo Architects. The elevation is scored by a network of subtle reveals, and shallow relief articulates the volume at its edges.
The great domed central hall of the original building (above, left) has been restored. The top floor of the herbarium contains the library's compact storage, while its remaining floors are dedicated to specimen collections. Air-handling requirements are rigid, and vary throughout the building according to specific collection needs. The main collection (above, right) is kept at a constant 70 degrees Fahrenheit and a relative humidity of 45 percent. On the entry façade, Virginia creeper grows on an armature (facing page, top); the architects envision much of the concrete surface as a "green wall" (facing page, bottom left).
The muted rustication of the herbarium’s base picks up the texture of the library’s lower section but subtracts its elaborate pediments and keystone treatments. The rustication continues from the base up a stair-tower shaft in the new building’s extreme northwest corner. The herbarium, given that it is a storehouse for delicate material, is practically opaque, save for a single bay of stacked strip windows (for study rooms) surrounded by copper cladding on the west elevation and a repeat of that arrangement on the narrow south-facing edge. The copper provides contrast, a clue that this end zone is the only area of the building intended for human occupation.

The balance of the herbarium’s precast surface, lightly sandblasted to a smooth finish, acts as a backdrop to a regular series of vertical painted-steel fins expressing the structural bays. The vertical fins support three pairs of thin steel rods that stretch horizontally across the building’s entire surface at every other level of the midriff, clipped to a series of minor brackets projecting outward from the surface. Together, the fins, rods, and brackets form a gigantic armature that serves several purposes. The armature indexes the building’s scale, relieving the bulk of its broad mass with refined detail. It creates a pattern of constantly shifting shadows upon the concrete wall, endowing the exterior with a musicality it does not gain from fenestration. The rhythm of the brackets runs off-center to the right of the fins, creating a visual bias southward, toward the library, as it wraps around the southwest corner. Most importantly, the armature will help support the growth of Virginia creeper, rooted in long planters atop the ledge of the base between the fins. The creeper will eventually cover the side of the building to create a “green wall” (except, presumably, in winter, as the plant is deciduous).

“It’s very important that [the Virginia creeper] didn’t grow from the ground,” says Rodriguez. “Because, in that sense, it’s an abstraction to disengage the green wall from the ground plane, yet symbolize the plant material within the building.” The vines will be clipped back before they reach the trim copper cornice of the roof, and if they fall, as Virginia creeper often does when it becomes top-heavy, the armature will catch it.

The six-story herbarium holds nearly seven million specimens of dried plants and fungi, cataloged according to botanists’ best guess about their evolutionary place in the tree of life. These specimens have been collected in the wild on expeditions dating as far back as the 1690s, although most were collected during the 19th and 20th centuries. About 125,000 of the specimens are what are known as a “type,” the cardinal example of a given species, to which plant scientists around the world may refer when conducting research.

Each of the herbarium’s specimens resides in an archival folder of roughly standard legal filing size, and the basic dimensions of the building are predicated on these archival units. The specimen folders require custom-designed compact-storage cabinets that roll upon moveable carriages. Each cabinet holds 52 shelves for the folders; thus, the folders dictated the size of the storage cabinets. The required number of storage cabinets drove the design of the floor plates to produce a building
The entry sequence is through a deeply carved portal slightly off-center-right that is overhung by a simple copper canopy echoing the form of the cornice. The entrance bypasses mechanical spaces to the north and directs people through a cherry-paneled lobby to the elevators, which serve both the old and new buildings.

NEW YORK BOTANICAL GARDEN INTERNATIONAL PLANT SCIENCE CENTER BRONX, NEW YORK

CLIENT: New York Botanical Garden

ARCHITECT: Polshek Partnership Architects—James S. Polshek, Susan T. Rodriguez (design principals); Timothy P. Hartung (partner-in-charge); Damyanti Radheshwar (project architect/manager); Thomas Wong (senior designer); Gary Anderson, Anya Bokov, Mark Gregory Clawson, Denis Dambreville, Paul Golden, Charmian Place, Alina Tesmer (design team)

LANDSCAPE ARCHITECT: Miceli Kulik Williams

ENGINEERS: Robert Silman Associates (structural); Goldman Copeland Associates (mechanical/electrical); Wohl & O’Mara (civil)

CONSULTANTS: Richard Jansen Architect (collections storage); Wolf and Company Engineers and Construction (cost estimating); Robert Schwartz & Associates (specifications); Design 2147 (building code); Langan Engineering and Environmental Services (geotechnical); Dicibella, Venter & Santore (security); Garrison/Lull (conservation environmental); Cline Bettridge Bernstein Lighting Design (lighting designer); Lawrence Wolfson Design, Wojciechowski Design (graphics); Richard Hauser (architectural hardware)

GENERAL CONTRACTOR: V R H Construction

Corporation COST: $19.3 million PHOTOGRAPHER: Robert Benson Photography

The herbarium floors, well lighted for study and designed to hold 200 pounds per square foot, have two banks of storage cabinets surrounding a central open corridor. Each storage bay holds 12 mobile carriages, each of which has seven cabinet units. A central workspace down the center of each floor has its own banks of cabinets running perpendicular to the others with counter space atop them and periodic microscope stations.

The cabinets are fabricated from steel; rubber gaskets surround their openings to keep out light and moisture. For now, each cabinet in use is kept about half full of specimen folders. “If you had looked at our old herbarium, before we expanded, you’d have seen that every cubby hole was pretty much full,” says Barbara Thiers, the herbarium’s director, and a botanist herself. “Once these are three-quarters full, you start breaking up the specimens. So when we moved into this new building, we wanted to allow for about 20 years of growth.” About 50,000 new specimens arrive at the herbarium each year, she adds.

Among the library’s rare books is the “Circa Instans,” a hand-published medical manuscript dating to 1190, that attests to botany’s outgrowth from medical science. “People know the [New York Botanical] Garden very much as a place for incredible horticulture,” says Rodriguez, “but they don’t know the research that they do.” For that very reason, the herbarium is a foreground building with a background function, strategically positioned to advertise the crucial role it plays in advancing the public’s understanding of the natural world.
FIELD STUDIES

AT A HISTORICAL PARK IN GERMANY, ARCHITECTS GIGON / GUYER REINTERPRET LANDSCAPE, CONFLICT, AND TIME. BY AMANDA BIRCH
Three lead slingshots. A discovery of this nature ordinarily attracts little attention. But these Roman weapons were discovered in a meadow long suspected, but never proven to be, the site of the famous Battle of Varus. This battle, where the Teuton tribes defeated the Romans in the year 9 A.D., marked one of the key turning points in European history, halting the legion's advance into Germany with profound consequences for the subsequent linguistic and political map of Europe.

The slingshot discovery in early 1988 by a British soldier and amateur archaeologist transformed the 50-acre forest and farmland in Kalkriese (near Osnabruck in northern Germany) into a site of immense historical and archaeological importance. Since the first excavations began in 1989, the site had become a major visitor attraction initiating the launch of an architectural competition to develop the museum and park.

Won by Swiss architects Gigon/Guyer and landscape architects Zulauf and Partners in 1998, the project was always more than just a new museum building. It required a deep understanding and reinterpretation of the site's brutal history through a creative landscaping scheme. The design team also had to accommodate the unusual needs of a working archaeological site with a swiftly changing brief. The new structures, for example, had to be adaptable. Their location was conditional on the importance of what was unearthed by the archaeologists. Also, at an advanced and crucial stage in the project, it was decided to convert an existing farmhouse into a visitor's entrance, café, offices, and shop—leaving the new museum as a pure form.

The completed project, more ambitious than originally intended, is a deeply thoughtful complex of structures. The architects have embraced not only the historical theme of the site but also the present and future in a subtle dance of force and abstraction, leaving it to the visitor to form conclusions about war and its meanings.

Of all the new structures at the historical park, the museum, with its 120-foot viewing tower, dominates the site. Located in the southeast pocket of the park, it is also the first structure that the visitor meets after passing through the entrance. Vast panels of corten steel (average dimensions 20 feet by 10 feet) clad the tower and are interspersed with random openings that act as either viewing platforms or openings into the innards of the structure. On the other side and at right angles to the tower, the single-story exhibition space stretches out into the field. This rectangular block's steel skin is articulated not by void openings, like the tower, but by large windows. The architects chose steel not only because most of the weapons and artifacts recovered were metallic, but also because the unusually large panels identify the material as particularly contemporary. Given the use of steel, the building appears at once heavy but also temporary and light due to the structure being balanced on columns that graduate in length as the ground slopes upwards. All new structures in the park are poised on stilts, touching the ground lightly. This demonstrates a respect for the layers of history in the soil and gives the impression that the buildings could be easily dismantled.

The exhibition is approached via an entrance and stairs behind the tower that leads into a full-width lobby. There are meeting rooms on one side and a vivid orange locker-room on the other—a refreshing injection of color after the prevailing gray of rolled steel plates to the wall and ceiling and non-rusting steel to the floor. The innovative exhibition curated by museum director Heidrun Derks and designed by Paris-based Integral Concept challenges the standard-issue displays of archaeological museums by presenting fragments of infor-
exhibition
tour
meeting rooms
locker room

First floor plan

1. exhibition
2. lobby
3. meeting rooms
4. locker room
Heavy, shield-like steel plates mark the probable route of the Roman soldiers (top and bottom). Thin steel poles indicate the rampart of the agile Teutons (center). Visitors trace these movements from the viewing platform high atop the museum (facing page).

After the tantalizing views of the park and the intentionally fractured exhibition, the desire to explore the former battlefield is compelling. A path of irregularly placed iron plates, reminiscent of military shields, weave westward across the meadow indicating the probable route taken by the Roman legions led by Publius Quintilius Varus, after whom the battle was named. A camouflaged network of wood-chip paths represents the more fleet-footed movements of the Teutons. This contrast in materials is significant in telling the story of the two sides in the battle. The Romans’ misjudgment of the landscape and the Teutons innate understanding of the forest determined its course. The paths showing the Teuton’s routes blend in rather than try to compete with the woodland. Running roughly parallel, but further south and backing onto what would have once been a dense oak and beech forest—that is currently being replanted—is evidence of the Teutonic rampart. Iron poles march through the meadow marking the rampart’s supposed route. The poles are placed close together where archaeological evidence proves the rampart’s position and are placed further apart where evidence is patchy. This rampart would have once extended about 130 feet in length. A section of the earthen mound topped with a wattle screen has been reconstructed in a rectangular excavation plot that demonstrates that the rampart would have been 16 feet wide and about five feet high. This sunken site situated in the western part of the park and encircled by a steel sheet-piling wall illustrates what the landscape would have been like at the time of the battle. The visitor finds sandy ground changing into a moor pond on the Roman (north) side and a grove of beech trees behind the rampart on the Teutonic (south) side.

While the museum and the reconstructed landscape give the visitor a varied and subjective experience, three small pavilions dotted around the field add substantial nuance. Also constructed in corten steel and accessed via ramps, their intention is to act as “tools or perception instruments to help visitors understand the site,” says project architect Volker Mencke. “They lead you to listen or trigger your thoughts and put into perspective the impressions.
MUSEUM AND PARK KALKRIESE, BRAMSCHKE-KALKRIESE, GERMANY

Architect: Annette Gigon / Mike Guyer

Architectural Concept Team: Volker Mencke (project manager), Massimo Rich, Christian Brunner, Caspar Bresch, Christoph Scher (trainee), Pieter Rabijns (trainee), Sebastian Thaut (trainee), Esther Hodel (trainee)

Civil Engineer: Gantert + Breiter Ingenieurplanung

Landscape Architect: Zulauf, Schweingruber, Landschaftsarchitekten

Exhibition Designer: Integral Concept Net, Ruedi Bauer, Lars Müller

Square Footage: 530,000 square feet

Cost: $5.7 million

Photographer: Heinrich Heffenstein
The "listening" pavilion is dominated by a movable ear trumpet that combines sounds from the park with recorded battle noises (top). The "seeing" pavilion features a large eye-shaped camera obscura that simulates the ferocious tunnel vision of battle (center and bottom). The isolated "questioning" pavilion offers the strongest anti-war statement, with recorded footage of present-day conflicts (facing page).

They also create an atmosphere of curiosity and adventure. Viewed externally, they border on the fantastic, as if lifted from a bizarre fairy tale. The most peculiar of the three is the "hearing" pavilion, which at first glance looks more like an old-style gramophone. With its enlarged "ear piece" or acoustic pipe that rises from the roof and swivels around picking up sounds from the park, it seems as if every movement is being constantly monitored, lending an eerie suspense to the landscape. Within the timber-panelled interior—with recorded sounds of horses and men going into battle and restricted views to the meadow—the experience is both intense and absorbing.

The "seeing" pavilion is equally eccentric. Like a giant eyeball, a camera obscura positioned into an over-dimensional glass "retina" projects the exterior view in reverse presenting the viewer with a distorted and alienating outlook.

The most isolated of the three pavilions, located on the western most edge of the park, is the "questioning" pavilion. To stand in this cocooned box looking through the small horizontal slit openings onto the meadow with nine television monitors continuously playing prerecorded news broadcasts on international conflicts is, to put it mildly, discomforting. Completing the tour in the questioning pavilion is certainly a poignant ending. The past, present, and future are all encapsulated in one box summarizing the architect's all-embracing vision for the park. It is also worth visiting to reflect on a question inscribed on one of the walls. It says: "War is not history—why?" It's as if the future is staring you in the face.

Amanda Birch writes about architecture from London.
By building consensus and with limited means, Carol Ross Barney elevates the public realm.

Carol Ross Barney’s work is bright and bold, not the sort of architecture that we've come to expect in an increasingly cautious public sector. A tenacious individual who’s had to work hard to break barriers, she began her career as an outsider in Chicago’s insular architectural community—coming of age at a time when blue-suited white men were perceived as the rebels against a mainstream norm of gray-suited white men. It seems fitting, then, that she just recently moved her 45-person office into a funky three-level loft space that was home to the late Harry Weese—a local iconoclast who bucked conformity to raise the city’s civic conscience.

Born and raised in the Chicago area, as a teenager Ross Barney chose to pursue architecture. (The guidance counselor at her all-girls high school, she remembers, had to look the field up, as the nun had no experience with the profession.) Later, after graduating as one of just a handful of women from the University of Illinois, Ross Barney joined the Peace Corps as a designer in Costa Rica during a downturn in the economy. Returning to Chicago in 1972, he found herself pursuing the “Employment—Men” section of the newspaper and enduring typing tests at prestigious local firms.

Ross Barney eventually joined the venerable firm Holabird & Root, where career-long interest in public buildings began. She spent most of the decade there, working with numerous government clients, and left for a short stint as a designer in a firm known more for its business savvy. Its principal was Alden Orput, she recalls, who “taught me how to count votes in a public board”—a skill that served her well when she left in 1981 to start her own firm.

Leading the firm Ross Barney + Jankowski today, Ross Barney, 53, tends toward the use of the first-person plural in every discussion of her work. When she says “we,” she doesn’t just mean her firm’s partners and employees, but her clients as well, who are an integral part of an intense, dialogue-driven design process that is especially effective in the public sector. “I’ve always liked working together,” she explains. “Maybe it's because I'm the oldest of eight, I need consensus.”

Regardless of project type, Ross Barney builds her unique brand of consensus by simultaneously developing multiple solutions that help frame the client’s programmatic needs in three-dimensional terms. Singular authorship is disdained in the office and “competing” solutions are passed through several team members’ hands during the design process. Client input is extensive and the goal is a shared solution that’s “owned” by everybody involved. Ross Barney is adamant that each solution developed be good enough to build. “I’ll bring them multiple things,” she says, “and the owner will say, ‘Well, which one do you want to do?’” Ross Barney exclaims, “I’ll do any of them!”

If her work bears a recognizable signature, it’s seen in buildings with a strong graphic presence that reflect something of each structure’s use and users. “The function suggests a form, and a graphic suggests an attitude toward a function,” she explains.

Ross Barney’s architecture is driven by her high aspirations for the public realm and the lives of the communities in which she builds. She struggles with many of the same issues that other architects use as excuses for mediocre design and construction: low budgets, banal building materials, and testy review committees. Through her dedication to creativity and talent for consensus-building, her firm is molding a lively and compelling architecture that appeals to the twin focus of institutional leaders: public service and bottom line. “I like to work for people who have a vision of the future and think that building is a part of it,” she declares.
James Park in Evanston, Illinois, is hardly this college town’s most picturesque landscape. Punctuated by hardscrabble playing fields and an old recycling center, its southeastern corner is bounded by nondescript ranch homes and a railroad spur of the Chicago Transit Authority. But that corner is now one of the most happening places in town, where a spry gang of elderly citizens shoot pool and practice tai chi in an airy lair that belies their age and puts a bright modern spin on the traditional field house.

In fact, the only thing even remotely senior about the 27,000-square-foot structure is a sign that reads “Levy Senior Center.” Ross Barney + Jankowski composed a simple courtyard scheme that places classrooms and activity spaces facing the community to the east and south, a double-height multipurpose space that functions as either a gymnasium or performance space to the north (B), and ancillary spaces to the parking lot on the west side of the building. Entry is from the parking lot, acknowledging the center’s suburban locale.

Ross Barney pursued a sense of transparency in her design solution. A single-loaded corridor is fully glazed to the courtyard, and a system of punched openings with clerestory windows above permit visual access through every space. With the exception of the flat roofed multipurpose room, each space has a dramatically sloped ceiling plane that reflects natural light and creates a strong sense of the park within the building. Broad roof overhangs shield the building’s ample expanses of glass from the sun, aided on the east and the south by sassafras wood louvers that give a rich texture to the façade (A).
In a few short years, the Little Village Academy has become a distinctive neighborhood landmark within Chicago's bustling Mexican-American community. The school's 68,000 square feet are contained within a taut, three-story masonry envelope that's dramatically inflected by each of the building's significant interior spaces. While the school's front door is on a main avenue, its protected playgrounds are accessible from first-floor classrooms to the south (B), and a large playing field fills the remainder of the city block to the north (C).

The school's boxy exterior is dramatically divided along its entry façade by a multicolored cylindrical mass split by a bright yellow wall that extends half a story above the building's roofline (A). This is the structure's signature space: a three-and-a-half-story-tall sundial that's actually part of a required fire stair. "We found that the sun was prominent in all the mythologies of Mexico," explains Ross Barney as she recalls the research process that inspired the solution.

A U-shaped corridor wraps first-floor service spaces and a double-height gymnasium on the second floor so that all the classrooms and associated teaching spaces face either the street or the playing field. A second-floor science classroom is a feature space sporting rotated translucent walls that cantilever over the building's southwest corner. Similarly, on the third floor, the library receives pride of place at the center of the north façade where the story-and-a-half space gathers generous daylighting from a clerestory window located above a mural of the school building (C).

Little Village Academy could have been just another banal school, like dozens of prototypes churned out by the Chicago Public Schools in recent years. Instead, Ross Barney produced a simple masonry box that's marked throughout by deft design touches punctuated by a few bold strokes, like the sundial. The solution creates an identifiable character that resonates with faculty, students, and the community.
3 JUBILEE FAMILY RESOURCE CENTER

1. entry/reception
2. classrooms
3. gross motor room
4. kitchen/lounge

Floor plan: 1 30' A
Ogden Avenue on Chicago’s West Side is a gritty, post-urban landscape dotted with single-story buildings, vacant lots, and storefront evangelical churches. Motorists zip through the North Lawndale neighborhood at such speed that the block-long Jubilee Family Resource Center might easily be missed—if it weren’t for the bright yellow fins that spring from each end of the facility. But while the fins dramatically mark the building for motorists, pedestrians and neighbors know the building’s façade for its subtle weave of brown bricks.


“If anybody tells us not to do something, we think that’s as important as telling us to do something,” explains Ross Barney, who immediately began researching the patterns of the traditional African cloth. Its overlaying grids, rendered in earthy mud colors, directly inspired the building’s front façade.

Inside, the plan of the 23,000-square-foot, single-story structure is simple: A looped double-loaded corridor provides a continuous circulation path around an interior courtyard that’s a protected play area for the center’s youngest users (A, B). Offices and administrative functions face the noisy street to the front; service areas face the back alley. The classrooms at each end of the building open to fenced play lots along the side streets so that every learning space in the facility has its own exterior area (D). But the corridor is cleverly jogged, shifting the circulation with the canted geometry of the parallelogram site while developing wider interior entries into each pair of classrooms (C).

As it turns out, the Jubilee Family Resource Center is most recognizable for a graphic expression the client wrote off. But Ross Barney has woven the warp and weft of kente cloth into more than the image of the main façade. Its spirit is identifiable with out being literal, so the building does not talk down to its neighbors.
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Over Head

Energy efficiency and environmental friendliness are top of mind in the roofing industry

Ask roofing manufacturers and contractors and they’ll tell you that many architects don’t view roofs as the most creative part of their design process, unless they are steeply sloped and visible. But the fact remains that roofs are vital to the building envelope. After the foundation, they are the second most important component of a building. Today more than ever, they deserve attention. Demands for energy conservation have been increasingly translated into new building codes around the country. Concerns for the environment have led to calls for the use of more eco-friendly roofing systems—from production to disposal. These issues and more will affect how architects specify the design and materials of their roofs.

Brighter Is Better

When most people think of roofing, particularly flat roofs, black asphalt comes to mind. But that perception is changing fast. “The trend now is white, reflective roofing, because it saves energy,” says Tom Hollingsworth, president of Duro-Last Roofing, headquartered in Saginaw, Michigan. “You will get arguments from different facets of the industry, but in time I believe black roofing will go away.”

It’s hard to argue with the basic reasoning behind this trend. White roofing reflects the sun’s heat and UV rays, keeping the ambient air temperature lower, so air conditioning units, for instance, don’t have to work as hard to pull in that air and cool it. By blocking levels of UV rays, a white, reflective surface can also slow down a roof’s degradation over time. Thermal fatigue becomes less of a problem as well, since a white roof is not as likely to experience extreme temperature fluctuations.

Still, some roofing experts caution that the white versus black roof argument is not so, well, black and white. Light-colored roofs get dirty and can lose the reflectivity characteristics touted by manufacturers. “Manufacturers establish a reflectivity number based on a perfectly clean roof and go back after three years to establish another reflectivity, but they are allowed to clean the spot they test. It’s a bit deceptive,” says James R. Kirby, AIA, senior director of technical services for the National Roofing Contractors Association (NRCA) in Rosemont, Illinois. “If you are basing a long-term energy study for a particular building for a reflectivity of 90 percent and in two years it’s 70 percent, you’ve misrepresented what’s going to occur.” To ensure optimum energy performance, Kirby recommends using the right amount of insulation in conjunction with white, reflective roof surfaces. “The insulation generally stays there,” he says. “An R-value won’t change as long as you start with a proper value.”
Look To Insulation

Indeed, insulation is widely considered to be key for improved energy efficiency, not to mention comfortable and conditioned interior environments. “Our panel systems are one thing, but the insulation is integral with it,” says Myron Kottwitz, manager of product research and testing for Butler Manufacturing, a Kansas City-based producer of metal roof systems. “We are spending more time considering the impact of the insulation system and ways to make buildings more efficient.”

Butler has developed an insulation system called ThermaLiner, which addresses the problems of compressible insulation, specifically the need for uniform thickness. “Fiber-glass blanket insulation is a compressible insulation. When you install it on metal buildings, it goes over attachment members and is compressed in some areas from a six inch blanket to a one inch, so you don’t get the full value everywhere,” explains Kottwitz. “With our system, we put in compressible insulation, but we install it in such a way that it is not compressed.” ThermaLiner works with Butler’s roof systems, including the VSR, a versatile standing seam system that accommodates architectural applications.

Research and development into increased energy performance has also been critical at Kalwall, a Manchester, New Hampshire-based company that pioneered the translucent roofing panel used to take advantage of daylight, thus saving lighting and electrical costs. Shatterproof and fire resistant, Kalwall’s panels are already highly insulating, but with an energy crunch and stricter building codes, the company knew it had to do better. The trouble is, says Bruce Keller, Kalwall vice president, when you try to improve insulation values with light-transmitting materials, you often end up compromising light transmission. Thanks to space-age, submolecular technology, the company may have found a way around the problem. This fall Kalwall will be installing panels that incorporate “aerogel.” This silica-base material performs as though it were an opaque insulator, but remains at an ideal light-conducting size.

Structural Curbs for proper support

When a structural curb is installed and fastened to the top of bar joists, as shown, additional structure is not required to support roof-mounted equipment. Curbs can be mounted up to four feet on either side beyond bar joists or supporting members. For installation of smaller curbs between bar joists, two reinforcing angles would be required. Structural curbs may also be attached to the top of the steel deck. Holes for supply and return are cut into the deck as required. Structural curbs from RPI are the sure solution to leak-free, cost-effective roof penetrations.

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Glenwood School  Chatham, Illinois
Architect: BLD Decatur, Illinois
"We're driven to lead the light-transmitting roof industry into the insulation areas, approaching that of non-light transmitting materials," says Keller. "We're almost there, getting R-values close to what's required in a highly insulated conventional deck."

It's not just the roof itself gaining from these technologies. The Bilco Company in West Haven, Connecticut, makes roof hatches and automatic fire vents. Their Lumivent automatic fire vent features translucent Lexan Thermoclear glazing, a polycarbonate material manufactured by General Electric that provides the benefits of daylight while minimizing solar heat gain. The vent's multiwall cover construction provides an increase of over 40 percent in insulation performance when compared to conventional domes. Dominic DeConciliis, Bilco's vice president of sales and marketing, says the Lumivent's design came about precisely because warehouses and manufacturing facilities, the primary users of fire vents, were looking for ways to reduce energy costs. DeConciliis believes roofing's future may lie in the kind of translucent, skylight material used on the Lumivent. "I think we'll see more roof mechanisms that will balance lighting, air conditioning, and heating by taking advantage of natural light."

Proving Its Mettle
A combination of environmental advantages and aesthetics has piqued architects' interest in metal roofing. "Architects seem to be taking the time to get educated about metal," says Jack Rogers, vice president of Copper Sales, Inc. in Anoka, Minnesota. Roofing metals—including galvanized steel, stainless steel, aluminum, and copper—afford architects more creativity. "Copper, in particular, is very malleable, which makes it easier to install and offers a variety of designs—from traditional standing seam to batten seam to diamond shapes, horizontal, and diagonal runs," says Ken Geremia, manager of communications for the Copper Development Association in New York.

Color has added even more possibilities to the use of roofing metal. Suppliers such as Copper Sales (Una-Clad), Petersen Aluminum (Pac-Clad), and Integris Metals (ColorKlaid) offer roofing metals in multiple colors that are as durable as they are eye-catching. Known for their zinc/tin alloy coated steel sheets that are highly anticorrosive—TCS II and TERNE II, West Virginia's Follansbee Steel is joining the competition at the end of the year with a prepped painted version of TERNE II.

A SPECIAL SECTION

"Green" Polyiso
With about 60 to 65 percent of roof insulation being polyisocyanurate, architects need to be aware of environmental regulations governing its use. Come January 1, 2003, the current HCFC polyiso blowing agent can no longer be manufactured or imported into the U.S. because of its ozone-depleting properties. HCFC polyiso can still be manufactured until the end of the year and used later, so there will be no interruption of supply. The HCFC-free, zero-ozone depletion polyiso is not new—the Europeans have already been using the more environmentally sensitive blowing agent, pentane, says John Geary, insulation product manager for Firestone Building Products in Carmel, Indiana. "But we've been able to learn from it and bring it to the U.S." Firestone has been at the forefront of producing the so-called "green polyiso," what it calls IsoGard, since 2000. "The good news is that it's not untried," says Geary. "The product is well tested in the lab and field. We're getting the same performance and meeting the same FM and UL requirements as before."

Achieving these colors is usually the result of a paint or surface application, but Millennium Tiles in Barrington, Illinois, has gone one step beyond, generating color from within through an exclusive process, creating permanently colorized stainless steel tiles. In addition to color, the tiles have other architectural conveniences, according to Millennium spokesperson Kate Hauk. "The tiles allow for new roofline designs, without having to have a heavy substructure in place that often limits architects' designs when they are using tile, asphalt, or slate," she says. Hauk is also quick to note that the tiles, made of 75 percent recycled stainless steel, are 100 percent recyclable and can be applied over an asphalt roof in many cases, saving it from the landfill.

When it comes to meeting green building standards, metal's recyclability and longevity are two attributes hard to ignore. Copper Sales' Jack Rogers feels architects are much more conscious of this: "They are not just going to put shingles on because they want it to look a certain way because they know they will have to deal with the throwaway issue down the road. Metal can be recycled and there is a value to that. And from a life cycle standpoint, it's going to last a long time."
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Up On The Green Roof

Perhaps the most environmentally sustainable roof system out there is what’s known as a green, habitat, or eco-roof, a layer of grasses or plants grown over a watertight, root-repelling membrane. Popular in Europe where they are a big industry, green roofs blossomed in response to environmental ills such as global warming and urban heat island effects. By retaining heat in the winter and reducing its absorption in the summer, green roofs reduce energy consumption. They can also improve air quality and manage storm runoff.

Though not in the mainstream of roofing, the concept of green roofs has been received well by many architects, according to Steven Peck, executive director of the Toronto-based organization Green Roofs for Healthy Cities. “Architects have a key role to play in knowing the benefits for the client and how to work with landscapers in designing them,” he says. Peck and other roofing professionals advise architects do their homework when it comes to green roofs. Their installation and performance depends on many variables, including cost, climate, new versus older building construction load capacities, and adequate drainage. When done properly, they can be a viable system for dealing with rising energy costs and environmental problems.

TPOs

Thermoplastic polyolefin (TPO), the latest single-ply membrane, has been attracting growing interest in the industry due to favorable costs, installation ease, and an improved formulation. TPOs offer good weatherability and resistance to punctures, tears, and chemicals. Its flexibility makes it ideal for different roof designs—flat, low, and steep slopes, and it features heat-welded seams. Available in white and other light colors, they are an energy saver and kinder to the environment. One manufacturer of TPOs is Carlisle SynTec, located in Carlisle, Pennsylvania. They offer wider and thicker membrane sheets as well as fleece-back TPOs, which reinforce long-term adhesion.

By Karen Gine
FREE PRODUCT INFORMATION

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NEW YORK CITY

In New York City, too, the aesthetic imagination has been deployed to sublimate an unsettling reality, as urban historian Max Page reminds us: New York has long been the subject of premonitions and fantasies of destruction. From serious literature and art to science-fiction films and commercial advertisements, these nightmare visions and exceptionalist interpretations have served to capture and manage the experience of living in a paradigmatically provisional city.

New York's collective unconscious has also given its residents a certain sense of inevitability with respect to urban transformations and even—like their fellow Chicagoans—caused them to embrace crises and calamities as opportunities for "creative destruction," that is, for new economic and architectural development. Yet, previous disasters in the city's history like fires and epidemics have had far less impact on New York's history than longer-term shifts, Page argues.

From a broader perspective, political theorist Benjamin R. Barber offers a critical and historical overview of the relationship between cities and democracy, tracing the ideas and norms of "democratic space" that have evolved from the Athenian polis through the mercantile town to the capital city and industrial metropolis. With respect to this trajectory, he sees the contemporary processes of suburbanization and globalization as constituting a radical rupture. Asking how any notion of citizenship can be sustained in a culture where identity is principally conferred by consumer choices and where public space is confined to gated precincts and sanitized theme parks, he delivers a scathing indictment of the "republic of goods."

While slightly more sanguine about the potential of cyber-space to serve as a portal for new forms of democratic interchange, Barber nonetheless laments that the Internet has rapidly turned into another shopping mall.

As the foregoing suggests, there are provocative and sometimes surprising resonances among the diverse cities examined in Out of Ground Zero. It is striking, for example, that Barber and Prodanovic, coming from opposite worlds, share so many of the same concerns—with issues of democracy and place, cosmopolitanism and identity, urban and global "citizenship." Their convergent critiques underscore the fatally interdependent dialectic of "jihad vs. McWorld," as Barber has elsewhere called it, which played itself out with such dire consequences in September 2001. Other major themes the respective roles of human agency and chance in the shaping of the city, the relativity of short- and long-term consequences, the interplay of idealism and pragmatism, ideology and lived experience, urban and anturban mind-sets, physical and mythic construction—open up fertile avenues of thought. All of them lead, however obliquely, back to New York's ground zero, which, has finally been cleared, an empty center awaiting reinvention. 

>features

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WALKING THE HIGH LINE

Does nature stop where the city begins? In Joel Sternfeld's photographic series on the abandoned High Line, an elevated freight railway that winds its way along Manhattan's industrial western edge, the two converge—or more accurately, nature takes over. Wilderness overwhelms urbanity. As Sternfeld's photos show, nature survives when buildings fall, when infrastructures become obsolete, when cities fall into neglect or ruin.

In cities, our connection to nature is contrived. Our parks are clipped, controlled, cultivated. Midair, however, on an improbable bed of metal, stands of wild grasses, flowers, weeds, even trees have taken root, changing dramatically in color and shape as we circle the seasons. Flocks of birds have discovered new nesting grounds here, too. Without political process or human intervention, eight acres—half the acreage of the nearby World Trade Center Site—of greensward has evolved, wildlife habitats have been restored, and a picturesque linear pastoral is enjoyed from above.

An effort to save the High Line as a potential promenade or park has been growing, supported by West Siders turned on by its poetic, nostalgic grit, and opposed by property owners inconvenienced by its serpentine hulk. Meanwhile, the city grapples with much larger questions about urban regeneration, about how to restore form and life to a city that has been physically and economically wrecked. Sternfeld's photos remind us that the things we make and build are not nearly as resilient as nature. CATHY LANG HO
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