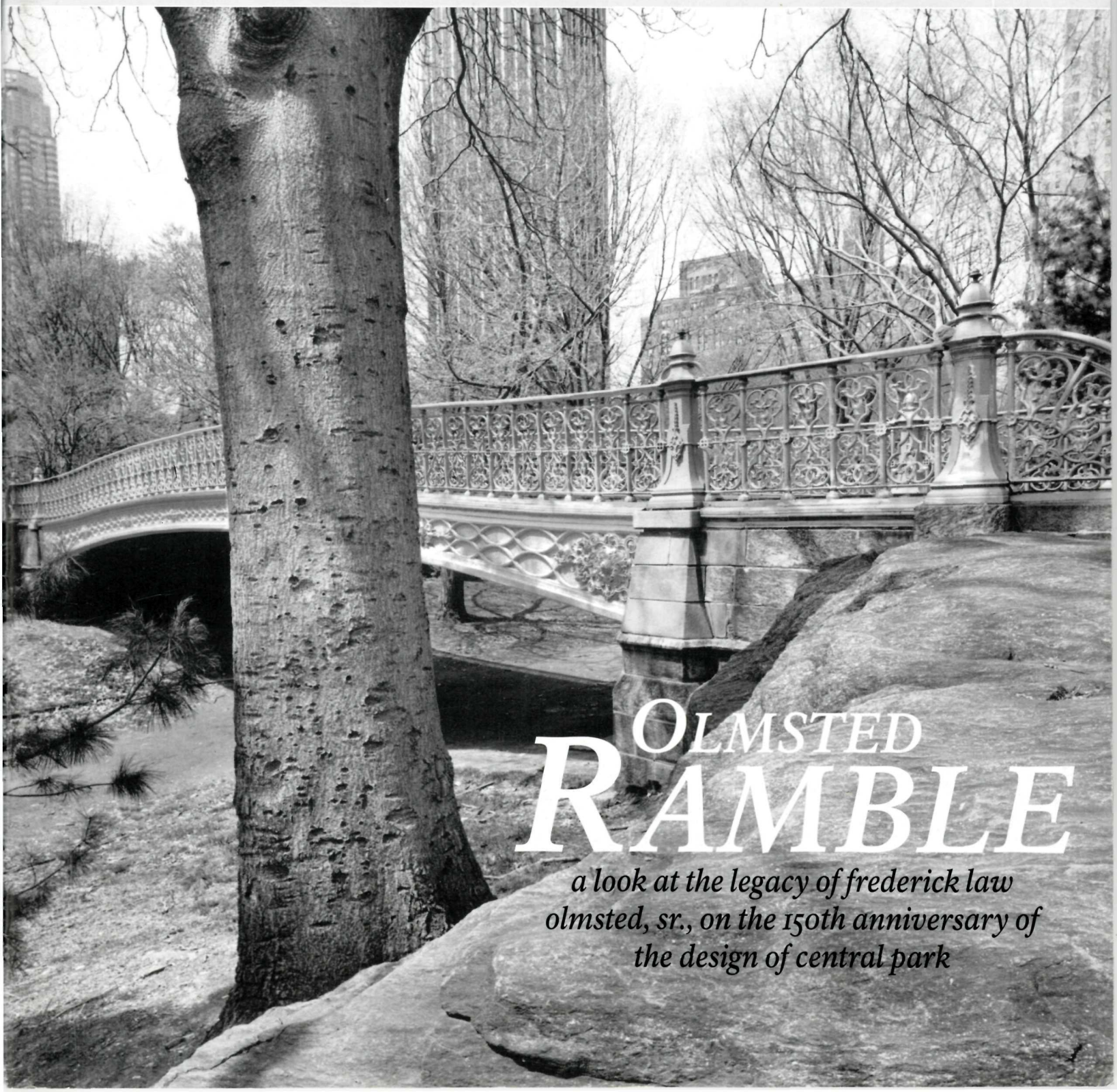
COMMON Ground

PRESERVING OUR NATION'S HERITAGE SPRING 2008



OLMSTED RAMBLE

a look at the legacy of frederick law olmsted, sr., on the 150th anniversary of the design of central park

FIRST WORD

Roads Taken and Not

BY WILLIAM DEVERELL

TEN YEARS AGO, urban historian Greg Hise and I took landscape architect Laurie Olin to dinner in Los Angeles, a memorable evening I look back on with fondness. Armed with questions and a recorder, we interviewed Olin—a noted scholar and preservationist as well as a master of his craft—about the legacy of Frederick Law Olmsted and his sons. Laurie spoke of once being hired to go into Central Park to draw "every bridle trail, every path, every tree, every twig, every stone, every lake" near a planned upgrade of some stables and horse facilities. That experience—rendering the park in fine detail—convinced him that Central Park was probably the greatest work of art in American history. **THIS REVELATORY MOMENT PROVOKED** a bit of a wistful response from us. Greg and I were in the midst of dusting off a little-known landscape plan that the Olmsted Brothers, with Harland Bartholomew & Associates, had done in the 1920s. Los Angeles had tried for years to bring the Olmsteds—first Olmsted, Sr., and then his sons—to southern California. A consortium of civic-minded elites—Mary Pickford, Douglas Fairbanks, and other Hollywood luminaries working with the chamber of commerce—finally enticed the firm (then run by Frederick Law Olmsted, Jr.) to come west and think big about landscape planning in the vast, eclectic spaces of Los Angeles County. **LOS ANGELES HAD ALREADY PROVEN** it knew how to think big. It is a tried-though-not-true statement that L.A. is an unplanned morass. Careful urban, and especially suburban, planning marks much of the region's 20th century history, as scholars such as Hise have made clear. By the 1920s, the city had already tackled big infrastructural efforts. Los Angeles harbor came into being mostly by way of federal funding for vast dredging and breakwater operations. From there, the city moved quickly to grapple with the demands for water. First came the Los Angeles Aqueduct, a giant straw that sucked water from the Owens Valley into the Los Angeles basin a few hundred miles away. Then came the dream of doing the same with the mighty Colorado River, which came to pass in a political and engineering triumph. Greater Los Angeles indeed had a thirst. But, every bit as important, it proved capable of thinking very, very big. **THUS THE PITCH TO THE OLMSTED FIRM** made sense. What was produced, just as the Depression dawned, was a masterpiece in three parts. First, Olmsted and Harland Bartholomew thought impressively of ways to integrate greenspace. Tying small, vernacular, out-of-the-way spaces such as playgrounds, bridle paths, and athletic fields to parks, beaches, and parkways, Olmsted envisioned a greenbelt for the entire basin. Even today the project, intricate and painstaking, is a model. But it is only one part of a triangulated vision. Not only did Olmsted outline how to pay for the plan, he also sketched how to govern it. **THAT LAST PIECE OF THE PUZZLE,** governance, became the sticking point. It's the part that made Hise and me think wistfully as Olin spoke with reverence about Central Park. Olmsted, Jr., insisted on super-jurisdictional oversight. How else to administer something larger than vast Los Angeles County? The plan sprawled from coast to desert, crisscrossing dozens of jurisdictions. **OLMSTED'S PATRONS,** especially the chamber, had zero interest in ceding clout to a "super parks board" with its own funding, law enforcement, and other authorities. The chamber vociferously defended its fiefdom at the expense of Olmsted's genius. The very organization that called for the plan killed it. **THE IRONIES ARE ALMOST AS POWERFUL** as the regrets. The Depression forever changed the balance of power in Los Angeles. The arrival of federal dollars, administrators, and programs soon ended the chamber's reign. Had the plan's proponents held on, it may have been possible to get the work underway through the New Deal projects that were reshaping the American West. **CENTRAL PARK AND THE SOUTHERN CALIFORNIA WATERWORKS** were both characterized by bold vision, telling stories of significance about American ideas of cities and nature. Would there be even more to connect them, like the great work of Olmstedian art envisioned long ago for the city of Los Angeles.

> **"Olmsted's patrons, especially the chamber, had zero interest in ceding clout to a "super parks board" with its own funding, law enforcement, and other authorities. The chamber vociferously defended its fiefdom at the expense of Olmsted's genius."**

William Deverell is Professor of History at the University of Southern California and Director of the Huntington-USC Institute on California and the West. He is the editor with Tom Sitton of *Metropolis in the Making: Los Angeles in the 1920s*.

Contents

PARKER DAM, SPANNING THE COLORADO RIVER BETWEEN ARIZONA AND CALIFORNIA. JET LOWE/NPS/HAER

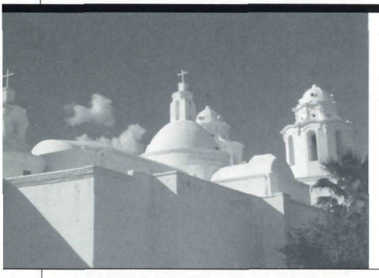
Cover: New York City's Central Park, Frederick Law Olmsted's masterwork.
FROM THE BOOK LEE FRIEDLANDER PHOTOGRAPHS FREDERICK LAW OLMSTED LANDSCAPES, PUBLISHED BY DISTRIBUTED ART PUBLISHERS 2008, © LEE FRIEDLANDER

NEWS CLOSEUP

SOUTHWEST MISSION

INTERNATIONAL EFFORT AIMS TO BOOST RESEARCH, HERITAGE TOURISM

The remains of the early Spanish presence in the American Southwest are among the region's most striking landmarks. Their missions have come to be a defining part of the Southwest, as expressive of its history and culture as desert and mesa are of its nature. The ornate architecture, built amid such stark surroundings, speaks of ambition, power, and the long reach of the Spanish crown. Today, many of these sites are fragile relics. Some are endangered. An international, multidisciplinary effort to preserve them is underway, however, involving federal and state governments, academic institutions, independent research organizations, and nonprofit groups.



TODAY EACH OF THE MISSIONS IS ARCHITECTURALLY AND CULTURALLY RICH. WHEN ONE CONSIDERS THAT THERE ARE HUNDREDS OF THEM ACROSS THE REACHES OF NORTHERN MEXICO AND THE SOUTHERN UNITED STATES, THE SCALE OF THE LEGACY IS APPARENT.

THE MISSIONS INITIATIVE, COSPONSORED BY THE NATIONAL PARK SERVICE AND ITS COUNTERPART IN MEXICO— the Instituto Nacional de Antropología e Historia—will promote research, education, preservation technology, and heritage tourism. Entities with an interest in the missions are distributed widely on both sides of the border, making the preservation picture complex. While some sites are under the jurisdiction of the National Park Service, some are managed by state and local governments, with others owned by conservancies, private parties, or the Catholic Church. Most are south of the border, from California down the Baja Peninsula in the west and from Texas to Tamaulipas, Mexico, in the east.

What's envisioned is "a self-sustaining multi-institutional entity" that unifies diffuse research and preservation, says the University of Arizona's R. Brooks Jeffery. According to Pat O'Brien, a National Park Service liaison, the initiative has already started to bear fruit.

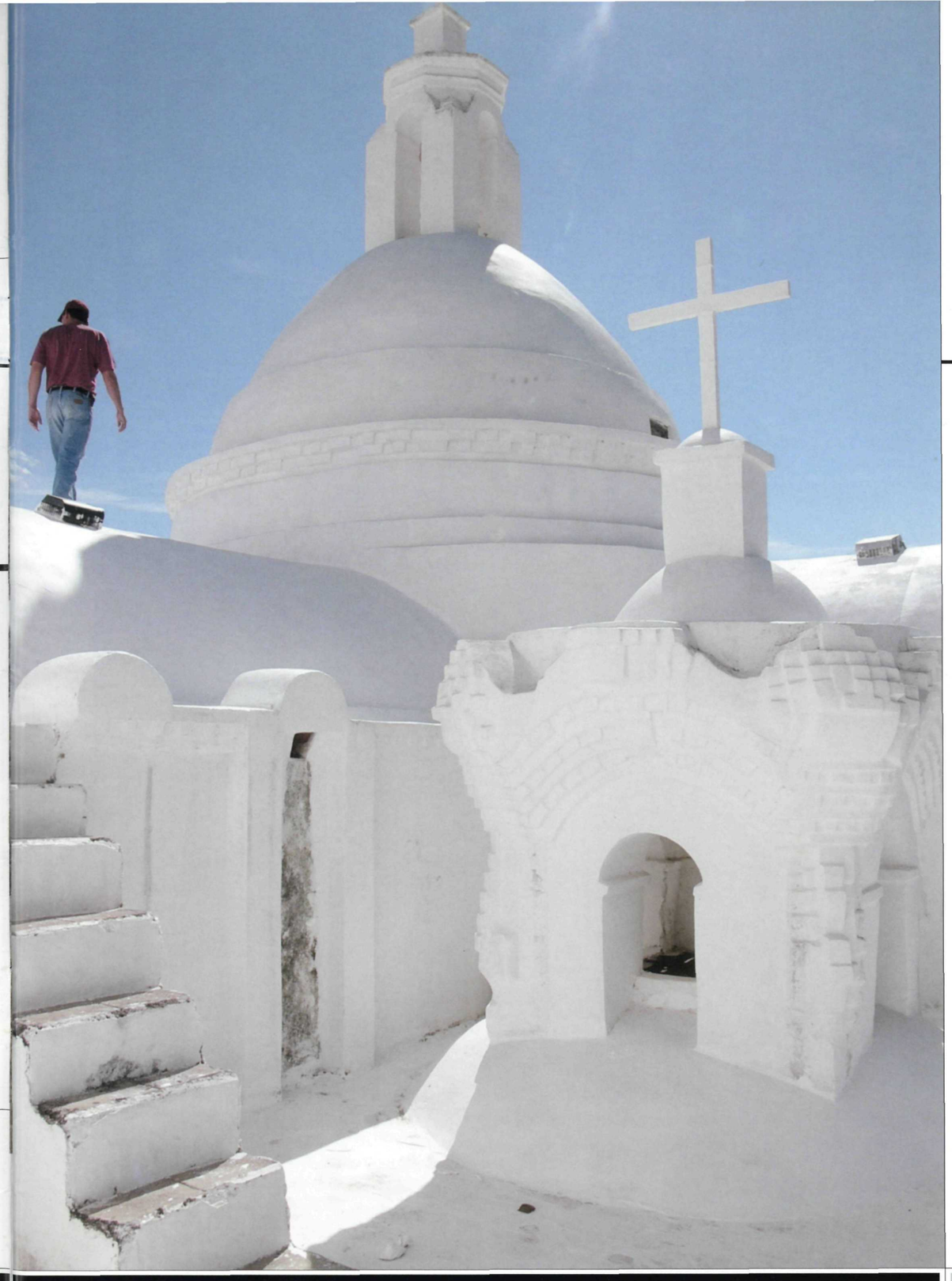
AS THE SPANISH MILITARY PROBED THE NORTHERN REACHES OF NEW SPAIN, PRIESTS WERE USUALLY ALONG. GOLD AND silver were a primary reason for Spain's presence, but it was also intent on enlarging its empire. The missions were part of the strategy, imposing order in the harsh wilderness while converting indigenous people to Christianity. Some missions featured ornate churches, others spare chapels, but all served to anchor the Spanish presence. The villages that grew up around them established orchards and crops. Routes whose ruts are still visible carried people and goods into the furthest parts of what is now the southwestern United States. Known as caminos reales—royal roads—they formed a lifeline from one settlement to the next. When Mexico won its independence in 1821, many of the churches were converted to other uses. Today each of the missions is architecturally and culturally rich. When one considers that there are hundreds of them across the reaches of northern Mexico and the southern United States, the scale of the legacy is apparent.

NPS grants have seeded the initiative, headquartered at the University of Arizona. The first step was a database. "There are literally hundreds of sites," says Jeffery, "so it's a massive undertaking." Still under construction, the database nonetheless includes an expansive inventory with an interactive map. One of the key tasks is to gather information in one place, available for all with a stake in the legacy. Jeffery says, "We want to marry historical evidence with the condition inventory we're building."

Sharing technology is to be a major part of the initiative, too. The group Cornerstone, for example, works with adobe conservation on both sides of the border. A recent adobe and plaster workshop—sponsored by the group with the National Park Service and Mexico's INAH—was filmed for a bilingual DVD. As older craftspeople pass on, transferring their skills to coming generations is critical, a fundamental goal of the NPS Vanishing Treasures Program, also part of the effort.

LEFT AND RIGHT JIM GRESHAM

Left: Bacadéhuachi mission in Sonora, established around 1645 by the Jesuit missionary Cristobal Garcia and one of many in northern Mexico featured in heritage tours. Right: A guide on the roof.



LEFT: JET LOWE/NPS/HABS, RIGHT: DAVID DICKENSHEETS/NPS/HABS

THE INITIATIVE GOT ITS START WITH A PUSH FROM SUPERINTENDENTS AT Tumacácori National Historical Park in Arizona, San Antonio Missions National Historical Park in Texas, and New Mexico's Salinas Pueblo Missions National Monument and Pecos National Historical Park. "Because of constantly shrinking budgets and diminishing staff, they wanted to pool their efforts," says O'Brien. "They wanted to connect with independent and government groups too."

The initiative plans to foster state-of-the-art interpretation illustrating how the missions, far from existing in isolation, were very much a part of their surrounding communities, a fact that is still true today.

Left: Entrance to Mission San José y San Miguel de Aguayo, an 18th century church built by the Spanish in what is now San Antonio, Texas, photographed by the NPS Historic American Buildings Survey. Above left: Hill of the Cross, adjacent to Mission San Xavier del Bac, a national historic landmark outside Tucson built toward the end of the 1700s, photographed for HABS during the Depression era. Above right: Mission San Xavier del Bac in another Depression-era HABS photograph.

Heritage tourism—a key part of the interpretive strategy—will benefit communities on both sides of the border.

Tucson-based La Ruta de Sonora demonstrates some of the potential. Focusing on heritage and ecotourism, the company conducts trips on both sides of the border. A tour of missions established by the 17th century Jesuit, Father Eusebio Kino, also includes Native American petroglyph sites, desert ecosystems, and modern border towns.

Tours run by the Southwestern Mission Research Center are exemplary, too. The educational nonprofit sponsors popular three-day excursions into Sonora, where tourists visit eight Mexican towns and their Spanish colonial churches. The guides are experts in regional history and anthropology. Mexico's INAH is setting an example as well, with community workshops for local people on taking advantage of heritage tourism. The initiative seeks to further all these efforts, and others like them.

WHILE SPANISH COLONIAL RESEARCH IS DYNAMIC, MUCH OF IT IS INDEPENDENT. The Spanish Colonial Research Center, a joint NPS-University of New Mexico effort that has spent 22 years developing a database of colonial documents and maps, could be central to increased research collaboration. It is what Director Joe Sanchez calls "anything and everything about the whole Spanish colonial enterprise." The Mexico-North Research Network, a consortium of U.S. and Mexican educational and cultural institutions, would likely be key too, as would the Mission 2000 project at Arizona's Tumacácori National Historical Park, a searchable database of baptisms, burials, marriages, and notable events recorded in mission registers. "It is an opportunity to erase political boundaries," Jeffery says, "to get this information out of the ivory towers."

THE INITIATIVE ALSO AIMS TO PROMOTE STANDARDS FOR DOCUMENTING AND monitoring sites, which is especially important given the multitude of jurisdictions involved. Published material will be in both English and Spanish. There will be regular conferences, too. Says Jeffery, "A passion for me is talking about preservation case studies so we can disseminate success stories from both sides of the border. Not just technical stuff but funding and marketing and site steward strategies."

Initiative planners will convene in June at the meeting of a federal/academic consortium on ecosystems in Washington, DC.

For more information, contact R. Brooks Jeffery at the University of Arizona, rbjeffer@u.arizona.edu. Visit the Missions Initiative web site at www.statemuseum.arizona.edu/oer/missionsini/index.shtml.

Theatrical Return

DC Streamlines Once Again Shower the Street with Light

WALKING BY THE ABANDONED ATLAS THEATER ON H STREET IN WASHINGTON DC SEVERAL YEARS AGO, ONE WOULD HARDLY HAVE predicted a theatrical future for it. Some may not have realized that the building *was* a theater—the ticket booth was gone, the Carrera glass broken or missing, and the marquee unlit for ages. And the inside didn't look much better.

"There was nothing here except odd bits of skid-row style paraphernalia," says Patrick Stewart, executive director of the Atlas Performing Arts Center, the group that purchased the building in 2001—a move spearheaded by Washington lawyer and theater aficionado Jane Lang. In the three decades since the theater's closure, everything from its cinema days was gone, except two decorative plaster grilles that once framed the theater screen.

Today, however, it would be hard to imagine it as anything but what it is, with colorful show posters in the windows and the blue neon of the Atlas sign showering the street with light, announcing itself to passers-by.

After a $20 million rehabilitation, the 58,000-square-foot-structure is thoroughly up to date, with a 280-fixed-seat theater, a 225-seat black box theater, some lab theaters, a production shop, and plenty of support space. Plus, several dance studios occupy the adjacent original storefronts. The rehab work, completed by the Washington-based Core architecture and design firm, involved raising part of the roof 12 feet for stage rigging, excavating the basement, and repairing much of the building's original brick. Color abounds in design touches such as the deep red gouged pressed wood wall in the entrance hall and azure blue terrazzo accent tiles in the flooring. And as a reminder of the site's theatrical past, the two plaster grilles, now completely restored, hang in the promenade hall.

OPERATED BY THE WASHINGTON-BASED K-B MOVIE CHAIN, THE THEATER WAS PART OF A BUSTLING COMMERCIAL CORRIDOR IN THE CITY'S NORTHEAST QUADRANT, NEAR CAPITOL HILL, UNTIL BECOMING A VICTIM OF WHITE FLIGHT IN THE '50S AND '60S. AFTER RIOTS DEVASTATED THE AREA IN 1968, THE THEATER NEVER QUITE RECOVERED, AND CLOSED ITS DOORS IN 1976.

Seven years later, after lots of fundraising and with the renovation work finished, it's one of the hottest spots in the city, all with the help of National Park Service-administered historic preservation tax credits, available for many historic preservation projects if a building is income-producing and the work is approved as meeting standards set by the Secretary of the Interior.

BUILT IN 1938, THE ART DECO THEATER WAS DESIGNED BY JOHN JACOB ZINK, A THEATER ARCHITECT WHO BUILT AROUND 200 movie houses, several of them in the DC area. Operated by the Washington-based K-B movie chain, the theater was part of a bustling commercial corridor in the city's northeast quadrant, near Capitol Hill, until becoming a victim of white flight in the '50s and '60s. After riots devastated the area in 1968, the theater never quite recovered, and closed its doors in 1976.

But the theater wasn't alone—none of the area recovered, instead becoming poverty-stricken and infested with drugs and crime. Dozens of structures along H Street remain abandoned, but a three-block stretch is slowly revitalizing, the Atlas a cornerstone in the comeback. "It's definitely helping ignite an economic spark," Stewart says. "New businesses are having a great impact on H Street in bringing back entertainment, culture, and nightlife," adds Anwar Saleem, executive director of H Street Main Street, a nonprofit aimed at restoring economic vitality. A long-time resident and business owner, Saleem describes the Atlas as an "anchor."

Stewart likens the center to Washington's other multi-service arts venue, the prestigious Kennedy Center, albeit on a much smaller scale and without the federal funding—or the $16 parking spot. Four international theater groups and the award-winning dance troupe Joy of Motion occupy the site. Stewart hopes the center stays a star in the "Atlas District," as some have taken to calling the area. "The idea is that you can open the paper on Friday evening and always find something going on here," he says.

The tax incentives program has been key in revitalizing thousands of properties. For more information, go to www.nps.gov/hps/tps/tax/index.htm.

Above and right: The Atlas Theater in its restored glory.

LEFT AND RIGHT ©MICHAEL MORAN PHOTOGRAPHY

GRANT SPOTLIGHT

TROPICAL RENAISSANCE

Gilded Age Retreat Gets Save America's Treasures Grant

A lavish Italian-style villa on Florida's Biscayne Bay—described as "America's greatest Gilded Age estate"—is one of the most recent beneficiaries of the NPS-administered Save America's Treasures grant program. Vizcaya, a spectacular mansion built between 1914 and 1916 by industrialist James Deering, is a national historic landmark operated today as a museum by Miami-Dade County. It is one of a series of grand estates built by families with names like Rockefeller, Vanderbilt, and Carnegie around the turn of the 20th century when fortunes were being made in oil, manufacturing, and railroads.

THE FOCUS OF THE GRANT—A $300,000 AWARD TO BE MATCHED FROM OTHER SOURCES—IS VIZCAYA'S OUTDOOR SCULPTURE. WHEN THE ESTATE EARNED ITS NATIONAL HISTORIC LANDMARK DESIGNATION IN 1994, THE STATUARY WAS CITED AS A MAJOR CONTRIBUTING FACTOR, PART OF "THE FINEST ITALIANATE GARDENS IN THE UNITED STATES."

DEERING'S FATHER ACQUIRED HIS WEALTH MANUFACTURING FARM MACHINERY, particularly the hay-baling machine that launched the family into the ranks of America's industrial barons. The company, which eventually became International Harvester, nearly controlled the market. In 1911, diagnosed with pernicious anemia, James Deering moved to Florida on his doctor's advice. There, he began building his 180-acre estate that included a working farm and orchard.

Vizcaya is one of the most intact remaining examples of what is known as the American Renaissance, a period when the wealthy built estates fashioned after the European example. Today, Deering's estate may seem like a relic of turn-of-the-century excess, a fantasy creation bordering on eccentricity. However, Vizcaya was very much an expression of Gilded Age aesthetics, a treasure in its own right.

Architect F. Burrall Hoffman, Jr., designed the mansion and Colombian landscape architect Diego Suarez designed the grounds. The concept was that of a great Italian villa evolved over four centuries. A central courtyard and corner towers look back to the 15th century. References to the 16th century can be found in aspects of the gardens. Elsewhere are elements of 17th century Venice, with details from the 18th in yet other parts. Interior designer Paul Chalfin shuttled back and forth to Europe to collect the furnishings.

The focus of the grant—a $300,000 award to be matched from other sources—is Vizcaya's outdoor sculpture. When the estate earned its national historic landmark designation in 1994, the statuary was cited as a major contributing factor, part of "the finest Italianate gardens in the United States." There are some 150 statues, 93 urns, and 21 fountains. The objects range from a 2nd century Roman ceremonial altar to commissioned works by modernist sculptor Gaston LaChaise.

Left and right: The statuary and ornamental gardens of Vizcaya, industrialist James Deering's Gilded Age estate in Florida. The remarkable collection of objects, essentially an outdoor museum, has suffered from dampness, salt, mold, and hurricanes.

DEERING AND HIS DESIGNERS PROBABLY COULD NOT HAVE FORESEEN THE TOLL taken by the salty, damp, subtropical climate. According to the museum's grant application, the collection is in a state of "severe deterioration," with limestone, marble, terracotta, and lead artifacts all suffering. Early repairs in some cases made things worse: metal pins intended to hold items together have corroded, expanded, and caused yet more damage. Mold, mildew, and other growth thrive here, accelerating deterioration. Hurricanes dating back to 1926—including Katrina—have also caused damage.

The grant will help repair and clean the statuary. Metal pins will be reinforced or replaced with titanium or stainless steel. Some statues will be relocated out of the path of hurricanes.

Visit the Vizcaya Museum & Gardens online at www.vizcayamuseum.org. For more information on Save America's Treasures, go to www.nps.gov/history/hps/treasures or contact the National Park Service Historic Preservation Grants Division at (202) 354-2020, ext. 1.

LEFT AND RIGHT BILL SUMNER

photographs by lee friedlander
from his new book Lee Friedlander Photographs
Frederick Law Olmsted Landscapes

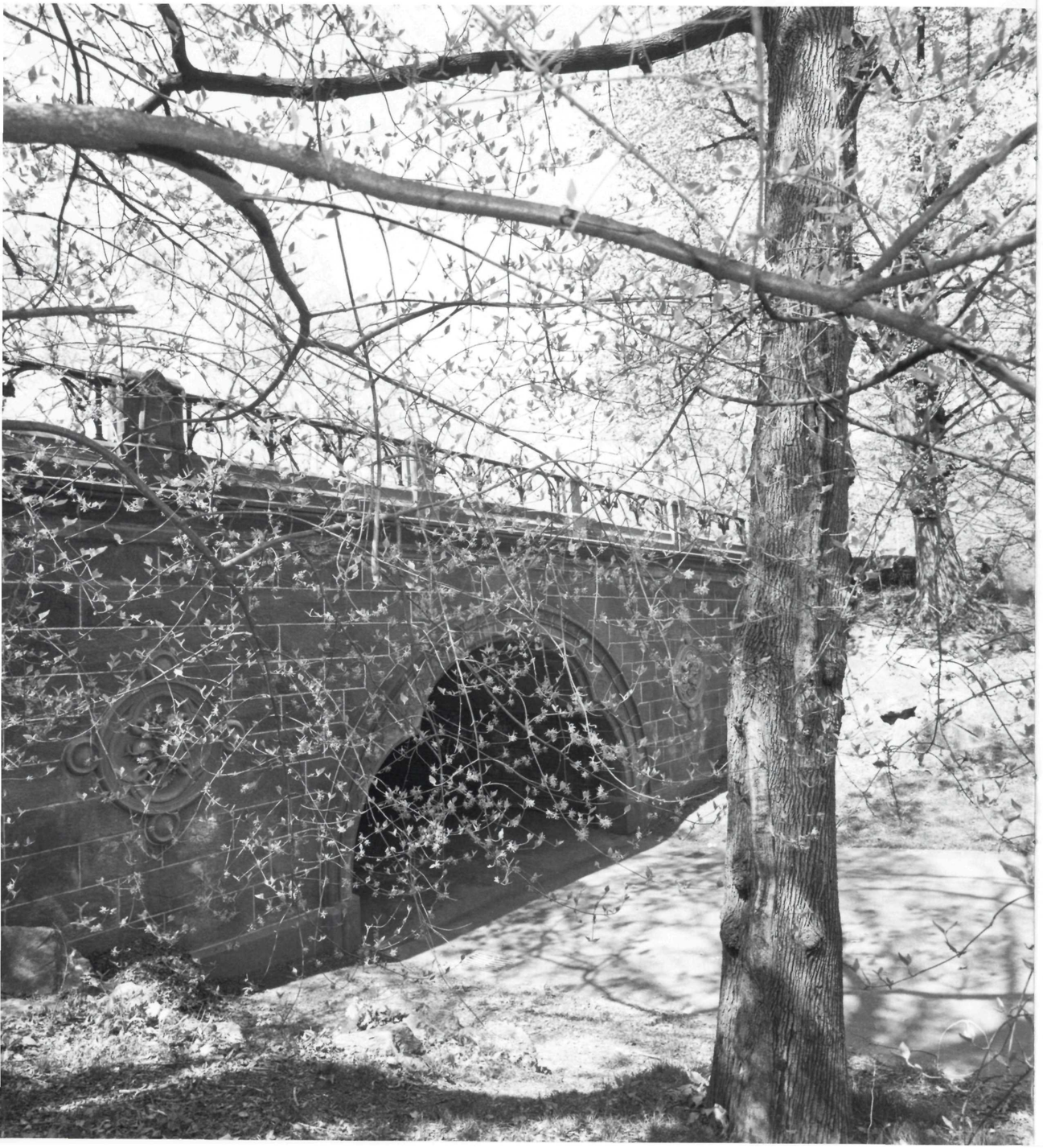
OLMSTED RAMBLE

a look at the legacy of frederick law olmsted, sr., *on the 150th anniversary of the design of central park*

FROM THE BACK BAY TO THE BILTMORE, FROM EAST COAST TO WEST, THE OLMSTED FIRM LEFT AN IMPRINT on America. That's cause to celebrate with the 150th anniversary of Central Park's design by Frederick Law Olmsted, Sr., and Calvert Vaux, along with the new expanded edition of *The Master List of Design Projects of the Olmsted Firm* and the Metropolitan Museum of Art exhibit "Lee Friedlander: A Ramble in Olmsted Parks," with the renowned photographer of the American scene turning his lens on some of the nation's most iconic landscapes. Here a roundtable discusses the Olmsted legacy—**Doug Blonsky, president of the Central Park Conservancy; Ethan Carr, noted author of *Wilderness by Design* and *Mission 66 and the National Park Dilemma*; Lucy Lawliss, resources program manager for four national parks in the San Francisco East Bay; and Catherine Nagel, executive director of the National Association for Olmsted Parks.** Carr, Lawliss, and Nagel all contributed to the *Master List*, an exhaustive look at the Olmsted oeuvre, over 6,000 projects that helped shape a nation. With plans ramping up for the National Park Service centennial in 2016—including a major two-part conference on parks past and future in Charlottesville, Virginia, and San Francisco later this year—Olmsted's work has never seemed more relevant.

Above: Frederick Law Olmsted's signature layered textures. The photographs in this article—from the Metropolitan Museum of Art exhibit "Lee Friedlander: A Ramble in Olmsted Parks"—portray Central Park as "a jungle dreaming of civilization," curator Jeff Rosenheim told the New York Times. *Friedlander channels the Olmsted vision, putting the focus on nature with buildings and manmade objects often in the background.*

TODAY PEOPLE LOVE THE PARK AS THEIR BACKYARD, NOT NECESSARILY AS A GREAT AMERICAN LANDSCAPE. THAT'S A GOOD THING, BUT YOU CAN EASILY SLIP AWAY FROM MAKING SURE IT'S KEPT SACRED. NOT LONG AGO LANDSCAPE ARCHITECTS TURNED THEIR BACK ON THE OLMSTED PHILOSOPHY, WANTING TO MAKE THEIR MARK WITH THE LATEST DESIGN OF THE MOMENT. NOW, WITH THE GREEN MOVEMENT, THE REST OF THE WORLD IS CATCHING UP WITH HIM.



© LEE FRIEDLANDER

Catherine: What has Central Park meant for America?

ETHAN: Central Park ushered in a new era. It was not only a critical but a popular success. In the winter of 1858, after the lake was excavated and flooded, thousands came to ice skate. And the public hasn't looked back since. It was an enormous economic success, too. Increased tax assessments more than paid for the park very quickly, and other cities wanted to emulate. So this anniversary is not just about celebrating Central Park, it's about celebrating the whole American park movement.

DOUG: Today people love the park as their backyard, not necessarily as a great American landscape. That's a good thing, but you can easily slip away from making sure it's kept sacred. Not long ago landscape architects turned their back on the Olmsted philosophy, wanting to make their mark with the latest design of the moment. Now, with the green movement, the rest of the world is catching up with him.

Lucy: Olmsted was a high-concept thinker, not a fuzzy-thinking Victorian as some suppose.

ETHAN: The experience of Central Park is visceral, intense, emotional. Olmsted's work was never shallow or fussy or strictly ornamental. Today he gets wrongly charged with Victorian excess, as the epitome of the 19th century picturesque. His work transcends those labels. The great rhetoric of his day was how important parks are for public health, individual happiness, and the successful functioning of society. These ideas are as profound now as they were then. Some practitioners make easy characterizations because they don't understand the historical context. Others, like Michael Van Valkenburgh, fully appreciate the Olmstedian tradition. His Teardrop Park, in lower Manhattan, evokes a sense of expansive beauty and emotional release, despite its tiny size, with constant change throughout the day and throughout the year. A dramatic outcrop drips with water or ice—depending on the season—and there's a swamp, too. People experience a range of emotions, because there's not a single narrative or layer of meaning. This is often missing in parks designed in a more severe modern idiom.

Catherine: What were some of Central Park's new ideas?

ETHAN: One was that governments need to be involved in park-making because if they aren't, they can't create a society where people can be happy. New York before 1858 was a place where people had no access to nature, no chance to experience beauty. That changed because Olmsted brought the country back to the city. Remember, when people of his generation were children, they could still walk out of New York and into nature. By the 1850s, people were trapped in an urban environment. The government was key in changing that. Yes, real estate speculators were involved, and yes, the park served elite interests. But there were important public purposes, too. One of the reasons New York didn't have a professional police or fire department in the 1830s and 1840s—well, in part they needed to develop those institutions—but in part they didn't have stable tax revenues.

© LEE FRIEDLANDER

So in a sense projects like Central Park helped lead to institutions that improved life across the board.

DOUG: On the other hand, Olmsted early on recommended a board of guardians to take the park's day-to-day management out of the hands of government. It took us all this time to realize he was right. But today the park really does exactly what it was designed to do. How many landscapes work exactly as they were meant to 150 years later?

ETHAN: Of course, details change—people aren't riding in carriages, they're riding on bicycles. They're not promenading, they're

Left: A bridge in Central Park. Above: Bough of a mature tree at Cherokee Park in Louisville, Kentucky. "Parks made possible what [Olmsted] termed 'unconscious' recreation, whereby the visitor achieved a musing state, immersed in the charm of naturalistic scenery that acted on the deepest elements of the psyche," writes Charles Beveridge in the Master List of Design Projects of the Olmsted Firm. *"There the visitor could experience an 'unbending' of the faculties that would restore mental and physical energies, renewing strength for the daily exchange of services that sustained the community of the city."*

NEW YORK BEFORE 1858 WAS A PLACE WHERE PEOPLE HAD NO ACCESS TO NATURE, NO CHANCE TO EXPERIENCE BEAUTY. THAT CHANGED BECAUSE OLMSTED BROUGHT THE COUNTRY BACK TO THE CITY. REMEMBER, WHEN PEOPLE OF HIS GENERATION WERE CHILDREN, THEY COULD STILL WALK OUT OF NEW YORK AND INTO NATURE. BY THE 1850s, PEOPLE WERE TRAPPED IN AN URBAN ENVIRONMENT.

jogging. But essentially they're using the park for many of the same basic purposes.

DOUG: The economic success continues, too. We just finished a study of the park's value to the city. The premium it puts on real estate is off the charts.

Catherine: Doug, could you walk us through some of the restoration's keynotes?

DOUG: A stroll through the park can be so inspiring—here are a few highlights. Let's start with the beauty of the mall, where you descend the staircase at Bethesda Terrace—lined with 16,000 newly restored tiles—and emerge to a statue of an angel on water, the only piece originally commissioned for the park. So you have elegant formality contrasted with the natural world of the ramble, just across the way. It's breathtaking.

I've enjoyed the ramble so much lately—partly because it's fenced

© LEE FRIEDLANDER

off now so I'm by myself! Soon everyone will share the experience.

As you walk over to Beau Bridge, in the next month or so you'll see eight Victorian urns, four on each side, that have been missing for about 70 years, each one a piece of beauty. We're having them recast right now, except for one. There's a story behind that.

A guy who worked for me, an historic preservationist, used to ride his bike home past a shuttered house on 145th Street. It was surrounded by a chain link fence, about to be demolished. Every night he'd look at this thing on the porch, and think "this looks familiar."

Above and right: Central Park. Olmsted believed that every city needed a freely accessible public space, says Charles Beveridge in the Master List, *"the most effective antidote to the debilitating artificiality of the built city and the stress of urban life."*

So he took a picture of it, did his research, and darn if it didn't look like one of the missing urns. Somehow or other—don't ask me how—we got it before the house was torn down.

Elsewhere in the park, shorelines have been restored, lake caves opened up, and much more.

Lucy: Olmsted exaggerated the landscape by stripping away ornamentation. His parks become a minimalist take on nature, so people would see in a new way. That's a very contemporary concept, designing a park around a "native" place. Yet when asked to "do Central Park" elsewhere, he refused. He wanted the land to dictate the design.

ETHAN: Each project was an experiment—an innovation—in response to a specific site. That idea is very contemporary, too. George Vanderbilt wanted a park for his North Carolina chateau, Biltmore, but Olmsted pointed out that the surrounding mountains wouldn't support it. He said it would be a wonderful place for scientific forestry, though, so Vanderbilt got the nation's first demonstration forests, with formal gardens around the house. In Boston, the park system was engineered to enhance the city's drainage and flood control, an idea that we're only now rediscovering.

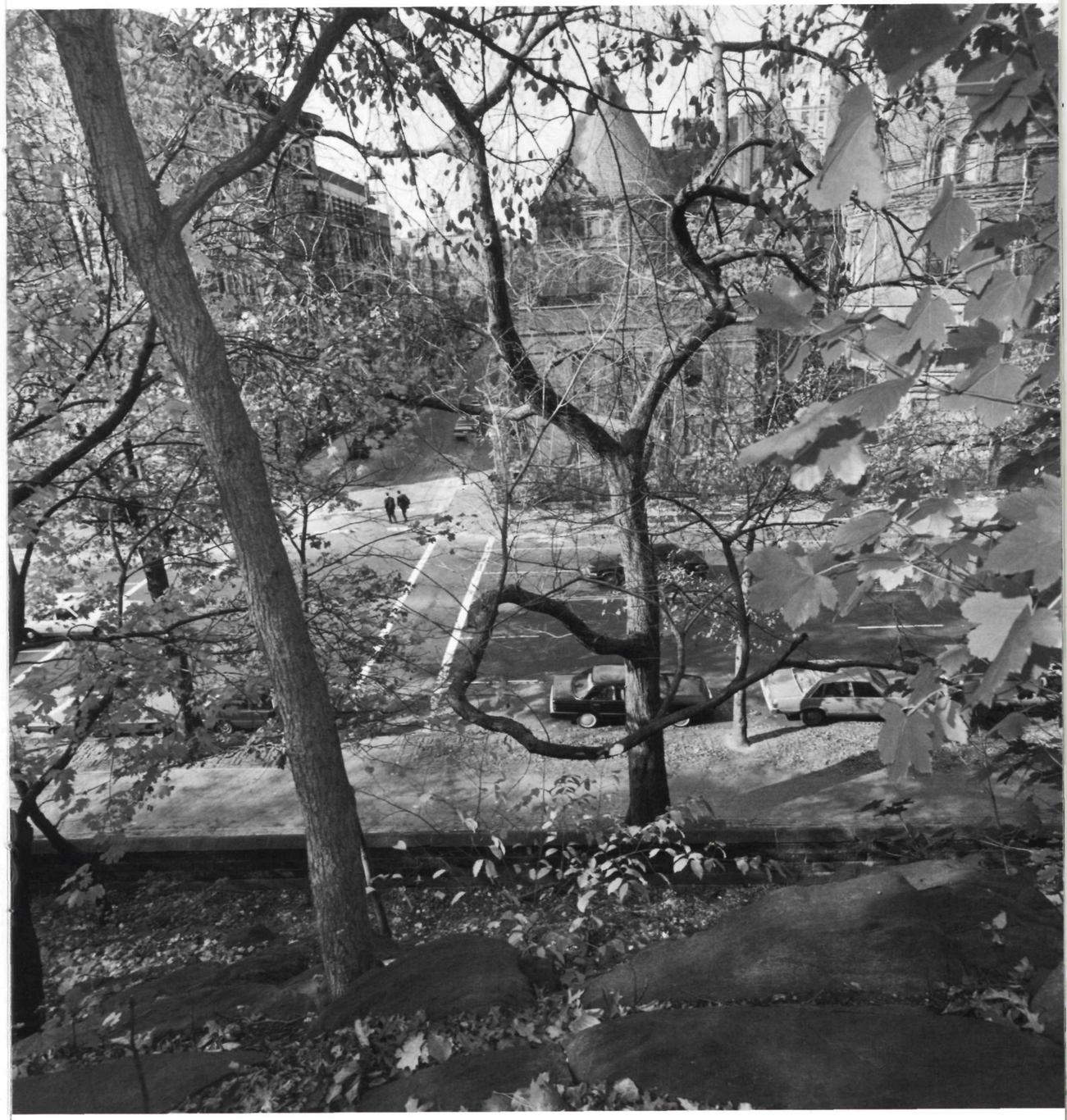
Catherine: What are some of the lessons that cities can apply to their parks?

DOUG: When you have high visitation you need strong management. With a building you can get away with a little dinginess. With a park, you see decline overnight. It must be graffiti-free all the time, litter-free all the time, with benches repaired, lights repaired. Otherwise it goes into a quick spiral. People think Central Park was beautiful until the 1960s, then went downhill until the conservancy brought it back. Actually it's gone up and down many times.

ETHAN: The most recent restoration, though, has been as important to the park movement as Olmsted's original creation. Other municipalities, other states—even the federal government—have looked to the conservancy's public/private partnerships as a model. Its management plan nurtured the development of the discipline of historical landscape architecture.

DOUG: We're only just getting to the fun details, like restoring the coves and the caves in the rowboat lake, bringing back the bridges, and realizing the full brilliance of the vistas and view sheds.

ETHAN: It really is in the details. To know you're bringing it back to those historic photographs where everybody is dressed up along the ramble is really tremendous. The restoration takes the park to a whole new level.



© LEE FRIEDLANDER

© LEE FRIEDLANDER

EACH PROJECT WAS AN EXPERIMENT—AN INNOVATION—IN RESPONSE TO A SPECIFIC SITE. GEORGE VANDERBILT WANTED A PARK AT HIS NORTH CAROLINA CHATEAU, BILTMORE, BUT OLMSTED POINTED OUT THAT THE SURROUNDING MOUNTAINS WOULDN'T SUPPORT IT. HE SAID IT WOULD BE A WONDERFUL PLACE FOR SCIENTIFIC FORESTRY, THOUGH, SO VANDERBILT GOT THE NATION'S FIRST DEMONSTRATION FORESTS, WITH FORMAL GARDENS AROUND THE HOUSE.

LUCY: It's only now that you see the full greatness of the art. Sometimes it takes a restoration—with the original plan in hand—to bring out all that was imagined. Look at the plan for Atlanta's Druid Hills. It shows the firm working with a bereft piedmont where now, a century later, you have these great mature trees on carefully shaped terrain, creating a multitude of views and vistas. With the new expanded edition of the *Master List*—and the archive of drawings at the Olmsted National Historic Site in Brookline, Massachusetts—hundreds of places like Druid Hills have the chance to make the genius blossom.

Catherine: The publication is not just a list, but a sweeping look at the firm's effect on the nation's landscape, with original drawings and interpretive essays.

LUCY: In many ways it's a book of firsts. In writing my essay, I found that the Olmsted firm did the first country club—also in Brookline. The country club was itself an American invention, an outgrowth of the dining clubs of Great Britain and later here. Essentially, because of all the open land, the dining club moved to the country—as a "driving club" for carriages. This coincided with the introduction of golf, so there was an explosion of interest in the game. As a result, the Olmsted firm was involved in the first golf course subdivision—in Baltimore—and for a decade worked for Bobby Jones' Augusta National, probably the country's most famous course.

The Olmsteds worked in almost every state; their narrative is part of the American story. Right after Central Park, Olmsted, Sr., came to California, where he designed a cemetery in Oakland, but most importantly wrote about Yosemite's Mariposa Grove, calling for the landscape to be set aside for the people of the United States.

The Olmsted firm was seminal in defining the practice of landscape architecture, a legacy that communities are starting to realize should be preserved. Unfortunately, places are disappearing every day, largely out of ignorance. The *Master List* should help address the issue.

Catherine: A recent report from the Director of the National Park Service, Mary Bomar, talks about putting children more in touch with nature. In Central Park, right next to 5th Avenue, children can explore a cave or put their feet in a lake.

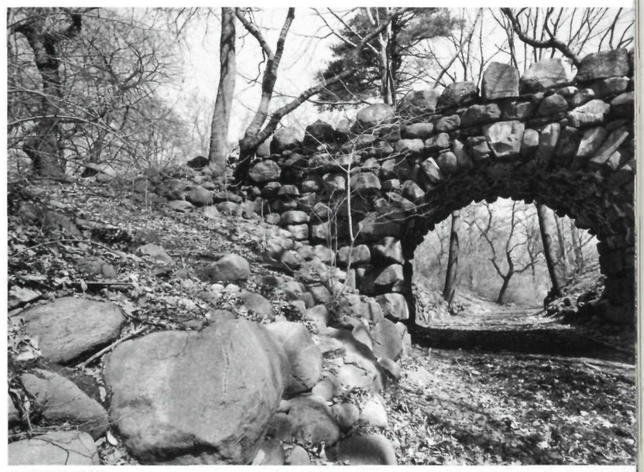
ETHAN: People are being denied something essential—another idea that's coming back. Nothing is new except what you forget, as they say. But this time we want to make sure it doesn't happen again, especially for children.

DOUG: There's no question that for us the next phase is using the park as an outdoor classroom. One of the things I'm working on is creating a small public high school here. To have a school get the benefit of the park every day, that would be a dream come true.

You need to get kids when they're young. Then they see their parents throw litter on the ground, and make them pick it up. It brings new respect to the entire family.

Lucy: Olmsted talked about a doctor telling a stressed-out businessman to just go walk in the park. Doug, how does Central Park connect with the public health agenda?

DOUG: I always laugh when people ask what are some of the park's hallmarks as a great democratic space. I say even dogs off a leash don't fight with each other, and I can't recall the last time I saw two people getting in a fight. It is truly a United Nations.



© LEE FRIEDLANDER

Obviously you can come to the park, sit down, read the paper, and relax, but clearly the place calls you to explore. The tourists want to get in as much as they can, in either two hours or four hours or a weekend. They hike all the way from 59th Street to 110th Street. They come to admire a masterpiece.

We have programs as part of our recreational agenda—hiking and walking programs tied into obesity and diabetes—but the vast majority of visits are from people wanting a spontaneous experience. Most visits just aren't structured, that's one of the park's great beauties. And it pays off. Over 2,000 people have adopted benches in the park, with most of the plaques expressing the great joy they get here.

Left: Rockwood in Tarrytown, New York. Above: Brooklyn's Prospect Park. "The purpose of a park was to provide city dwellers with an experience of extended space that would counteract the enclosure of the city by providing 'a sense of enlarged freedom,'" writes Charles Beveridge in the Master List. *"An expanse of meadow with gracefully contoured terrain, gently curving paths, and an indefinite boundary of trees was the central element of a park."*

Catherine: Doug, what did you do in the way of outreach to get people to return?

DOUG: It's incredible, but we really didn't have to lure them back. We said make it beautiful and they will come. When I started, tourists didn't go into Central Park, now they're most of the people here. We don't do a lot of organized activities; things happen on their own.

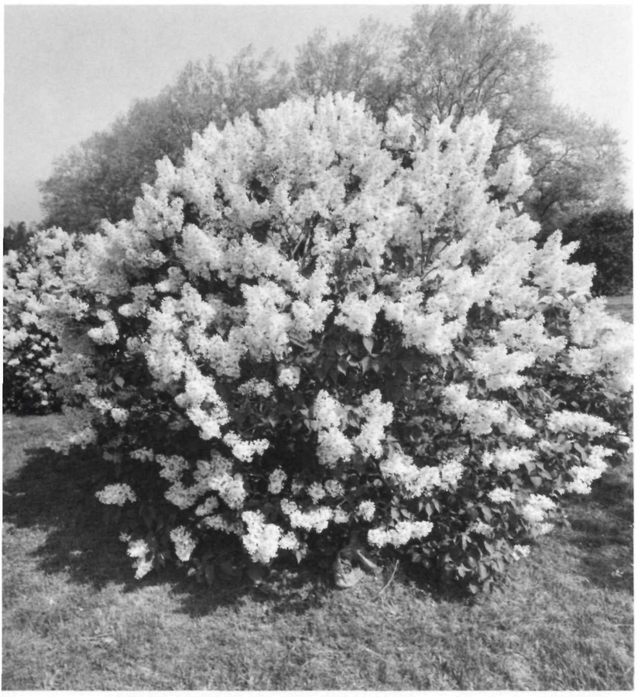
Catherine: The conservancy has demonstrated that cities can't go it alone. You have to have people working together, and a vision.

DOUG: When I started, the park was run under a crew-based system. Six people piled in a pickup, went out, and came back a couple hours later unable to point to one thing that was completed. On top of that, the conservancy was handling horticulture and the parks department was handling maintenance, so one of our guys would go out with a lawnmower and instead spend the time picking up trash. It just wasn't working. So we broke the park into 49 zones. We told staffers, each of you is going to have your own zone, with your own resources and support. It made a huge impact. Volunteers used to be in a huge group, sometimes creating more work than they did. Now the zone gardeners have two or three volunteers at their disposal on any given day. It's forged incredible relationships.

Relationships really are essential, because the park will always be a political football. We started an advisory committee of dog owners because of pressure to create dog runs. That gave me a platform to convince people that we shouldn't do that. Most of those runs are gnarly and funky. Instead we rotate areas with wood chips from one season to the next. We say here's where your dog can be off leash. Next season it'll be elsewhere.

Central Park has five community boards, and when we propose a project we get their input first. There are friends groups, too. We're constantly out there making sure that citizens are part of the process. It protects us in the long run. Relationships are the cornerstone for all we're doing to maintain Olmsted's treasure for America, and the world.

THE OLMSTED FIRM WAS SEMINAL IN DEFINING THE PRACTICE OF LANDSCAPE ARCHITECTURE, A LEGACY THAT COMMUNITIES ARE STARTING TO REALIZE SHOULD BE PRESERVED. UNFORTUNATELY, PLACES ARE DISAPPEARING EVERY DAY, LARGELY OUT OF IGNORANCE.



© LEE FRIEDLANDER

Above: Highland Park, Rochester, New York. Right: Washington Park, Milwaukee, Wisconsin. Photographer Lee Friedlander portrays Olmsted's creations as "living works of art," says Met curator Jeff Rosenheim. Writes Charles Beveridge in the Master List*: "Olmsted had great faith in the ability of art to improve society . . . he was convinced that the spacious, gracefully modulated terrain of his parks provided a specific medical antidote to the artificiality, noise, and stress of city life. In this and many other ways he strove to use his skill as an artist to meet the most fundamental of human needs."*

Contact Doug Blonsky at the Central Park Conservancy, dblonsky @centralparknyc.org; Ethan Carr at the University of Virginia School of Architecture, ec2h@virginia.edu; Lucy Lawliss at Rosie the Riveter/World War II Home Front National Historical Park, lucy_lawliss@nps.gov; Catherine Nagel at the National Association for Olmsted Parks, NagelCatherine@cpa-naop.org. *The Master List of Design Projects of the Olmsted Firm, 1857-1979,* 2nd edition—edited by Lucy Lawliss, Caroline Loughlin, and Lauren Meier—was published by the National Association for Olmsted Parks (online at www.olmsted.org) and the Frederick Law Olmsted National Historic Site (online at www.nps.gov/frla). *Lee Friedlander Photographs Frederick Law Olmsted Landscapes* was published by Distributed Art Publishers on the occasion of the exhibition "Lee Friedlander: A Ramble in Olmsted Parks" at the Metropolitan Museum of Art, New York. For more about the Designing the Parks conference—sponsored by the National Park Service, Cultural Landscape Foundation, George Wright Society, National Parks Conservation Association, University of Virginia, and Golden Gate National Parks Conservancy—go to www.designingtheparks.com.

© LEE FRIEDLANDER

seeding california

BY JOE FLANAGAN PHOTOGRAPHS BY JET LOWE

At the weary end of a six-month trek from New Spain, the settlers stopped at a place that would later be described as "a beautiful limpid little stream with willows on its banks." To the founders of the pueblo of Los Angeles, the sight of water must have been a great comfort, since they likely saw very little of it in their 1,200-mile journey from what is now Mexico. Water—its necessity and its scarcity—has been an unequalled force in shaping the face of the American West. The modern history of the semi-arid basin where the pueblo took root vividly illustrates the larger issues of populating desert lands. The vision of Los Angeles as a 20th century metropolis drove intense competition for water. It brought elaborate political maneuvering, rural-urban conflict, undying controversy, and finally, some of the most remarkable engineering feats of all time, which command respect even today.

***Right:** The Los Angeles Aqueduct ushers water down the San Bernardino Mountains toward the city.*

ALL PHOTOS JET LOWE/NPS/HAER

The Los Angeles Aqueduct proposed to move water solely by gravity,

from a mountain valley over 200 miles away through craggy terrain and desert. The Colorado River Aqueduct aimed to exert a bit more muscle, using a series of pumping stations to get the water out of a river gorge and over more than 200 miles of difficult terrain. Both projects employed some of the most innovative techniques of the day, as well as the most basic, overcoming seemingly insurmountable obstacles and setting records doing it. The logistics and support systems alone were monumental achievements.

Two projects, the Los Angeles Aqueduct and the Colorado River Aqueduct, embody the politics of growth and the history of water in the West. But it is their technical achievements that drew teams from the NPS Historic American Engineering Record to document them in detail. California water authorities, eager to capture the magnitude and rich history of the aqueducts, sought out HAER's expertise.

The subplots that swirled around these projects are an integral part of their story, but the practical objective is compelling in and of itself. The Los Angeles Aqueduct proposed to move water solely by gravity, from a mountain valley over 200 miles away through craggy terrain and desert. The Colorado River Aqueduct aimed to exert a bit more muscle, using a series of pumping stations to get the water out of a river gorge and over more than 200 miles of difficult terrain. Both projects employed some of the most innovative techniques of the day, as well as the most basic, overcoming seemingly insurmountable obstacles and setting records doing it. The logistics and support systems alone were monumental achievements.

As milestones in the nation's engineering legacy, the aqueducts came under HAER's lens for the purposes of posterity. The group documents historic industrial and engineering sites with measured and interpretive drawings, large-format photographs, and comprehensive research. The final product, a detailed profile of a site from its smallest workings to the backgrounds of the people who built it, goes to the Library of Congress, where HAER's extensive collection is kept. Recording the aqueducts was the inspiration of former HAER chief Eric DeLony. "We were systematically recording the nation's major engineering systems," he says, "and I'd just read the famous book, *California Water*. The number one issue in the West is water."

Visions of Los Angeles

The tumultuous history of the Los Angeles Aqueduct began in a peaceful valley far to the north of the city. The Owens Valley, formed by a cleft between the Sierra Nevada and the Inyo-White Mountains, was an agricultural community with about 400 family farms at the turn of the century. Water was plentiful, running off the eastern slope of the Sierra Nevada for some 150 miles along the range. But the crude irrigation methods were wasteful, and, in the long run, destructive. Farmers simply used trenches to route the water, but much of it seeped into the earth before it got to their fields. In time, the land was waterlogged, with an excess of alkali on the surface. Once one area was ruined, the farmers would simply go somewhere else. By 1903, the damage was widespread and farmers were looking for solutions.

At the same time, Los Angeles was coming up against an obstacle that was in the way of the potential its politicians envisioned. Like the Owens Valley, the city depended on runoff, which flowed down the sides of the San Gabriel Mountains and into an aquifer. This, in turn, had an outlet in the Los Angeles River. While the supply was adequate for a small Spanish pueblo, it was not up to the task for a city with big hopes. Business and civic leaders envisioned the West Coast's answer to New York and Chicago. Hanging their hopes on the vagaries of rich and lean water years was risky. L.A. officials were aware of the abundance of water in the Owens Valley, some meeting with U.S. Senators to discuss more efficient use. The situation intensified when Los Angeles endured two consecutive years of drought.

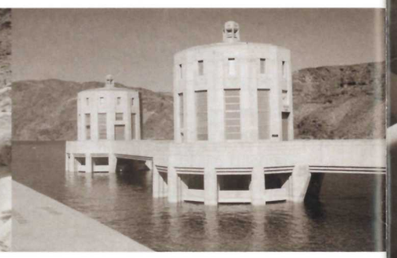
The federal government's involvement in the West's water issues was shaped by a series of laws intended to convert arid lands to agriculture. The Desert Land Act of 1877 offered 640 acres at $1.25 per to anyone who promised to irrigate within three years. The Carey Act of 1894 parceled out millions of acres to western states, who, in turn, pledged to promote irrigation and development. In 1902, President

***Left:** The Whitsett Pump Plant, part of the Colorado River Aqueduct. "This is the beginning of the journey," says National Park Service photographer Jet Lowe, who documented the system for the Historic American Engineering Record. "This is where the water comes out of the Colorado River." Pumps force the water up and over the steep terrain, the first stage in a series of relays. "None of it would be possible without the Hoover Dam upstream," Lowe says, the power grid an achievement in its own right. **Above left:** Copper Basin Reservoir and Dam, tucked in a crevice between red rock canyon walls and connected to intake and outlet pipes beneath the mountains. **Above right:** Moved by gravity alone, water snakes its way to the city in a concrete-lined channel of the Los Angeles Aqueduct.*

***Below left:** The Alabama Gates spillway on the Los Angeles Aqueduct. In 1924, the rural-urban acrimony found an outlet when ranchers opened the spillway to return water to the Owens River. **Below right:** In taming the Colorado River, the Hoover Dam—a national historic landmark and monument to American engineering—made an aqueduct possible. **Right:** Churning water from the Colorado River at the F.E. Weymouth Treatment Plant in the San Gabriel Valley.*

Theodore Roosevelt signed the Reclamation Act to fund irrigation projects. Scientists and engineers from the U.S. Geological Survey came to the West in numbers and, in 1903, to the Owens Valley.

It is impossible, in the story of water in the West, to avoid the themes of chicanery and influence-peddling. William Mulholland, head of the Los Angeles Department of Water and Power, was a driving force in the city's transformation. He and a number of his associates played a part in derailing a planned reclamation project for the Owens Valley, and Fred Eaton, a former city water official, bought acreage later crucial for building an aqueduct to Los Angeles. City officials allegedly had connections inside the newly formed U. S. Reclamation Service. President Theodore Roosevelt, in a letter to the Secretary of the Interior, wrote that while farmers in the Owens Valley had understandable concerns, they "must unfortunately be disregarded in view of the infinitely greater interest to be served by putting the water in Los Angeles." A 1906 act of Congress directed the Interior Department to sell land along the proposed route to the city. The aqueduct's political origins, says the HAER report, have been the subject of "intensive examination" in novels, poems, broadsides, and film, the latter alluding to the plot of Roman Polanski's *Chinatown*. In 1905, amid outcry and investigations, the *Los Angeles Daily Times* announced, "Titanic Project to Give City a River."



A Ditch in the Desert

The job was monumental, taking six years of planning, digging, tunneling, hauling, mixing concrete, blasting, and laying pipe. The design's guiding principles depended more on simple physics than technology, with the entire 235-mile length gravity-fed. "The physical dimensions of this thing are mind-boggling," says Jet Lowe, the HAER photographer who documented the aqueduct system. "But it's kind of humble too, because it's little more than a ditch in the desert." The waterway was comprised of lined channels, covered conduit, tunnels, dams, and reservoirs. It followed the course of the Owens River out of the valley, then rounded the southern end of the Sierra Nevada and crossed the Mojave Desert before it arrived at its final obstacle, the San Gabriel Mountains north of Los Angeles.

A key component was a series of hydroelectric plants that would use water flow to generate power for the city. All told, the project required 500 miles of roads and trails, over 2,000 buildings and tent houses, hundreds of miles of telephone, telegraph, and power lines. The demand for concrete would be so extreme that the city built its own plant in the foothills of the Mojave desert, where there was an abundance of natural limestone to make Portland cement.

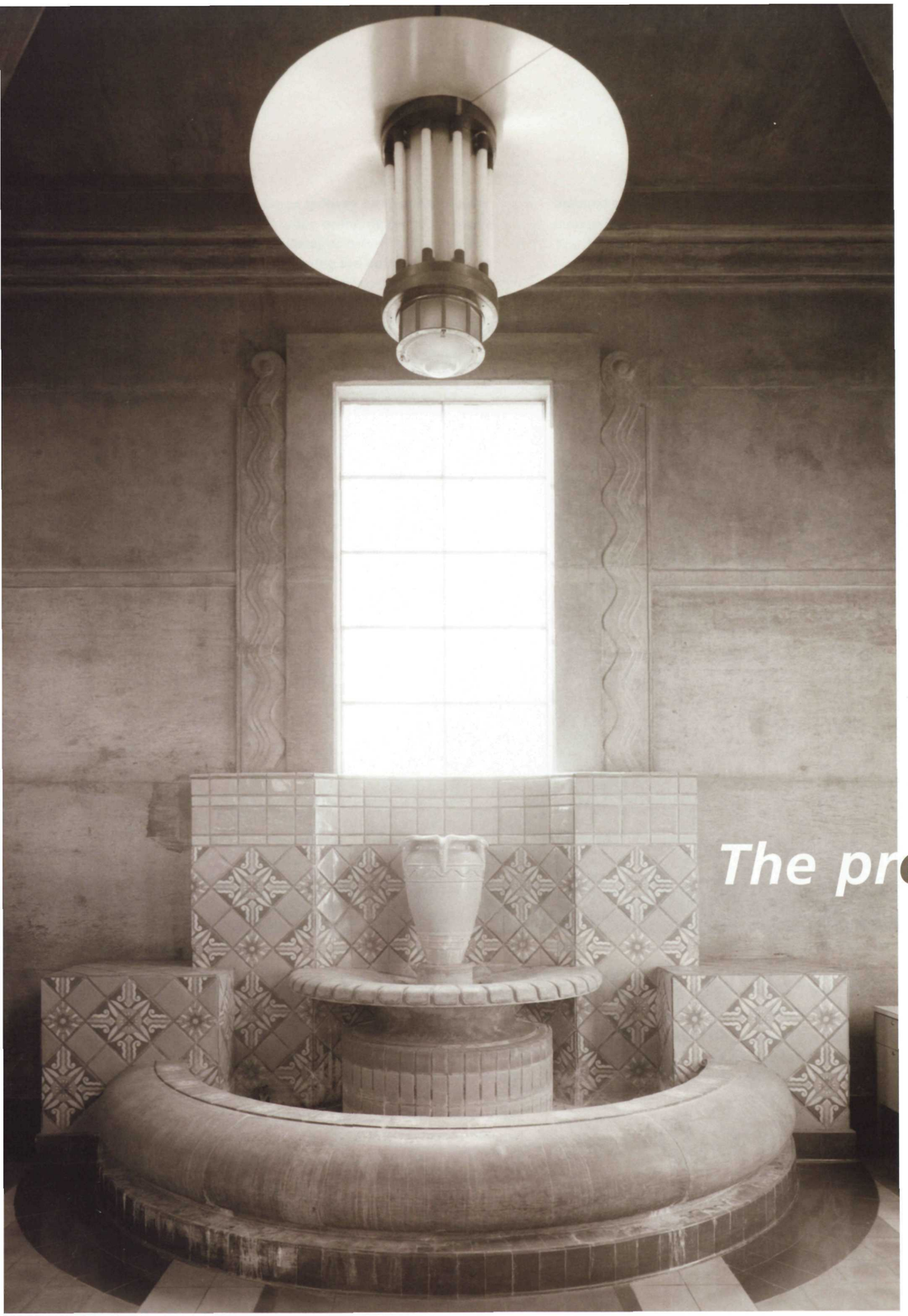
Small settlements sprung up along the aqueduct's course: offices, mess houses, shops, barns, cook shacks, and sawmills. Everything was portable. Structures were simply taken apart, loaded on a wagon, and moved further down the line. Thousands of workers from around the world converged on the project. It was, as the HAER history puts it, "back-breaking work in a desperately inhuman climate."

Most of the aqueduct is a concrete channel, with an average width of 12 ½ feet. To maintain gravitational pull over long stretches, the pitch was prolonged: At some places, the water is heading downhill toward Los Angeles at a mere 18 inches per mile. It had to cross a number of gorges and canyons, and to do this, engineers used siphons, a technology that goes back to ancient Rome. Builders sent pipelines down into gorges and canyons and then up the other side.

While the uphill climb would seem insurmountable, hydrostatic pressure and water's propensity to find its own level actually produced a siphon effect. Once the water starts flowing in quantity, it flows uphill. Both aqueducts used dozens of siphons along their respective courses. Says Tatiana Escobar, historian for the HAER documentation, "Certain parts of the aqueduct, especially when it flows in open channels, seem so small and idyllic that it's hard to imagine that it is one of the main water systems for such an immense city." She points out that the building of the aqueduct coincides with the rise of another institution that drove the city's emergence, Hollywood.

What Mulholland and the other leaders didn't expect was how fast Los Angeles would grow.

They had projected 260,000 residents by the time the project was finished in 1913. In fact, there were almost twice as many. Though 260 million gallons a day were rushing through the desert to the coast, it would not be long before the search was on for more water.



Workers blasted through mountains to build 142 individual tunnels. The five-mile-long Elizabeth Tunnel was one of the project's greatest feats. Running as deep as 250 feet below the surface, it served as an outlet for the Fairmont Reservoir, carrying water literally through the mountains. Workers set a speed record for hard rock mining, excavating more material faster than had ever been done before. Veterans of the Elizabeth Tunnel were sought for similar projects in other parts of the world because of their experience.

In the fall of 1913, the valve gates were opened during a festive ceremony full of hope for the future. William Mulholland presided, with some 40,000 onlookers in attendance. The aqueduct broadened the city's horizons immeasurably. What Mulholland and the other leaders did not know was how fast Los Angeles would grow. They had projected 260,000 residents by the time the project was finished in 1913. In fact, there were almost twice as many. Though 260 million gallons a day were rushing through the desert to the coast, it would not be long before the search was on for more water.

The '20s were both a period of explosive growth and prolonged drought. Mulholland and other officials planned to extend the aqueduct further up the valley to a large lake at Mono Basin. Once again, they enlisted the help of the U.S. Reclamation Service to acquire the land. There was a great deal of lingering bitterness from residents over the aqueduct, and news of an extension—to divert still more water to Los Angeles—provoked violence. Things came to a head when, in 1924, someone dynamited a spillway gate. Explosives were used repeatedly to sabotage the waterway. In the end, Los Angeles offered to buy out residents and pay for the water rights. They created jobs for locals to maintain the aqueduct. The so-called Mono Extension lengthened the aqueduct to 338 miles. The aqueduct was expanded again in 1970, increasing its capacity 50 percent.

William Mulholland's career suffered an irreversible setback when, in 1928, a dam collapsed. Part of a series of reservoirs built after the initial aqueduct was completed, the St. Francis Dam—about 40 miles northwest of L.A.—showed signs of trouble shortly after it was built. Several reasons were cited for the failure, among them hasty construction. When it let go, a giant wall of water surged all the way to the Pacific. Over 400 people were killed. It remains one of the greatest engineering disasters in American history. Mulholland, who had inspected the dam just hours before it gave way, took full responsibility and retired.

Insatiable Thirst

As early as 1923, Mulholland and his colleagues were eyeing the Colorado River. The vision this time was regional: reliable water not just for Los Angeles but for all southern California. Other towns joined Los Angeles to form the Metropolitan Water District of Southern California, an entity sanctioned by the state to pursue another aqueduct. Like its predecessor, the new aqueduct was surrounded by subplots that remain an indelible part of the story. It, too,

The project required 500 miles of roads and trails, over 2,000 buildings and tent houses, and hundreds of miles of telephone, telegraph, and power lines. The demand for concrete would be so extreme that the city built its own plant in the foothills of the Mojave desert, where there was an abundance of natural limestone to make Portland cement.

Left: *Fountain at the F.E. Weymouth Treatment Plant. The buildings and facilities are expressive of their time, says Lowe—"Art Deco with a lot of technology-affirmative imagery." He calls an enormous relief valve he shot "both iconic and primitive."* ***Above:*** *The plant's control room. The water has to be constantly mixed, balanced, purified, and monitored. "The workers are real chemists," says Lowe, "almost artisans in the way they handle it."*

was a sprawling, ambitious undertaking very much in the spirit of westward expansion, using technology to conquer the land.

Today, the American Society of Civil Engineers classifies the Colorado River Aqueduct as one of the seven wonders of American engineering. The project employed as many as 10,000 people in the depths of the Great Depression.

The aqueduct begins its 242-mile course at Lake Havasu on the California-Arizona border, formed by the Parker Dam. Then it crosses the Mojave, skirts several mountain ranges, follows the southern edge of Joshua Tree National Park, traverses the north end of the Salton Sea, and crosses the San Jacinto Mountains near Palm Springs before arriving at Lake Matthews near Riverside, California.

Before the journey begins, however, the water has to be pumped out of the river and propelled upward over the mountainous terrain. Engineers designed five powerful pumping stations to drive the water up in relays, from one station to the next, until it could flow by gravity. At the time, it was the world's most advanced water conveyance system.

There were obstacles to navigate even before building began. Colorado, New Mexico, Nevada, Utah, and Wyoming all claimed a right to the river. In addition, there was disagreement over a proposal to build the colossal Hoover Dam, intended to aid agriculture in California's Imperial Valley. Negotiations led to the Colorado River Compact, which apportioned water to each state annually.

The dam remained a thorny issue, however. The aqueduct would depend on electricity from it, and other states failed to see the benefit. Mulholland went to Washington to appear before the House Committee on Irrigation and Reclamation. As with the earlier aqueduct, the new project was pitched as a matter of survival. "This committee has got to come to our relief," Mulholland pleaded, "and give us the means of a larger and more secure water supply or we are ruined." In 1929, Congress approved $165 million. Los Angeles promised to buy hydroelectric power from the federal government to offset construction costs.

City officials launched a publicity campaign to drum up support. The water department inserted promotional material in the envelopes with monthly water bills. An early talking picture, *Thirst,* drove home the necessity of water for southern California. In 1931, voters approved a $220 million bond issue. Construction began two years later.

The Hoover Dam, like the Grand Coulee, became a monument to the New Deal, feeding a public infatuation with technology that gave hope to a nation weary of the Depression. The projects seemed to revel in their own scale, what historian Donald C. Jackson calls "a celebration of mass." Though not as large as some other dams of the era, the Hoover was a behemoth that went 235 feet down to bedrock. At the time, it was the largest concrete structure in the world. The Bureau of Reclamation designed space for the hundreds of thousands of tourists who came, adorning the structure with plaques and mosaics.

The California Institute of Technology designed massive pumps to get the water over the mountains, the largest run by a 12,500 horsepower motor. The pumps had their own power system. Steel towers marched across the desert carrying power lines to the stations, one of many dramatic changes to the landscape. The water, sent from one station to the next, traveled through a large conduit that bored through mountains. From its origin, the water was lifted over 1,600 feet until it flowed down with a gentle pitch to Los Angeles.

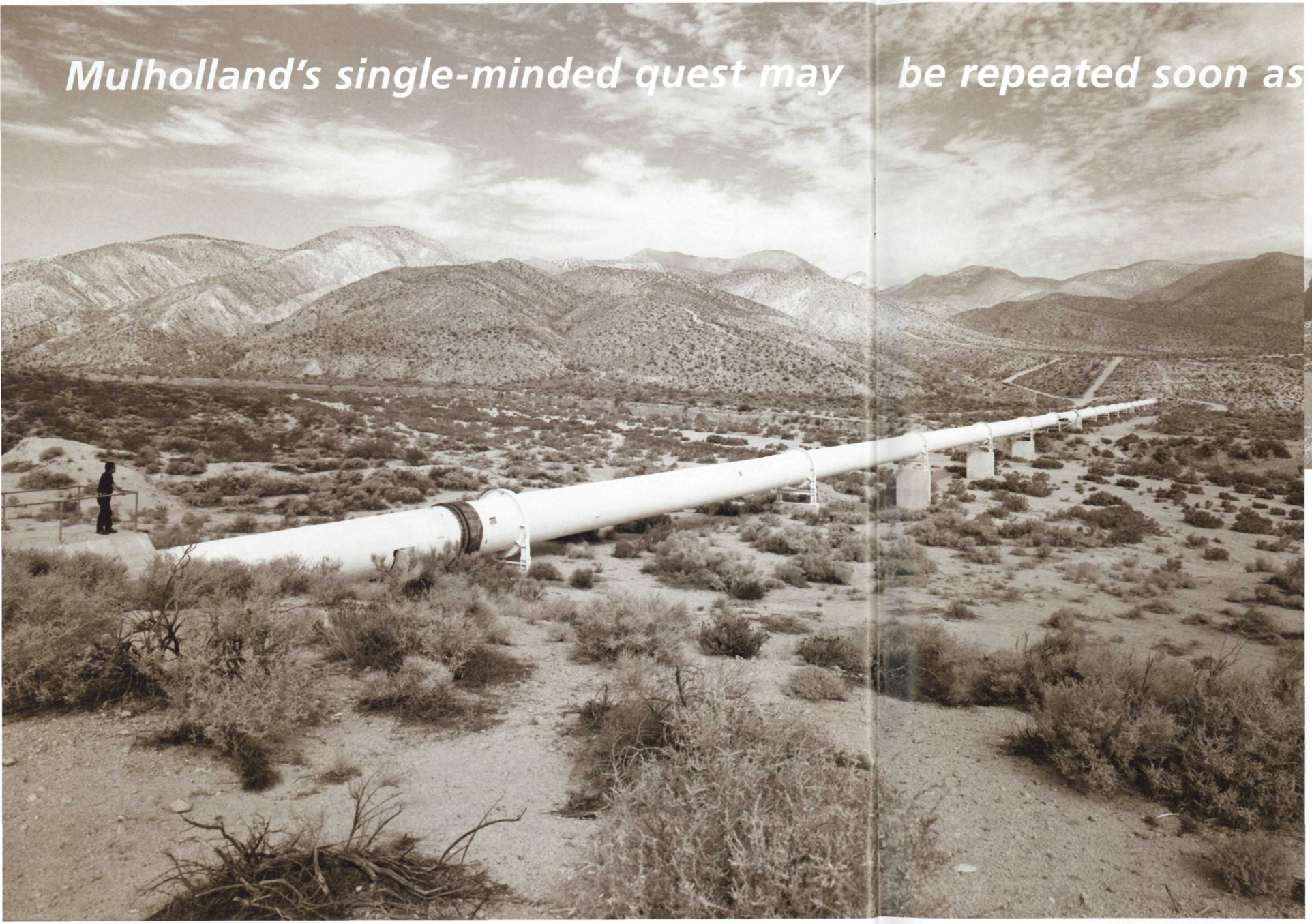
The plants and pumping stations were an ornate hybrid of Art Deco and Spanish Colonial Revival, with some classical references thrown in. "Little desert communities ran the pumps and guarded the water," says photographer Lowe, "amazing little oases" of green grass amidst the barren landscape. J. Philip Gruen, the project historian for HAER, describes a night spent at one of the pumping stations: "Everything was silent . . . You didn't have a sense that anything was going on, which gives you an idea of how efficiently the aqueduct was designed. There was just this low hum in the desert. Everything was working without any effort at all."

The construction of the aqueduct itself was much like that of its predecessor—a combination of concrete-lined channels, tunnels, and conduit. A veritable army of workers toiled for eight years, the support and logistics staggering in scale. As with the Los Angeles Aqueduct, they found ingenious ways around obstacles. "The scale of this project is apparent whether you're driving the length of it or flying," says Gruen. What is not visible to drivers is the water flowing freely through the desert. "Flying over the aqueduct in a helicopter, it's amazing to see these blue streaks running through the arid expanse," says Gruen. "There's extraordinary visual allure." And irony. When water finally flowed in 1941, it wasn't needed. The shortages never materialized, and consecutive rainy seasons filled reservoirs to overflowing. In the aqueduct's first five years, the Metropolitan Water District used only six percent of its capacity. The demand for power from the Hoover Dam didn't materialize, either. But the postwar boom changed things as subdivisions spread across southern California. By 1952, officials had to add more pumps and another hundred or so miles of pipes and tunnels. A third system, the California Aqueduct, was added in 1970, bringing water over 400 miles from the northern part of the state.

Far left: *Lines coming out of the Whitsett pumping plant on the Colorado River.* ***Near left:*** *The Los Angeles Aqueduct traverses the terrain, gravity-fed from start to finish; its builders came up with ingenious methods to overcome geography.* ***Right:*** *Oasis of green alongside the Los Angeles Aqueduct. Tiny communities of maintenance workers sprouted up along its course.*

There was a great deal of lingering bitterness from residents over the

the aqueduct, and news of an extension—to divert still more water to Los Angeles—provoked violence. Things came to a head when, in 1924, someone dynamited a spillway gate. Explosives were used repeatedly to sabotage the waterway.



Mulholland's single-minded quest may be repeated soon as climate change and development combine to create increasing demand for dwindling supply. U.S. Department of Energy scientists project that in winters of the future, mountain ranges like the Sierra Nevada will see more rain than snow. The flow will change from a steady, well-paced supply to an unpredictable pattern of storms and floods—followed by drought.

Above: *Part of a 1970 upgrade to the Los Angeles Aqueduct as it runs through Pine Tree Canyon.* ***Right:*** *Pipeline in the vicinity of Jawbone Canyon, in the Mojave Desert. Of the aqueduct's many siphons, Jawbone may be the most impressive. Running for a total of 7,096 feet, it carries water up canyon walls at a slope of 35 degrees.*

The Flow of the Future

At the turn of the 21st century, the Colorado Aqueduct was supplying water to approximately 18 million people, and the Los Angeles Aqueduct was still the main source of water for its namesake city. Mulholland's single-minded quest may be repeated soon as climate change and development combine to create increasing demand for dwindling supply. U.S. Department of Energy scientists project that in winters of the future, mountain ranges like the Sierra Nevada will see more rain than snow. The flow will change from a steady, well-paced supply to an unpredictable pattern of storms and floods—followed by drought. In the wet season, water managers will have to release water from overflowing reservoirs. In the dry months of spring and summer, there will not be enough.

In the meantime, water keeps flowing through the open desert and dark tunnels, down to California's coastal plain with its lush lawns and golf courses. The creation of William Mulholland and his engineers remains vital. It is also part of the lore of the modern West, a tale of backroom dealing, environmental plunder, and audacious can-doism. What gets lost is one of the drama's most compelling acts: the one that played out in the hard rock, gullies, and escarpments, a long-forgotten epic of ingenuity, sweat, and vision to which the West Coast megalopolis owes its life.

For more information, contact Richard O'Connor, Chief of the National Park Service Heritage Documentation Programs Division, at richard_o'connor@nps.gov, Jet Lowe of the National Park Service Historic Engineering Record at jet_lowe@nps.gov, or former HAER Chief Eric DeLony at pontist@ comcast.net.

ARTI FACT DESIGN FOR THE COMMON MAN

LEE BEY/THE URBAN OBSERVER

IT'S BEEN 10 YEARS SINCE NOTED ARCHITECT ALFRED CALDWELL died and if you Google his name, the project that comes up most often is his Lily Pool in Chicago's Lincoln Park. When he last saw it the place was a tangled mess of weeds, shrubs, and broken stones—a "dead world" he said. Today the recently designated national historic landmark has come back to life after a two-year restoration. CALDWELL, BEST KNOWN FOR HIS WORK AROUND CHICAGO, transformed the site from a dilapidated Victorian lily pond into a stunning Prairie-style "hidden garden," including a river, a limestone-edged lagoon, aquatic plants, and wildflowers. A WPA project, it was his baby—he even cashed in his life insurance to buy flowers for it. BUT ITS ZEN-LIKE BEAUTY STARTED TO FADE after only 10 years, when the park's zoo turned it into a sanctuary for exotic birds. The birds were not kind to the place, destroying plants and inducing erosion. Invasive trees took over—with the diminished sunlight killing more plant life—and a late '60s renovation paved over some of the site. SO THE CHICAGO PARK DISTRICT AND THE LINCOLN PARK CONSERVANCY had their work cut out for them with the restoration. One thing was clear: the public wanted to be involved. Focus groups of preservationists, birders, residents, and advocates for the Americans with Disabilities Act helped guide the comeback. CALDWELL, KNOWN FOR HIS UNCONVENTIONAL VIEWS, was often fired for one disagreement or another. But, as a protégé of landscape architect Jens Jensen—"father of the Chicago parks system"—he had broad support, and appeal. Mies van der Rohe became a lifelong friend after visiting the pool. "HE DID ALL OF HIS LANDSCAPING WITH A SOCIAL PURPOSE," says Lee Bey, executive director of the Chicago Central Area Committee. "He designed for the common man." Caldwell certainly succeeded with this site. "You open the doors and the city just falls away," Bey says. "You forget you are in Chicago."

The National Park Service preserves unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

Common Ground: Preserving Our Nation's Heritage spring 2008 / volume 13, number 1
Published by the National Park Service for the Heritage Community
Formerly Common Ground: Archeology and Ethnography in the Public Interest

Produced under a cooperative agreement with the National Conference of State Historic Preservation Officers. Statements of fact and views should not be interpreted as an opinion or an endorsement by the editors or the National Park Service. Mention of trade names or commercial products does not constitute endorsement by the U.S. Government.

Common Ground is published quarterly. To read online, subscribe, or update your subscription, visit www.cr.nps.gov/CommonGround. To contact the editorial staff, write to Editor, Common Ground, 1849 C Street NW (2286), Washington, DC 20240, or call (202) 354-2277, fax (202) 371-5102, or email NPS_CommonGround@nps.gov.

Also from the National Park Service—

CRM: THE JOURNAL OF HERITAGE STEWARDSHIP
Peer-reviewed biannual periodical with articles, research reports, book reviews, and more. To subscribe or read the journal online, go to www.cr.nps.gov/CRMJournal.

HERITAGE NEWS
Monthly e-newsletter with information on grants, laws, policies, and activities of interest to the heritage community. Go to www.cr.nps.gov/HeritageNews to subscribe or read online.

PUBLISHER
Sue Waldron

EDITOR AND DESIGNER
David Andrews

ASSOCIATE EDITOR
Joseph Flanagan

ASSISTANT EDITOR
Meghan Hogan

WEB PROGRAMMER
James Laray

ISSN 1087-9889

National Park Service
U.S. Department of the Interior
1849 C Street NW (2286)
Washington, DC 20240-0001

First Class
Postage and Fees Paid
USDOI-NPS Permit No. G-83

ENJOYING CHICAGO'S OLMSTED-DESIGNED WASHINGTON PARK, CIRCA 1900, FROM THE MASTER LIST OF DESIGN PROJECTS OF THE OLMSTED FIRM, 1857-1979. CHICAGO PARK DISTRICT SPECIAL COLLECTIONS