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Coming in
Cite 62

Things Fall Apart:
- New buildings' short life expectancy
- Buildings we're better off without
- When cladding goes bad

Cite

The Architecture and Design Review of Houston

A Publication of the Rice Design Alliance

61: Summer 2004

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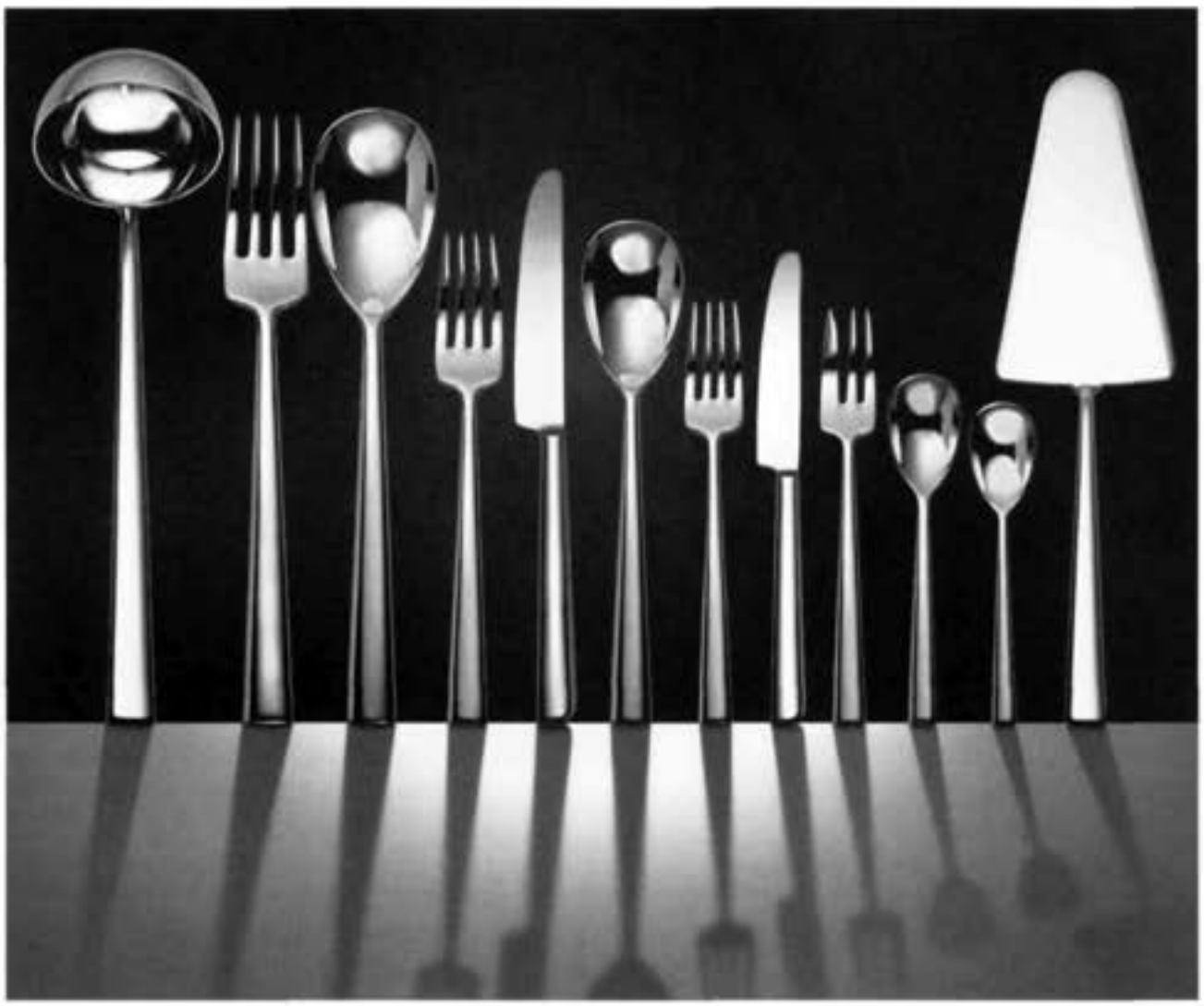

Aida cutlery set in 18/10 stainless steel Design: Alessandro Mendini, with Annalisa Margarini, 2004 Manufacturer: Alessi

RDA NEWS

Lynn Kelly

FreshForum attendees view a presentation by brooks • reid studio.

A Fresh Event for Houston's Architecture and Design Community

In May the RDA Partners gathered the cool, creative set at their first annual—and after rave reviews possibly biannual—FreshForum. The evening drew young architects and designers out to see the recent work of their peers. Darin Brooks and Robert Reid of brooks • reid studio and Camilo Parra of Parra Design Group gave short presentations to an attentive crowd while others mingled and mixed outside to the sounds of live bongo drums. On display were works by Natalye Appel+Associates Architects, BCA Bricker+Cannady Architects, Alejandro Brave, Ed Bullock, Shane Cook Designs, Enter Architecture, Intexure Architects, Kirksey, *m* Architects, Objects by Rame Hruska, and Pope Design. Hosted by Michael Morton and Tim Murray at *m* Architects' new office in the Warehouse District, the party went well beyond its scheduled end time. As one new Partner put it, "It was like singles night for the design world." Special thanks to the FreshForum sponsors: Barbara Amelio, McCoy Workplace Solutions, Natalye Appel+Associates Architects, and Joan Miller Interiors.

Karen Lantz

RDA visitors relax for a family photo in Behar and Marquardt's Miami *Living Room*.

RDA Members Travel South, then North

This spring RDA members traveled first to Miami and then to Boston in RDA's fifth season of city study tours, accompanied by architectural historian Stephen Fox and tour director Lynn Kelly.

In Miami, local architecture critic Beth Dunlop joined the group and gave a poolside introduction to the city at the Shore Club Hotel. A tour of Miami Modern in South Beach was led by Thorn Grafton, a descendant of John Collins, who began efforts to transform this barrier island into a tropical resort in 1907. The group toured a Duany Plater-Zyberk & Company planned community, AQUA, which incorporates New Urbanist planning principles. The group paused long enough in Miami's art district to be photographed on the couch in *Living Room* (see photo, left), the district's icon designed by Miami artists Roberto Behar and Rosario Marquardt.

Rice School of Architecture faculty member David Guthrie showed the group his award-winning design for the Miami advertising firm of Crispin, Porter +Bogusky. Rice architecture grad and Miami architect Michael Steffens gave a tour of downtown Miami, including Coconut Grove, Brickell Avenue, Little Havana, and avant-garde galleries in the Wynwood Arts District. The group was treated to visits at private homes, including two in the Coral Gables villages, led by architectural historian Ellen Uguccioni. The four-day tour of Miami ended with an outdoor brunch at the Miami-Biltmore Hotel and Country Club and a tour of the University of Miami campus.

In June RDA moved on to four days in Boston with special help from architectural historian and Wellesley graduate Kathryn O'Rourke. The trip began with a walking tour of the Boston Harbor Docks, the North End, Government Center, and the retail and financial districts. That evening Douglas Reed, founder of Reed Hildebrand Landscape Architecture, gave a lecture at the Fairmont Copley Plaza Hotel—home base for the weekend. The trip continued the following day with tours of the Boston Public Library, Trinity Church, Beacon Hill, the Harrison Gray Otis House, and the Isabella Stewart Gardner Museum. Visitors also were treated to lunch at the exclusive Somerset Club and a reception at the office of Machado & Silvetti Associates.

The group hit the road on Saturday for some special tours outside of Boston including Fairstead, Frederick Law Olmsted's house and studio; Wellesley College; Stonehurst by H. H. Richardson and Olmsted; the Ise and Walter Gropius House; and Six Moon Hill by The Architects Collaborative. That evening Polly Jo and Jamie Kemler, relatives of RDA president Larry Lander, hosted a reception at their Arts and Crafts-style home. For the final and perhaps most remarkable day, David Fixler, president of the New England chapter of DOCOMOMO/US and principal of Einhorn Yaffee Prescott, led the group through MIT's impressive campus, which includes buildings by Alvar Aalto, Eero Saarinen, Steven Holl, and Frank O. Gehry. The tour concluded with a quick spin through the Harvard campus to see works by H. H. Richardson; McKim, Mead & White; and Le Corbusier's only building in the United States, the Carpenter Center for the Visual Arts.

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The Rice Design Alliance, established in 1972, is a not-for-profit organization dedicated to the advancement of architecture, urban design, and the built environment in the Houston region through educational programs; the publication of *Cite*, a quarterly review of architecture and design; and active programs to initiate physical improvements. Membership in the RDA is open to the general public.

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CALENDAR

RDA CIVIC FORUM "EARTH, FIRE, AND WIND: PART II"
Wednesday, September 22, 7 p.m.
Brown Auditorium, The Museum of Fine Arts, Houston
713.348.4876 or www.rda.rice.edu

This season, RDA's civic forums will focus on the Houston region's self-assessment at the beginning of a new century. Part I, "Earth," addressed the successes and challenges in shaping the face of our residential life through various neighborhood organizations and activists. Part II, "Fire," will focus on the current economic engines and their impact on the city form, such as the growth of the Texas Medical Center (e.g., biotechnology), the future of energy companies' investment in the city, the NASA/space campus, and transportation infrastructure.

RDA FALL 2004 LECTURE SERIES: "BERLIN: ARCHITEKTUR, POLITIK, UND KULTUR"
Brown Auditorium, The Museum of Fine Arts, Houston
713.348.4876 or www.rda.rice.edu

At the end of the 20th century, the reunification of Berlin, capital of Germany from 1871 to 1945, ignited an outburst of architectural and urban development intended to recover the city's role as a global economic and cultural center. This series of lectures will examine Berlin's architectural evolution from its rise to regional significance to the present. It will identify important episodes in Berlin's consequential history to show how architecture and urbanism have altered the city in response to major historical movements, and how the resulting buildings and their architects changed the course of architectural history.

Wednesday, October 6, 7 p.m.
Classical Berlin: Dietrich Neumann, Brown University

Wednesday, October 13, 7 p.m.
Weimar Berlin: Janet Ward, University of Nevada Las Vegas

Wednesday, October 20, 7 p.m.
Berlin Divided: Eric Mumford, Washington University

Wednesday, October 27, 7 p.m.
Berlin United: Ulf Meyer, author of *Bauhaus Architecture* and *Berlin*

ART DECO RAIL TOUR
Saturday, October 9, 1 p.m.
713.348.4876 or www.rda.rice.edu

Celeste Williams, recipient of RDA's 2000 Initiatives for Houston grant, envisioned this self-guided tour after her extensive research into cataloguing Art Deco and Streamline Moderne buildings in Houston. There are many fine examples of these buildings along the Main Street METRORail line, the penultimate being the original Gulf Building, now the JP Morgan Chase Bank building, where Williams will give a brief talk during a reception at 5 p.m.

2004 RDA GALA
Saturday, November 13
713.348.4876 or www.rda.rice.edu

The 18th annual RDA Gala, supporting 2004–2005 RDA programs and publications, will honor E. D. Wulfe for his civic leadership to the city of Houston.

RDA CIVIC FORUM "EARTH, FIRE, AND WIND: PART III"
Wednesday, December 1, 7 p.m.
Brown Auditorium, The Museum of Fine Arts, Houston
713.348.4876 or www.rda.rice.edu

The final forum in the series, "Wind" will address the larger forces beginning to coalesce that will reconfigure our region, including economic, environmental, and social conditions.

RDA SPRING 2005 LECTURE SERIES: "BUILT BRAZIL"
January–February, 7 p.m.
Brown Auditorium, The Museum of Fine Arts, Houston
713.348.4876 or www.rda.rice.edu

The lecture series will feature eminent contemporary architects who will present their recent work. Invited architects are João Figueiras Lima, Ciro Pirondi, Marco Kogan, and the Campana Brothers, all of whom are the recipients of major commissions and practice either in Rio de Janeiro or São Paulo. An additional lecture will be presented by Farès el Dahdah to situate the work in relation to the history of modern architecture in Brazil.

UNIVERSITY OF HOUSTON GERALD D. HINES COLLEGE OF ARCHITECTURE GROUNDBREAKING
Thursday, September 9, 10 a.m.
Groundbreaking for the Burdette Keeland Design Exploration Center
North Lawn, Architecture Building
713.743.2400 or www.arch.uh.edu

UNIVERSITY OF HOUSTON GERALD D. HINES COLLEGE OF ARCHITECTURE LECTURE
Tuesday, November 9, 6 p.m.
Architecture Theater, Room 150 of the Architecture Building
713.743.2400 or www.arch.uh.edu

David Lake, of Lake/Flato Architects, San Antonio, Texas, will discuss the renovation of the Lyndall Finley Wortham Theater at the Cynthia Woods Mitchell Center for the Arts.

UNIVERSITY OF HOUSTON GERALD D. HINES COLLEGE OF ARCHITECTURE STUDENT WORK EXHIBITION
October 10–November 24
Architecture Building
713.743.2400 or www.arch.uh.edu

Work will be displayed in Gallery, Archives, and on the second and third floors of the College.

UNIVERSITY OF HOUSTON GERALD D. HINES COLLEGE OF ARCHITECTURE FALL 2004 LECTURE SERIES: "MOVING DESIGNS"
Architecture Theater, Room 150 of the Architecture Building
713.743.2400 or www.arch.uh.edu

This series will explore dwellings, furnishings, and transportation that are not directly attached to the terra firma but rely upon specific site conditions to function optimally.

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For information and event updates, go to www.arch.rice.edu.

BRAZOS PROJECTS EXHIBITION: "MID-CENTURY MODERN REVISITED: DESIGN 1943–1953"
September 24–November 28
Brazos Projects, 2425 Bissonnet
713.523.0701 or www.brazosprojects.org

The nearly 60 pieces of furniture and objects in this exhibition are from one of the most creative and influential ten years in the history of contemporary design.

LETTERS

Anna Mod

Anna Mod

Cullen Center Garage, 1800 block of Brazos (above and center); something new every day at the 1300 block of Milam at Polk (below).

Photos to the Editor

I enjoyed Bill Stern's article on parking garages in Houston (*Cite 60*). I wanted to share with your readers two of my favorites: The first is on Howe Street on the southern edge of downtown, best visible from I-45. The graceful curves of the up and down ramps are stunning.

The second is on Milam, and while it is not an architectural statement, I view it as a conceptual painting that changes every day, depending on the cars parked there.

Anna Mod
Historic preservation consultant
Houston

Anna Mod

The University of Texas M.D. Anderson and Health Science Center at Houston South Campus, home of the soon-to-disappear Urban Ecology Research Park. This natural environment will be replaced by the laboratory (and garage) environment looming in the background.

OverCite : Misidentified Micropreserves

Dr. Carl Hacker, professor at the University of Texas Health Science Center School of Public Health at Houston, is among the few in Houston who have come to realize the potential of the city's green spaces through his holistic urban ecological studies.

Perhaps the intriguing thing about our recent mix-up of images of two campus ecology preserves is that both sets of images depicted the jarring juxtaposition of unfettered nature with increasingly dense Houston institutional edifices. "The Greening of Houston" (*Cite 60*) showed photos of the Professors Tapley- and Harcombe-inspired Harris Gully Natural Area at Rice University, but misidentified them as being a part of the ecology research park at the University of Texas Health Science Center at Houston. The UT preserve, created by School of Public Health ecologist Carl Hacker, is pictured here. The recent announcement of a State of Texas Enterprise fund for a new UT research center most likely means the near-term end of this existing ecology park, although the phased growth of the new research campus may mean that smaller areas will be preserved.

Meanwhile, Dr. Hacker has found other venues for urban ecology through the cultivation of deep-soil roof gardens and shallow-soil grassy roofs on two of the Health Science Center buildings. He's also been consulting on a proposed green roof for a refurbished building that will become the Burdette Kelland, Jr. Design Exploration Center at the University of Houston. Satisfying not only the research ends noted last issue, these roof elements also allow for such benefits as longer roof-membrane life, cooler inhabited areas below, and a slower percolation of water off the roof. This latter impact, along with a general cooling of the roof surface, has been cited in a number of city studies as a way to mitigate our storm water and urban heat island problems.

Part of the School of Public Health roof is planted with a variety of Texas grasses to test their hardiness and fecundity in the roof climate. The new School of Nursing and Student Community Center has a pair of garden roofs and terraces as part of the top floor environment. These areas have a deeper planting bed for indigenous plants and a water system that uses condensate from the mechanical system. Dr. Hacker was instrumental in the selection of the materials and will monitor the conditions and effects of this newer strategy of green spaces in the sky.
— *Rives T. Taylor*

Midtowners left out in the heat: METRO has eliminated the free trolley service that connected the district's upscale residences to rail and downtown.

Where Have All the Trolleys Gone?

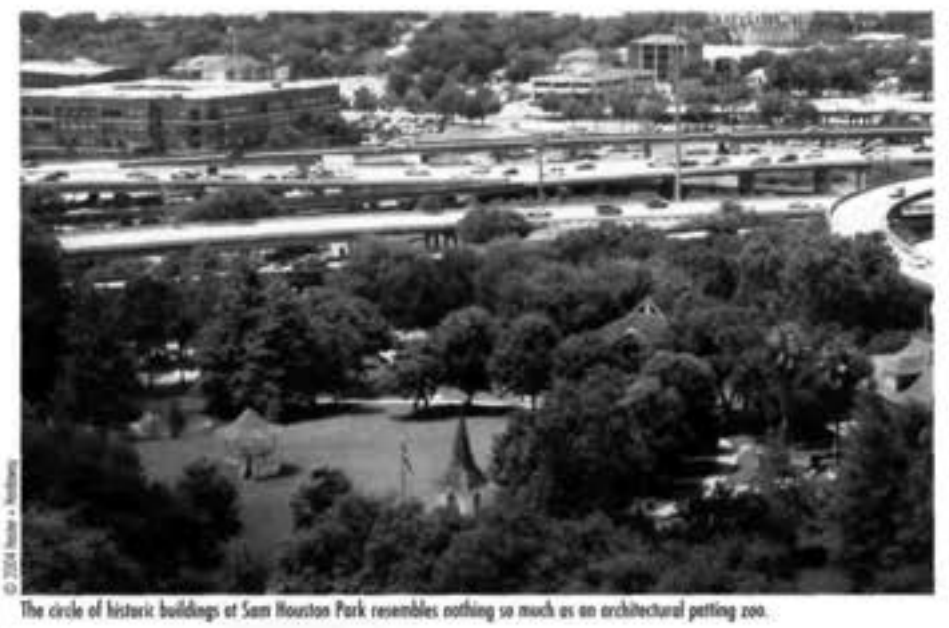
At the end of May, METRO increased its light rail service and added bus routes. But it also downsized another transit service. Four downtown trolley routes in operation since 1998 were reduced to three, and service to Midtown and Harrisburg was dropped.

"Trolley" service is a trend in U.S. transit; Fort Worth, San Antonio, and Austin also operate downtown circulators—rubber-tired buses dressed up with fiberglass trim to resemble turn-of-the-century streetcars. Some of the appeal may be nostalgia, but what really draws riders is frequent, low-cost shuttle service using vehicles that can't be mistaken for other bus service.

METRO's trolley system was inaugurated with federal clean-air funding. Initial plans to charge 50 cents a ride were dropped, and the service remains free. Ridership was impressive: 1.3 million people rode in 1999, a 162 percent increase from the paid "Texas Special" shuttle system that METRO operated previously. According to METRO spokesperson Ken Connaughton, though, ridership dropped as downtown construction increased trip times, resulting in ten- to 12-minute waits between trolleys rather than the scheduled six. That's simply too long, especially now that trolleys are intended to provide connections to light rail. To restore six-minute headways using the same number of vehicles, METRO decreased the number of routes and truncated the remaining ones. At the same time, the system was realigned to better connect to light rail stations.

Downtown residents and workers benefit from more frequent service and better connections. But Midtown residents are left out in the cold. When trolley service first came to Gray and Baldwin, Midtown was just beginning to redevelop. Trolley service helped lure residents to upscale apartments like Post Midtown Square, where they could catch a quick, free ride to office buildings along Smith and Louisiana and in Houston Center. Residents protested the loss of their routes, but none of the compromises offered—including a plan to get residents to sign up for yearly passes—worked. METRO's preliminary service-change plan included a different Midtown trolley connecting the apartment area to the McGowen station and continuing east to serve townhomes around La Branch and Crawford. That service would not have been as convenient for Midtown residents commuting downtown, though it would have provided an easy rail transfer to the Texas Medical Center. Connaughton says, however, that Houston-Galveston Area Council funding on which the plan was contingent has not come through. If it does, that service—as well as another Midtown trolley and a trolley service connecting the Rice Village to light rail and the TMC—may yet be implemented.

The discontinuation of the Midtown trolley service—which will surely cause some people to switch from bus to car—raises a bigger question. The free trolley service has been somewhat controversial; Post Oak and the Texas Medical Center must pay METRO to offer shuttle service there, and suburban politicians don't like the thought of Inner Loopers getting something for free that their constituents must pay for. But the free trolley service requires less than a third of the taxpayer subsidies that suburban park-and-rides do, despite their (up to) $3.50 fare. If METRO's mission is to reduce traffic congestion, then convincing suburbanites to move to Midtown is surely more effective than having them drive to a park-and-ride lot. Midtown proves that free shuttle bus service can be an effective way to promote high-density urban development; there are good reasons to expand, not reduce, such service. — *Christof Spieler*



The circle of historic buildings at Sam Houston Park resembles nothing so much as an architectural petting zoo.

Please Don't Feed the Buildings

In 1956 Gus Haycock, postwar director of the Houston Parks and Recreation Department, pulled out a red pencil and drew a circle in the middle of the Sam Houston Park plan. I wasn't there, but my father, Harvin C. Moore, was; as a founder of the Harris County Heritage Society two years earlier, and as chair of the AIA Historic Preservation committee, he was seeking direction to move two more old houses into the park. The Society had already restored the Kellum Noble House and rescued the Nichols Rice Cherry House; the San Felipe Cottage and Pillot House would be coming soon. So they were located around Haycock's circular sidewalk, and a three-quarter-scale reproduction of the original park bandstand soon arrived at the center, as a kind of punctuation.

It is not surprising that the Heritage Society's collection of important historic buildings has been referred to as an architectural petting zoo. They are arranged in a kind of abstract relationship to the site, like colored Easter eggs on a close-cropped lawn. The structures have been transformed into sculptural objects, without connection to the urban context of which they are a product.

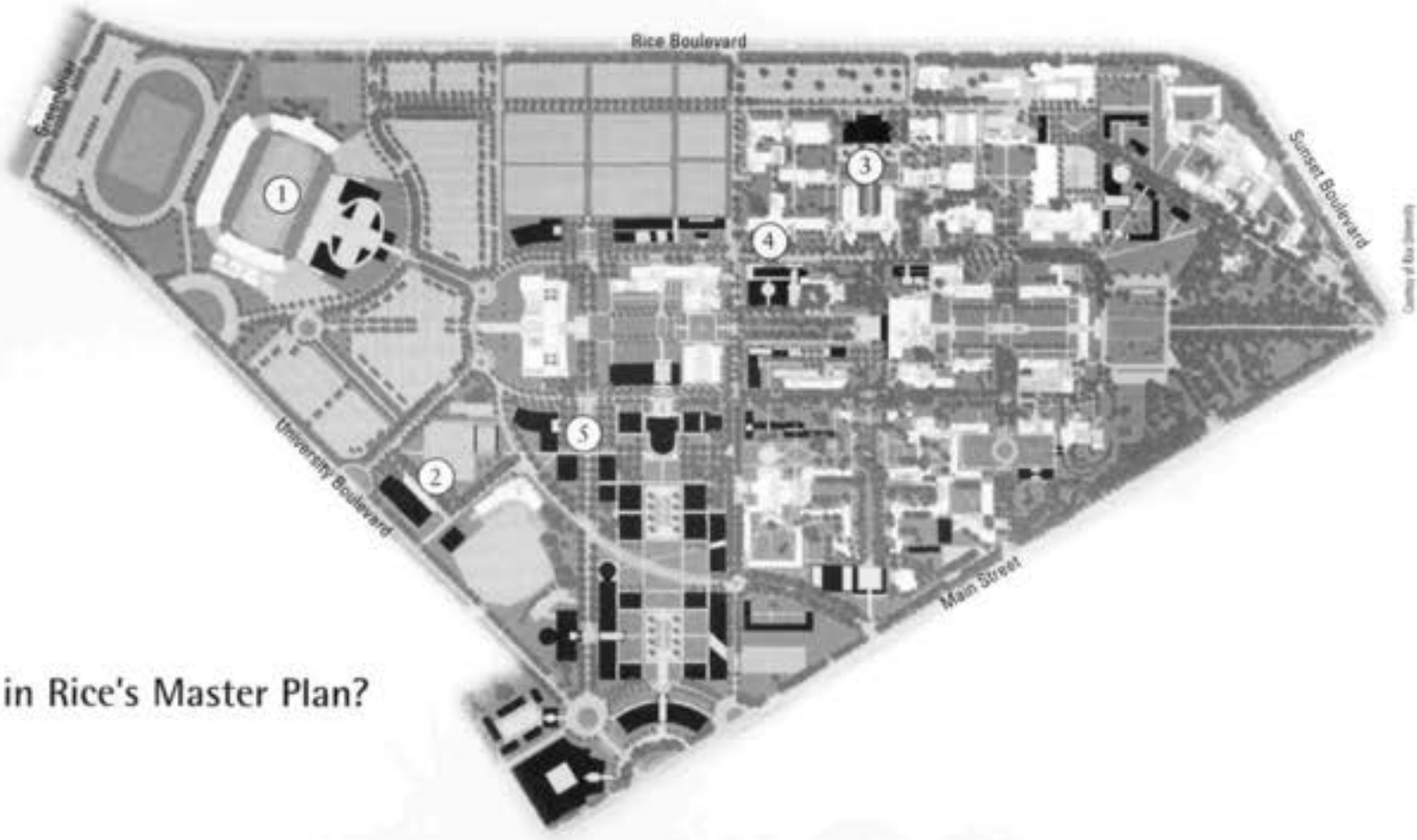
In all probability, nothing would be changing in Sam Houston Park if not for the recent propensity of Buffalo Bayou to overflow its banks and inundate Old Place and the Pillot House (which has happened twice in the last four years). In 2002 then-Heritage Society director Jane Ellen Cable approached me with the proposition that Geoff Brune's and my fifth-year architecture students at the University of Houston undertake a new master plan of the park as a semester project. The student work was strong, and all of it reflected not only a desire to re-create the historic relationship between the buildings and the street but also to reintroduce all of the cisterns, woodsheds, outhouses, clotheslines, and fences that every site had—in other words, to turn the park into a living history environment for a better interpretation of Houston's past.

Heritage Society Building Committee President Bill Hill then proceeded to work on a more practical plan with Gensler, incorporating much of the spirit of the student work. As of this writing, the only part of the plan that has been realized concerns the portion of Sam Houston Park south of the Lamar Street/Allen Parkway artery. All of the pre-Civil War structures are here, organized along the north-south sidewalk, terminating, across Dallas/Allen Parkway, at the Nichols Rice Cherry House, the only house on its original site. This arrangement will lend itself to the accumulation of outbuildings around Old Place, the Nichols Rice Cherry House, and the newly acquired Fourth Ward Cottage—perhaps the oldest house in Houston.

North of Lamar the obstacles to change proved too great. The existing naturalistic fountain with the little bronze foxes, the Bracewell Armillary Sphere, and a lot of semi-mature trees were all site elements that the Parks Department was reluctant to alter. That, and the rumor of a forgotten cemetery near Bagby at McKinney, ensured that nothing could be moved uphill to the eastern side of the park. Raising the Pillot became the default solution to escaping the floodplain.

Steve Lucchesi of Hall Barnum Lucchesi, Architects, devised the complicated plan of elevation. The house will be rolled aside, concrete foundations constructed, and dirt fill compacted; after that the house will be rolled onto its new substructure, a little more uphill and substantially higher than before. Once in its place, exterior restoration can begin. Early next year the Building Committee will be ready to begin interior restoration.

With the Pillot pretty much in the same place it has been for nearly 50 years, Gus Haycock's circle lives on, demonstrating the permanence that a simple plan can have. — *Barry Moore*



Courtesy of Rice University

What Gets Lost in Rice's Master Plan?

Few places in Houston seem more ordered, more serene, and more unchanging than the Rice University campus. That's no accident: Over 92 years the university has grown slowly, deliberately, and permanently. The broad outlines of the original general plan are still visible, the university's original buildings still serve their original functions, and only two academic buildings have been demolished in the life of the university.

But Rice is not immune to change. Universities have become more competitive, more business-like, and faster-paced. Rice's administration has tried hard to raise the school's national profile, attract more research grants, enlarge graduate programs, and improve weak or underfunded departments; to become, in outgoing president Malcolm Gillis's words, "a world-class university."

Gillis's 11-year tenure saw an unprecedented building boom: Rice built five new academic buildings and renovated three more, while adding two undergraduate residential colleges and new graduate housing. And more is in store.

In Gillis's last year, the university released a new master plan that proposes to double the number of facilities on the current campus. Whether Rice will take this path is an open question; Gillis's successor, Columbia law dean David Lebron, may have different priorities, and Rice has ignored master plans before. But the plan paints a clear picture of what might be lost as the university expands.

The most obvious casualty of expansion would be open space. The trees and fields along Main near University would be replaced by academic buildings and landscaped courtyards. The interstitial spaces of the campus—the lawn alongside the library, the line of oaks next to Herring Hall, the deck alongside Sid Richardson College—would continue to disappear.

The plan map would destroy some significant buildings. This isn't called out on the maps, but it's not hard to notice what isn't there. What follows is a tour of speculative future lost buildings.

1. Rice Stadium (Hermon Lloyd & W.B. and Milton McGinty). The stadium was begun after Rice won the 1950 Cotton Bowl and was completed in time for the fall season. It is still the largest football stadium in Houston, with 70,000 seats, and it is easily the most striking. The huge, simple upper stands, supported on remarkably slender pillars and curving slightly at the ends to follow the lower seating bowl, are a landmark for surrounding neighborhoods. But the stadium has long been too big for the post-NFL, post-desegregation, and post-glory-days Rice team to fill. The master plan shows one set of the upper stands demolished and replaced with a basketball arena grandly called the Convocation Center and the lower bowl filled in to fit a running track around the field. Rice Stadium's predecessor, now serving as the track and soccer stadium, could then be demolished.

2. Rice Media Center (Howard Barnstone and Eugene Aubry). The media center was built in 1970 to house the arts program Dominique de Menil brought to Rice from the University of St. Thomas. The two metal sheds anticipated a generation of tin houses around Houston. The inexpensive materials (and external guy wires) have survived and now house the School of Continuing Studies, an art film theater, and studios. The plan replaces both buildings with a satellite central plant and replaces the NROTC building across the street with a parking area.

3. Hamman Hall (George Pierce-Abel B. Pierce). Built in 1958, Hamman Hall has become an institutional orphan; the concert hall in the 1991 Shepherd School of Music building has supplanted it for musical events and official functions, outside events have dwindled since Rice began charging for parking, and the theater program that does use it has no departmental affiliation. But the building has aged well. It forms a group with the adjacent science buildings designed by the same firm, repeating some details but adding its own—in particular, tiled vaults over the front doors and tall colored glass windows at the flanking stairwells. Its prominent position at the end of the secondary campus axis was co-opted by the massive George R. Brown Hall in 1991. The plan proposes to replace Hamman with an academic building to be named later.

4. Ley Student Center (Cesar Pelli & Associates). The Ley center was the less remarkable of two Pelli buildings built on campus in the 1980s. Its detail and finish are much like those of Pelli's Herring Hall, but the plan was compromised by cost-cutting. It was built as an addition to the 1958 Rice Memorial Center, but the graft was awkward. The resulting complex is confusing, with two independent second floors and an oddly L-shaped events hall. The master plan proposes to try again, tearing down the addition and building a new student center in its place, still attached to the courtyard and chapel of the old building.

5. Autry Court (Jessen, Jessen, Millhouse & Greeven). The home of Rice basketball, built in 1950, is a throwback to the days when college basketball was not dominated by shoe contracts and TV schedules. The building is not only the university's basketball venue but also the home of physical education classes and recreation facilities. All of these spaces are now inadequate; the building might be replaced as soon as a big donor writes a check to the athletic department.

It is too early to mourn the loss of these buildings but not too early to consider what their disappearance might mean. Buildings are meaningful to an institution that trusts in tradition. Rice seems to understand that—the 1925 chemistry building was recently renovated at considerable expense to house the bioengineering department. But the university does not appear to give 1950s and 1960s buildings the same respect. In the past, Rice buildings survived as much out of frugality as nostalgia; historically, the university never took on debt, and created endowments to fund the maintenance of each new building. Those policies are gone; Rice allowed itself to borrow to fund new buildings even as charitable giving lagged during the late '90s recession. One can only hope Rice's tradition of preservation will not be similarly abandoned. — *Christof Spieler*

METRO WHAT'S NEXT?

Planned extensions will connect neighborhoods to rail.

TEXT, PHOTOGRAPHS, AND MAPS BY CHRISTOF SPIELER

In November, Houston voters approved 72 more miles of light rail. But don't start rethinking your commute just yet: Ground will not be broken for the new lines until 2006, and passengers won't be able to board until 2008.

The next two years may seem uneventful on the streets. But many of the most critical decisions—decisions that will affect riders, residents, and businesses for decades—will be made in this period. Many options for the new rail lines still exist; nothing is final yet. This summer, the agency's new board, led by chairman David Wolff, has been publicly raising doubts about the plan and its concentration on street-running lines in Inner Loop neighborhoods. Time will tell if this is a change of direction or merely a lead-in to more refinements. Meanwhile, the studies move forward.

The days when federally funded infrastructure projects were hatched in back rooms are long gone. Federal law now mandates a multipart process of studies, reports, public hearings, and decisions with long appeals before the bulldozers ever arrive.

THE PLANNING PROCESS

To satisfy federal cost-effectiveness and environmental standards, the rail planning process will be broken into three major steps.

The first step, Alternatives Analysis, considers different technologies and alignments, which are ultimately decided on by the METRO board. Next, the chosen alignment is refined and an Environmental Impact Statement is prepared in the Preliminary Engineering phase. Blueprints aren't prepared until the last step, Final Design.

A street alignment and station locations are selected at the completion of the first step. But those are subject to change in the second step, when details such as land acquisition and the locations of traffic signals, left-turn lanes, and bus stops are considered. Preliminary Engineering also provides opportunities for public and private scrutiny of those decisions.

As a result of this very scrutiny, the Main Street Line went through several significant changes after the completion of Alternatives Analysis. The transition from Main Street to Fannin and San Jacinto, for example, was moved south from between McGowen and Holman

But will the neighbors want it?

to Wheeler, in response to the Main Street Coalition's desire to reinforce the importance of Main. Also, two stations originally planned for the north end of downtown—at Franklin/Congress and Texas/Capitol—were combined into one, at Preston, to save money. And a second track was added on the bridge over Buffalo Bayou to prevent a future bottleneck for trains.

LEARNING FROM MAIN STREET

Five new lines are due to be completed by 2012; all have been authorized for bond funding by voters, and work on them is moving into high gear. The North/Hardy and Southeast lines are in the Alternatives Analysis phase; the Harrisburg, Westpark, and Downtown Connector lines have not yet traveled that far.

One thing is already clear: The METRORail extensions will be very different from the Main Street Line. No other segment offers the big-ticket attractions of Main Street: Stops in Downtown, the Museum District, and Reliant Park have led to unexpectedly strong night and weekend ridership. It's hard to envision families driving in from the suburbs to ride light rail to, say, Northline Mall.

The major activity centers that will be added to the system—the University of Houston main campus, Texas Southern University, and Greenway Plaza—will attract students and office workers but not so many casual riders. The main idea behind the Harrisburg, North/Hardy, and Southeast extensions is to connect neighborhoods to rail. Because they will pass through areas less dense than Main Street, their stations will be placed farther apart. The Main Street Line averages a station every half-mile; the extensions will have stations more than a mile apart. As a result, trips will be faster. A trip from UH-Downtown to Fannin South takes thirty minutes at an average speed (including stops) of 15 miles per hour; the trip from downtown to Northline Mall would take only sixteen minutes at an average of 20 miles per hour, and future express service would cut that to fourteen minutes.

The extensions also will bring different challenges. Introducing the Main Street Line without radically altering existing automobile traffic patterns was relatively easy. Outside the Medical Center, that corridor has good traffic capacity. METRO was able to demote Main from an arterial to a local street because Fannin, San Jacinto, Milam, and Travis offered alternate routes. Scott Street, Harrisburg, and Fulton are not easily replaceable; the traffic capacity of those streets must remain high even as rail is added. That will take compromises.

And don't expect the landscaped median, which takes up a lane of Main, to be repeated everywhere. Nor will there be room to add wider sidewalks and street trees. The streets being considered for the extensions are often both narrow and busy, and with the high incidence of wrecks on Main, METRO's designers are trying to create separate left-turn lanes at all signalized intersections. The result will be a much safer, but less attractive, route.

RAISING QUESTIONS

The thought of traffic hassles inevitably leads to talk of alternative technologies. Pro-monorail websites gleefully point out that monorail would preclude such problems. Mayor Bill White (and many others) have argued that portions of the new lines should be elevated. But grade separation isn't the panacea it's held out to be. For one thing, it's more expensive—the 14-mile monorail Seattle is preparing to build will cost $90 million a mile for a partially single-track route; Houston's double-track Main Street Line cost $40 million. Elevating light rail could be even more expensive. A higher cost per mile simply means less rail. METRO barely won approval for the expansion plan with no new taxes; it's doubtful there would be public support to double the cost.

It's also doubtful that elevated rail of any sort would be acceptable to neighborhoods along the lines. A well-designed elevated trackway is obtrusive enough. Stations above city streets—essentially elevated boxes 300 feet long and 40 feet wide, with double escalators and elevators—would be worse. Opposition to elevated structures from neighborhoods along Richmond and Westpark played a big role in killing the 1991 monorail plan promoted by Mayor Kathy Whitmire. METRO does not want to risk a repeat.

So far, neighborhood fears seem to be outweighed by anticipation. The Main Street Line has made rail transit in Houston tangible. Now that people can see, hear, and ride light rail on Main Street, it's much easier to imagine it elsewhere. ■

Downtown Connector

BAGBY TO DOWLING

ALTERNATIVES ANALYSIS: 2004
PRELIMINARY ENGINEERING: 2005-2006
FINAL DESIGN: 2006-2007
CONSTRUCTION: 2007-2010

LOCATIONS 1, 2, 3, 4 ON MAP, OPPOSITE PAGE

The Downtown Connector is how Harrisburg and Southeast trains will enter downtown. The line must do three things: connect with the Harrisburg and Southeast lines on its east end, provide a convenient transfer to the Main Street Line, and connect to the future Inner Katy Line on the west end.

This short downtown segment likely will be the most controversial of this round of extensions. Downtown interests, with memories of street construction fresh in their minds, don't want it at all; they suggested the Harrisburg, Southeast, and Inner Katy Lines connect north or south of downtown, taking all trains though downtown on Main Street. But that would put limits on service: The Main Street Line is designed to handle a two-car train every three minutes in each direction; more would excessively disrupt traffic on cross streets. METRO also felt that it was important to put stations near the George R. Brown Convention Center and near Smith and Louisiana. As a concession, though, METRO offered assurances that a subway alignment—which would not eliminate traffic lanes or require as much street work—would be studied.

METRO is now studying two options: a surface line on Capitol and a subway alignment on Walker. While conventional wisdom holds that a subway can't be built in Houston, it's merely expensive. After all, Amsterdam—a much more waterlogged city—has a downtown subway. Subway stations are considerably more complicated than surface stations, with elevators, escalators, and mezzanines, but because the entrances—connected to the station with underground passages—can be a block or two from the platforms, they can serve a larger area. A subway also offers other advantages: East-west trains would not interfere with north-south trains, and the small blocks downtown wouldn't limit train length. A downtown street alignment would forever limit METRO to two-car trains; with a subway, the entire line could handle three-car trains.

1) The Downtown Connector begins at Bagby, where connections would be left for a future extension out to the Heights and the Northwest Transit Center. METRO's preliminary route for this extension is on Washington Avenue. The west side is an obstacle course, with superblocks and streets turning into freeway ramps. The Capitol surface alignment could continue by following Capitol past the Hobby Center, passing under I-45, then turning right on Houston Avenue past the courts to reach Washington. The subway alignment, some 60 feet under downtown streets, would tunnel under the bayou and surface in Houston Avenue. The surface alignment includes a station at Smith, among the highrises and only a block from the Theater District. The subway alignment relies on pedestrian tunnel links from the Main Street station to avoid the cost of another station.

2) An easy transfer to the Main Street Line is critical for the success of the light rail system as a whole. Unfortunately, the design of the line makes this difficult. Capitol falls in the longest gap between downtown stations: East- and westbound platforms on Capitol would be two blocks from the nearest northbound platform and two blocks from the nearest southbound platform. That's a long walk for, say, someone traveling from the Medical Center to Hobby Airport with luggage in August. An earlier version of the Downtown Connector actually proposed closing a block of Main Street—from Capitol to Rusk—to traffic in order to add a station to the Main Street Line, but that's no longer on the table. A subway station on Walker would be better in this regard, with walks of one or two blocks, some of which could be underground, and it would be only a block from the downtown "superstop" at Reliant Energy Plaza. The subway station would have entrances directly from the sidewalk, but if owners of adjacent buildings were willing (which they presumably would be), it could connect directly to the downtown tunnel system as well.

3) There are three major attractions on the west side of downtown: Minute Maid Park, the George R. Brown Convention Center, and Toyota Center. Since these extend six blocks north-south, it's impossible to serve them all well with an east-west line. The massive superblocks these facilities occupy set up another obstacle course: in the 12 blocks between Congress and Bell, only four east-west streets are continuous. Of those, Capitol is probably best: next to the convention center and only two block from the ballpark, with a good connection to the east. There's more flexibility in subway alignments since the tunnels could pass right under the convention center or, more likely, cut diagonally under a block to miss it. The Walker subway alignment is farther from the ballpark than Capitol but closer to the skyscrapers of Houston Center, where a subway station could be connected directly to the skywalk system. A direct connection to the convention center's indoor concourse, with its link to the Hilton Americas, would also be possible.

Harrisburg

DOWLING TO MAGNOLIA TRANSIT CENTER

ALTERNATIVES ANALYSIS: 2004-2005
PRELIMINARY ENGINEERING: 2006-2007
FINAL DESIGN: 2007-2008
CONSTRUCTION: 2008-2010

LOCATIONS 5, 6, 7 ON MAP, OPPOSITE PAGE

The Harrisburg Line was included in the METRO Solutions plan as a sort of affirmative action. This heavily Hispanic neighborhood didn't figure in the three corridor studies that METRO conducted before assembling the plan; it was the only line in the draft plan that has not been the subject of a public study. But METRO needed minority votes. Politics aside, this line makes sense. It serves a dense, low-income, transit-dependent neighborhood and intersects major cross-town bus lines.

The Harrisburg Line's schedule must move fast; unlike the Southeast Line that's due to open at the same time, it has not been the subject of an alternatives analysis. That study will start later this year.

Southeast/Hobby

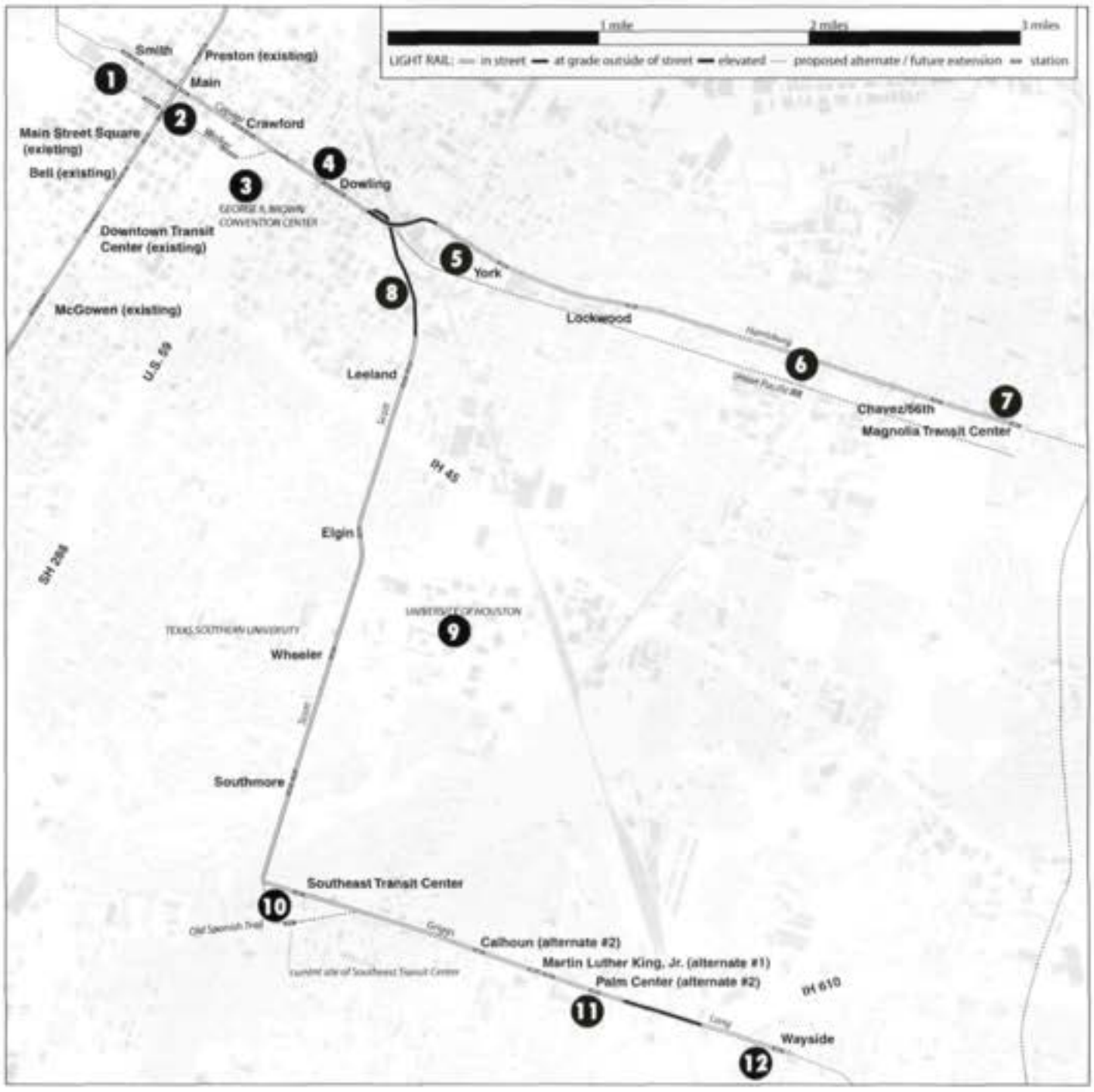
DOWLING TO GRIGGS/LOOP 610

ALTERNATIVES ANALYSIS: 2002-2004
PRELIMINARY ENGINEERING: 2005-2006
FINAL DESIGN: 2006-2007
CONSTRUCTION: 2007-2010

LOCATIONS 8, 9, 10, 11, 12 ON MAP, OPPOSITE PAGE

A southeast line of some sort has shown up repeatedly in METRO's plans. The most visible draws are the University of Houston and Texas Southern University. But the areas around the universities may provide more riders. The Southeast Corridor covers only 5 percent of METRO's service area but accounts for 25 percent of bus ridership. These are primarily black and for the most part low-income neighborhoods. The Southeast Line will place light rail stations in the midst of these neighborhoods and link to busy bus lines.

The neighborhood is deeply ambivalent about rail. Community leaders, having seen what's happened to the Fourth Ward, are afraid that development will drive out current residents. Some are trying to stop developers from buying property. Others, like Scott Street Coalition president John Guess III, are trying to channel it. He's looking for orderly growth that will "turn the tide of pressure on the neighborhood to disappear." Rail, he says, is a challenge—but the high-density development that follows could also bring enough additional residents to create demand for much-needed services such as drugstores and groceries.



4) The Harrisburg and Southeast lines meet a mile west of downtown in a deserted industrial neighborhood. METRO is considering this area for a facility to store and maintain the fleet for the two lines. That makes operational sense—trains from either line wouldn't have far to go after ending their runs downtown—but it may be shortsighted. Already there is some residential development on the western edge of this area; the vacant and underused buildings and empty lots here could become great high-density housing, especially with a direct light rail connection to downtown and (eventually) Post Oak.

5) After splitting, the Harrisburg Line will need to cross over a major railroad line. There are two options for the Harrisburg Line's alignment: the street itself or the Union Pacific railroad line paralleling it one block away. Harrisburg is relatively narrow—only four lanes near downtown—and is dotted with many businesses. Putting light rail in the railroad right-of-way would minimize traffic congestion—and let the trains run faster—without making the stations any less convenient. On the other hand, the railroad is relatively busy—it's the UP's main link to Galveston—and railroad would have to be accommodated either by fitting both freight trains and light rail in the same corridor or by upgrading other routes (through other neighborhoods) to handle the freight traffic.

6) Near 65th Street, Harrisburg crosses a busy freight rail line. The light rail route will need an overpass. This may be a chance to build a road overpass and provide relief for local residents who are frequently stuck behind crossing gates.

7) The Harrisburg Line will end at the Magnolia Transit Center, where eight bus routes converge. The METRO Solutions plan shows this line being extended south from here, past Gulfgate Mall, to rejoin the Southeast Line on the way to Hobby Airport.

8) After parting ways with the Harrisburg Line, the Southeast alignment follows an old railroad right-of-way to meet Scott Street. North of I-45, Scott is wide. The grassy median is generous enough to fit two light rail tracks without changing the traffic lanes. South of I-45, though, Scott widens from four to six lanes and the median narrows. The Alternatives Analysis calls for removing two traffic lanes to fit rail. This may not go over well. Scott carries 17,000 cars a day, with few alternate routes. Based on resident concerns about traffic, METRO is now looking at keeping two traffic lanes in each direction with left-turn lanes at intersections. That would require property acquisition continuously from I-45 to Griggs. Some of that might be university land, but some would be homes and small businesses.

9) The University of Houston is eager to get rail, which will give commuter students an alternative to driving and connect the university to downtown and its sister campus. But Scott skirts a scruffy and disjointed edge of the university. A student getting off at Holman or Wheeler would have to walk over half a mile—well over the quarter-mile considered an easy walk by transit planners—to reach the center of campus. However, the UH shuttle bus system would be rerouted to meet light rail. METRO was already planning a new UH transit center; it can now be built at a rail station to provide easy connections between bus, light rail, and the shuttles. It's also likely that the gap between light rail and the campus will close over time. UH is currently studying a new parking garage with 50,000 square feet of ground-floor retail; the favored site is at Scott and Holman. Designed properly, it could be a gateway to the university. Texas Southern University, as far from Scott as UH is in the opposite direction, does not yet have a shuttle system, but is planning to start one.

10) The Southeast Transit Center—already served by eight bus routes with a 325-space park-and-ride lot—will become even more important with the coming of rail. The question is whether rail will come to the transit center or the transit center will come to rail. The current site is on the south side of Old Spanish Trail, just east of Scott. Getting trains there would require the alignment to continue on Scott past Griggs, cross Old Spanish Trail, follow it for two blocks, then rejoin Griggs. The other option is to run the tracks from Scott directly onto Griggs and build a replacement transit center adjacent to them, north of Old Spanish Trail. Ultimately, the choice will come down to cost and neighborhood input.

11) Griggs provides an easy path for rail, with a wide median and low-density commercial land use. METRO is considering a single station at Martin Luther King, Jr. Drive or two stations, one at Calhoun and one at Palm Center, both of which could have park-and-ride lots. The only tricky area along the way will be where Griggs, Long, Mykawa, and two major railroads meet. Light rail trains could be carried over the mess with an extended overpass. Other agencies have plans here, too: The City of Houston has long wanted to build an overpass, and the Harris County Toll Road Authority would like to bring a toll road through. If the governmental stars align, all those plans could dovetail nicely. Otherwise, METRO can only hope it gets there first.

12) The ballot proposition specified that this phase of the Southeast Line would end at Griggs and 610; the AA has extended it a bit farther to the prosaically named East of Wayside Station. Though METRO is considering a park-and-ride lot here, the end of the line is arbitrary, a pause on the way to Hobby Airport by 2025.

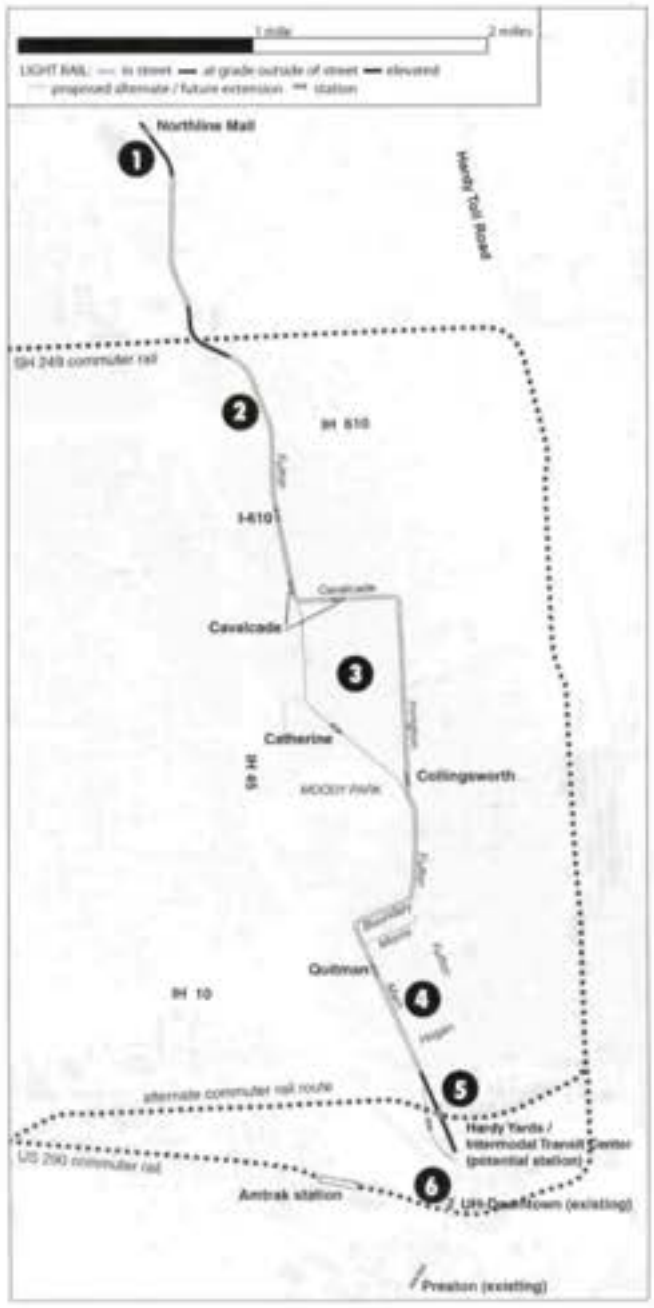
North–Hardy

UH-DOWNTOWN TO NORTHLINE MALL

ALTERNATIVES ANALYSIS: 2002-2004
PRELIMINARY ENGINEERING: 2005-2006
FINAL DESIGN: 2006-2007
CONSTRUCTION: 2006-2008

In 2003, METRO Executive Vice President John Sedlak said that if METRO had had more money, he would have wanted the Main Street Line to extend farther north. After four years' delay, it will. The extension is simply logical: It requires no street construction downtown; makes better use of Red Line trains, which now leave UH-Downtown nearly empty; and lets METRO prune bus lines to the north as it's doing to the south.

The North-Hardy Line will have a split personality. It will start off as a neighborhood transit service, serving largely residential neighborhoods and linking to local buses. As the later phases of METRO Solutions are implemented, however, it will also be a 22-mile line to Greenspoint and Intercontinental Airport. The Alternatives Analysis sets out a dual service to fit that dual purpose. Every six minutes, a local train will leave downtown, stopping eight times en route to Greenspoint, getting there in 32 minutes. An express train will leave a few minutes later, stopping only twice and passing the local on the way. Every other express train will continue on to the airport, four stops and 38 minutes from downtown. That's an average speed of 35 miles per hour; it will take only four minutes longer to get from downtown to Intercontinental on light rail as it will to get to Hobby, nine miles closer.



1) Northline Mall already has a small transit center in a corner of the parking lot. With the coming of rail, a new, bigger transit center will be built—most likely closer to the mall. That can benefit both METRO and the mall; some passengers may ride rail to go shopping, while others may find it convenient to ride rail to work if they can take care of shopping on the way home. But it's by no means a done deal; the mall management may worry that rail will make the parking lot harder for cars to navigate and that rail commuters from adjacent I-45 may take parking spaces from shoppers. METRO and mall management will be talking as preliminary engineering continues to figure out how to make the arrangement work for both parties. The mall station will include a third track for express trains; the tracks will be extended a few hundred feet past the station to connect to the future extension to Intercontinental Airport, which will continue elevated on Airline Drive. Before that extension is completed, Northline will be a major bus-transfer point. That role will diminish when rail pushes farther north, but Northline will remain a key station; in fact, the current plan proposes that some trains operate only this far, giving Northline more frequent service than points north.

2) The line heads south on Fulton, crosses under 610 at grade, then rises onto a short overpass to cross a BNSF freight railroad line. Harris County is considering this line for commuter rail; that study discusses a possible light rail-commuter rail transfer station here. The North/Hardy Alternatives Analysis, however, makes no mention of this possibility and proposes no provision for a station. METRO is considering extending the overpass into a segment of elevated line over Fulton as far as Northline Mall to reduce traffic at the Fulton-Crosstimbers intersection, which will suffer unacceptable congestion within ten years even without trains crossing.

3) One alignment being considered would continue on North Main across I-45 to Airline. However, the transit demand is on the east side of Main; analysis indicated that an alignment along Fulton and Irvington would draw 40 percent more riders. The biggest problem with this alignment is getting from Main to Fulton. METRO considered following White Oak Bayou, but that would have required taking parkland. An alignment along Boundary Street is now the leading candidate, though it would require taking all the houses on one side of the street to provide enough room for light rail and cars. Local officials have proposed crossing over Fulton farther south, but that would require even more property. The current alignment then follows Fulton, veers off onto Irvington, then turns sharply left onto Cavalcade to return to Fulton. The direct route along Fulton—eliminated early on because it would require extensive property aquisition—is now back on the table thanks to neighborhood requests; it would provide better access to Moody Park, serve homes near Fulton, and avoid impacts to businesses and street trees on Irvington.

4) Light rail will bring North Main closer to a long-held ambition of being the equal of the more glamorous South Main. That was part of the vision behind connecting Main across the bayous in 1912; 78 years later, the Main Street Master Plan included this neighborhood, which it dubs the Northside Village. The vision, it's not surprising, includes mixed-use development, streetscape improvements, and light rail.

5) A few blocks north of UH, Main passes under an active rail line. There's a lot of potential around here, and a tug-of-war is developing. To the east are the abandoned Hardy railyards, 45 acres of vacant land in the heart of Houston. Hardy Street Partners has bought the property and is seeking developers for its redevelopment. Their master plan calls for residential space with some office and supporting retail. B. Kelley Parker III of Cushman/Wakefield, who is marketing the property, notes that light rail is "absolutely relevant" to the project: "It isn't the driver, but it is a potential benefit."

But the new residents will need a station. The existing UH-Downtown station is half a mile from the yards, and the alignment doesn't place a station any closer. It does, however, specify an elevated line over the railroad with provision for a potential future station. An elevated station isn't cheap, but the Partners are talking to METRO about including it. Parker says they might even be willing to pay for it.

Parker joins downtown groups in proposing an intermodal transit center linking light rail, commuter rail, and Amtrak. The Partners own some of the land on which such a station would be built. In the future, commuter train riders might transfer to light rail simply by taking an escalator. But this potential could also be lost: The Partners won't keep the land vacant forever.

Meanwhile, the owners of the old Missouri-Kansas-Texas yards to the west are concerned about the light rail ramp along Main blocking access to their property. It's a testament to their long-sightedness—and a measure of how far Houston has come with regard to rail—that their solution is not to try to kill the project but to offer land and funding for METRO to bring the rail a few hundred feet west, putting a station on their property, which they would then develop as high-density residential and retail along the line of Dallas's Mockingbird Station. That would put the station farther from the Hardy Yards but next to a UH student parking lot and still close enough to the rail line for a transit center.

6) The UH-Downtown station is an odd rail terminal, perched atop a bridge surrounded by bayous. The tracks end abruptly at a pair of concrete bumpers. It's already easy to visualize where they will continue, following the western side of North Main under I-10.

Westpark

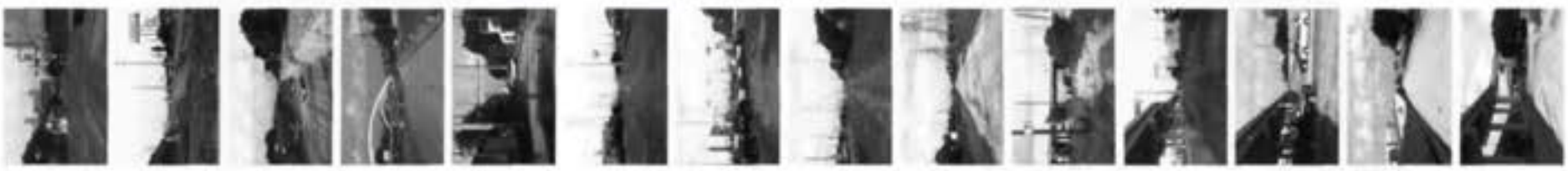
WHEELER TO HILLCROFT TRANSIT CENTER

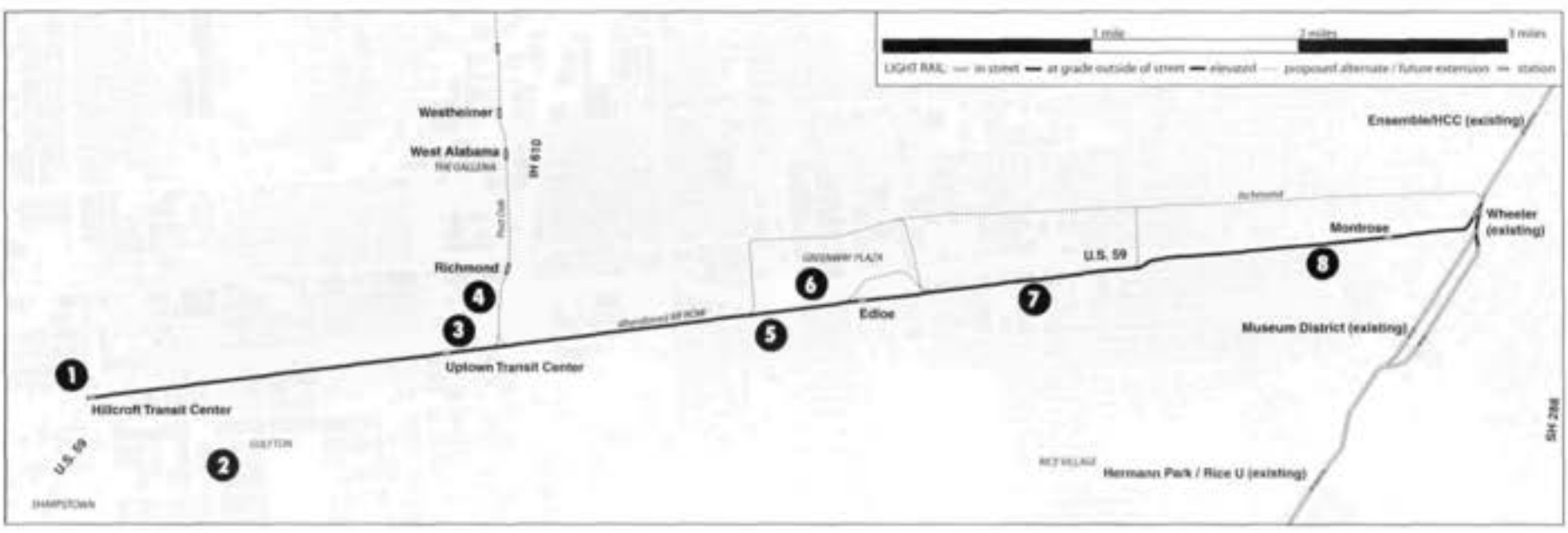
ALTERNATIVES ANALYSIS: 2004-2005
PRELIMINARY ENGINEERING: 2006-2007
FINAL DESIGN: 2007-2008
CONSTRUCTION: 2009-2012

The Westpark corridor was a last-minute addition to the METRO Solutions plan, appearing between the draft and final plan. But METRO knows it well: Two of Houston's near misses with rail (the 1983 heavy rail line and the 1991 monorail) would have taken it. The appeal is obvious. But so are the problems.

The line reappeared in METRO's plan for one reason: the Greenway Plaza office complex. But the corridor could also serve as Houston's first high-speed suburb-downtown rail line. The conflict between these two roles—distributor and feeder—is exemplified in the two major right-of-way options. Richmond Avenue promises miles of congestion and speed limits of 35 miles per hour, but it is where the people are. Parallel and less than half a mile away, an abandoned rail line offers the possibility of faster trains separated from cars at about the same cost, but it misses all of the major employment centers.

METRO's preliminary plans show the line in the rail right-of-way along Westpark. This Westpark Line would be significantly different from the rest of the METRORail system. Trains would run at 60 miles per hour, offering a quick connector from the west side (a compelling alternative to U.S. 59 traffic). But a Richmond alignment will have to be considered as an option.





1) The Westpark Line will begin at the Hillcroft Transit Center, an existing bus transfer point and park-and-ride linked to the 59 HOV lane. Here, HOV bus service could be linked up to allow drivers from 59 and the Westpark Toll Road to catch rail. Eventually, METRO may heed Gulf Coast Institute director David Crossley and extend light rail farther west, providing rail service to Westchase.

2) One of the densest residential areas in Harris County (over 5,000 people per square mile in giant apartment complexes) is Gulfton, just south of Westpark around Chimney Rock and Fountain View. METRO doesn't show a station here, but the Alternatives Analysis might change that. In any case, a circulator bus could connect to nearby stations.

3) METRO's plans call for a transit center, most likely with a parking garage, where the Westpark and Uptown/West Loop lines meet. This center could form an important hub where riders can transfer from commuter buses on the Westpark Toll Road and Southwest Freeway corridors and where people headed to work, shops, and restaurants might park to avoid Galleria-area traffic.

4) In a brand-new trench under 59, a wide shoulder has been reserved so the future Uptown/West Loop light rail line can pass under the freeway and emerge in the center of Post Oak Boulevard. This unique accommodation—a first for Houston—came about with money from the Post Oak TIRZ. Obviously, the Post Oak business community can't wait for light rail.

The Uptown light rail line—which would extend I-10 to 59, following Post Oak and the West Loop—would serve two purposes. It would bring in commuters from other sections of the light-rail system, as well as from HOV-lane buses on the Northwest, Katy, and Southwest freeways; and it would carry people between offices, hotels, retail, and restaurants along Post Oak. Uptown Houston District's John Breeding expects all-day transit demand and says that commuters would account for only about half the ridership.

But Uptown will have to wait. METRO places the opening of the Uptown/West Loop Line at 2014 and did not include the line in the bonds authorized in November. Breeding holds out hope that funding may be found by cost savings in other lines, by delaying the outer section of the Westpark Line, or even by having Uptown issue bonds for METRO. Most likely, though, Uptown will need another election to get light rail.

5) West of Edloe, the Westpark corridor adjoins a quiet residential neighborhood. This was once an active railroad line—Ringling Bros. and Barnum & Bailey was still unloading circus trains here in the late 1990s—but the neighbors probably aren't eager to see trains—even sleek, quiet, electric trains—return. Organized opposition here helped kill the earlier rail proposals.

6) One major problem with the Westpark alignment is that it's on the opposite side of 59 from Greenway Plaza, the third-largest employment center in Harris County. An elevated line might cross the freeway, stop at an elevated station above the southbound frontage road linked to the pedestrian plaza and retail concourse between Buffalo Speedway and Edloe, and re-cross the freeway. That would require complicated structures, some property acquisition, and the cooperation of Greenway's owners. A street alignment might follow Buffalo Speedway, Richmond, and Weslayan, but that would impair street traffic and require at least two sharp turns in busy intersections. The lowest-cost solution would be to keep rail south of the freeway, building a station with a pedestrian connection—perhaps simply an improved sidewalk, a pedestrian bridge, or an air-conditioned skywalk with moving walkways—across the freeway.

7) The Westpark right-of-way crosses a series of congested north-south streets—Shepherd, Greenbriar, Kirby, Buffalo Speedway, Edloe, and Weslayan—near where those streets meet the Southwest Freeway. It's likely the Alternatives Analysis will conclude that crossing gates here would cause unacceptable traffic problems. Elevating or depressing the entire line would be expensive. Most likely it will cross over some major streets on short overpasses, returning to ground level in between and crossing minor streets such as Wakeforest at grade.

8) Only a narrow strip of land remains along the south side of the freeway east of Shepherd; putting light rail there would require an elevated structure or railroad crossing gates (with the attendant bells and train horns) immediately behind the backyards of $400,000 homes. Another possibility is Richmond, but businesses and homeowners along the way might raise significant opposition. Instead, METRO's preliminary plan places the tracks inside the newly rebuilt 59 trench. The freeway's generous shoulders leave enough room to fit rail on the south side of the trench without taking lanes. This option would include a station under the new Montrose bridge, steps from Chelsea Market, which already looks like transit-oriented development without the transit.

Reliant Energy Plaza, Gensler, architect, 2003.

Enclosed plaza at tunnel level.

The Tower and the Tunnels : Reliant Energy Plaza

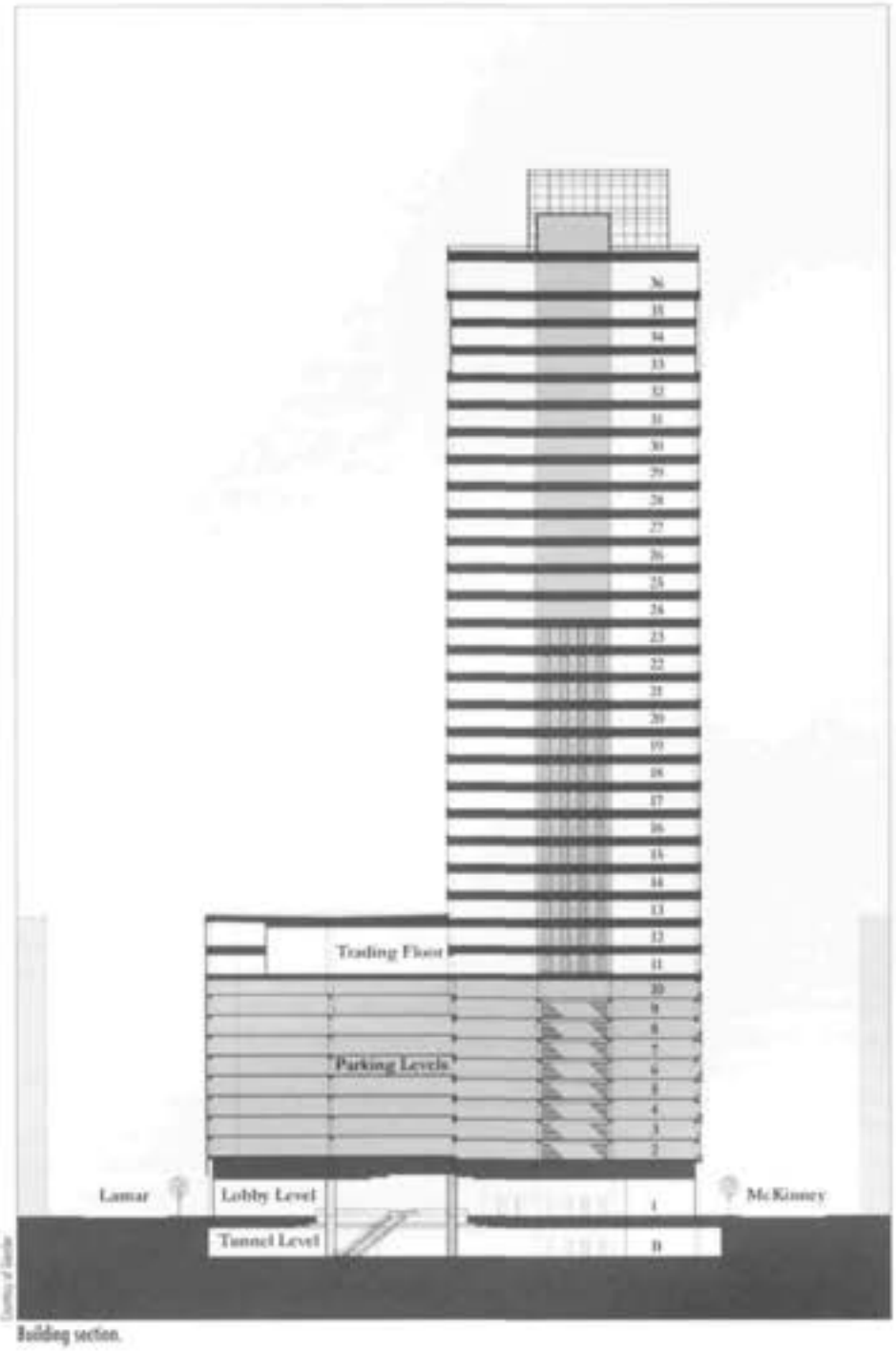
Skywalk connecting three-structure complex at 1500 Louisiana Street, Cesar Pelli & Associates with Kendall/Heaton Associates, architects, 2002.

Inaugurating a new era for Houston's tall building design, Reliant Energy Plaza at 1000 Main Street presents an urbane, public-spirited example of how architecture can help to build good cities. Much like Cesar Pelli's 1500 Louisana Street, Reliant Energy Plaza, designed by Norman Hoover of Gensler, goes beyond the conventional isolation of modern downtown office towers by showing an uncommon interest in its relationship to a larger urban whole. At 1500 Louisiana Street, two office towers and a garage are linked as a mega-building with an enclosed circular bridge that dramatically frames the street intersection below. Reliant Energy Plaza demonstrates even more direct concern for pedestrian connections. By accommodating the convergence of three downtown tunnels to form a grand, two-story-high underground rotunda, Reliant Energy Plaza provides a first for downtown Houston: a spacious indoor plaza that opens the city's maze of tunnels to the sidewalks and streets above.

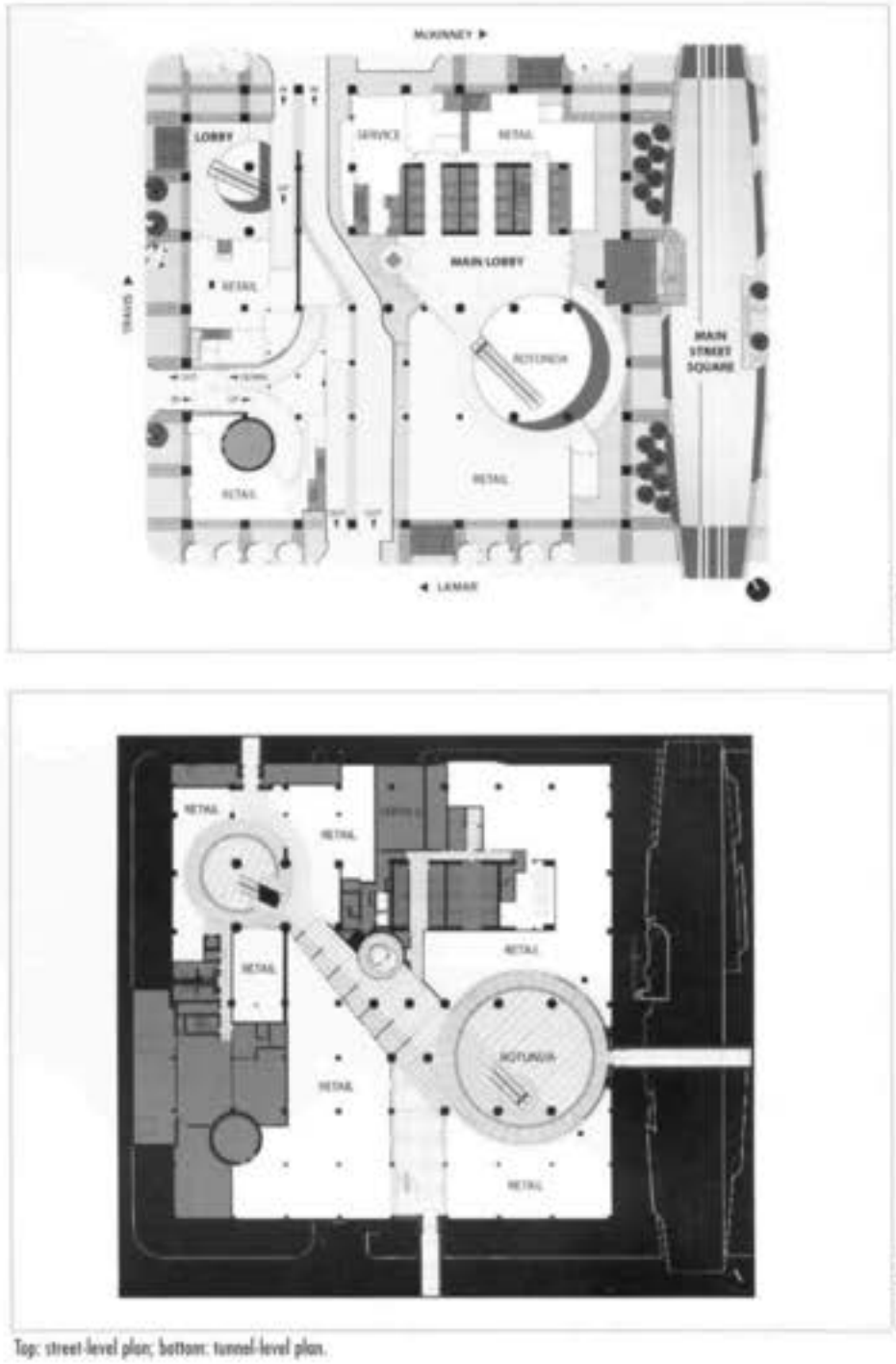
Virtually invisible and largely unfamiliar to people who work outside of downtown, Houston's tunnel system has become a primary pedestrian link among dozens of office buildings, parking garages (both above and below grade), theaters, and municipal buildings. Like the unseen habitat of a colony of ants, the tunnels are alive during the day with office workers coming and going, jury pools parading single file to court assignments, messengers, shoppers, and, if one believes some of the tourist bureau's hype, a few (probably bewildered) visitors exploring "Houston's best-kept secret." At night the network shrinks to become the haunt of well-dressed audiences headed for venues in the Theater District.

But the air-conditioned tunnels are more than a means to get from here to there. A whole emporium of restaurants, shops, and convenience stores lines the byways and intersections of this underground street system. No need to venture out in the summer heat or winter rain. From that moment in the morning when the office worker drives into the parking garage until late in the day, he or she is shielded from the vagaries of weather and life on the streets. Lunch hour is busy with a potpourri of restaurants to choose from, including some Houston favorites like La Madeleine, Scholtzsky's, Ninfa's, and Treebeards, along with the same fast-food stops that populate suburban strip malls. Florists, barbers, shoe repair places, gift shops, and eyewear stores abound.

Walking the subterranean passageways can cause disorientation, even claustrophobia. Built over time by individual property owners, the tunnels form a maze beneath the orderly street pattern above. Vault rights—permission to burrow under the streets—are obtained from the munici-



Building section.



Top: street-level plan; bottom: tunnel-level plan.

BY WILLIAM F. STERN

pal government, which charges an annual tax. Navigating the complex substrata of utilities, sewers, and water lines, the tunnels zig and zag, move up and down, and widen and narrow without any predictable consistency. Ceilings are more often than not unnervingly low, though occasionally space opens to major street-level building lobbies. Escalators and elevators move people from the tunnels to buildings and garages above. Each section of the tunnel is built and maintained by the owners of the property above, resulting in a hodgepodge of interior finishes and spatial qualities. Granite flooring gives way to vinyl tile, and just as quickly ceramic tile takes over. Even the overhead lighting changes from section to section.

Transferring large segments of pedestrian circulation from the streets to overhead bridges, skywalks, and underground tunnels effectively dilutes the social milieu of the city, creating what urbanist Trevor Boddy calls an "analogous city."[1] Boddy argues that the traditional system of streets, intended as the primary carrier for both vehicular and pedestrian traffic, is duplicated and diminished by an analogous network of circulation above or below. From the skywalks of Minneapolis and Calgary to the tunnels of Montreal and Houston, several North American cities have been transformed as the activities of the street are eroded and displaced. Pedestrian crowds are effectively segregated into different circuits: The middle-class office population gravitates to the sanitized environment of skyways or tunnels, and the underclass populations are left to the less orderly streets. In Houston many of those small shops, convenience stores, and restaurants that can contribute to the vitality of street life are to be found in the analogous city underground. It is no wonder that the sidewalks of downtown Houston are rarely crowded, lacking the pulse and pace of Chicago or New York.

And yet cities tend to grow in unpredictable ways, establishing patterns that are particular to each place. Although Houston's tunnel system may detract from the commercial activity of the streets, it has established itself as a fundamental and convenient way of traversing the city's commercial core. Using the 6.3 miles of tunnel is a habit Houstonians are not likely to give up for a more vibrant street life. So Reliant Energy Plaza's developer, Richard Everett of Century Development, and architect Norman Hoover of Gensler decided to make something more out of this subterranean half of the city. Their solution: Bring several tunnels together in a quasi-public space that would open the underground to the street-level lobby, thus uniting the two bifurcated levels of downtown pedestrian traffic and allowing each to vitalize the other.

The Main Street block has had a starring role in the history of downtown Houston. It was at one time the site of the storied Lamar Hotel and two fabulous 1920s movie theaters, the Metropolitan and Loew's State. In 1980, The Hines organization bought the block and subsequently demolished those buildings along with a group of smaller commercial buildings to make way for a high-rise office tower. But the building boom of the '70s and early '80s had run its course, and the block remained empty until Century Development acquired it in 1997. By then this section of Main Street, once the heart of downtown Houston, had become rundown, overtaken in prominence by more fashionable streets to the west, even though Foley's, the last remaining downtown department store, was just a block south.

Before Century acquired the site, others, concerned about the deterioration of this section of downtown, had begun to

Two-story rotunda where three tunnels join to form a gathering place.

Covered arcade along Main Street.

Glass and steel canopy at the METRO bus stop.

explore the future of this block. In 1993 Central Houston, Inc., a privately funded agency supported by downtown business interests, applied for and received a $270,000 federally funded grant from CMAQ (Congestion Mitigation Air Quality) to study concepts for the site's development. Capitalizing on the presence of Foley's to the south, Central Houston investigated ways that future development might incorporate and stimulate new retail activity. And with several METRO bus routes converging on the streets surrounding the block, Central Houston saw the need for better integration of the METRO system with future development. Finally they realized that for Main Street to thrive, a major connection to the tunnel system would be desirable to draw pedestrian and retail activity together, above and below grade.

Central Houston's goals for civic improvements were compatible with Century's development plans. A funding package was assembled from public and private sources to support the ambitious plans for the site. Working with METRO, Central Houston and Century made plans for the consolidation of commuter bus activity around the site, including a METRO store that would sell tickets and disperse information. (METRO prepaid $5.25 million for the store's long-term lease in Century's new building.) The Houston Downtown Management District, the agency overseeing Central Houston, committed $750,000 for street improvements, particularly new METRO transit stops, and the Main Street Market Square Redevelopment Authority agreed to contribute $2.5 million for connections that would join two additional tunnels with the proposed hub of the building's basement lobby. The cooperation between private interests and those seeking to nourish the public realm worked to the advantage of developer and citizen alike, providing a practical, Houston-style alternative to what zoning and its attendant ordinances provide in other American cities.

Supporting the ambitious program of public amenities is a 36-story, 785,000-square-foot office tower. Although it was initially designed as a speculative venture, during construction Reliant Energy became the building's prime tenant and now occupies 60 percent of the office space. The office tower, set on the northern half of the site, rises above nine levels of enclosed parking, each level occupying the full buildable area of the block. Perhaps the greatest challenge confronting the building's architect was how to cogently organize the complicated mix of street-level and below-grade activities.

Norman Hoover and Richard Everett made an early decision to address Main Street with the building's entrance lobby, thus reinforcing Central Houston's goal of reinvigorating the streetscape and anticipating METRO's later plan for the Main Street light rail line (see "Great Expectations," opposite page). The exciting, light-filled space of the lobby entrance, with a 70-foot-wide circular opening overlooking the underground rotunda, successfully serves as a threshold to both the office tower above and the intricate passageways of the tunnel system below. Mimicking the rotunda space at the Main Street entrance is a smaller below-grade rotunda, also open to the streets above, entered at the corner of Travis and Lamar. Because the building is bisected by a service drive and protected automobile drop-off, the Travis Street entrance serves primarily as a lobby for the METRO store, and a secondary path via escalator to the tunnels and shops below. Added to this mix, the garage entrance and egress face Travis Street wedged between a retail space and the METRO store. Additional retail spaces open onto the north-south streets of McKinney and Lamar. A covered arcade, reminiscent of those that once lined Houston's streets and are still evident at the nearby Rice Hotel, fronts the retail space on either side of the Main Street lobby entrance. Above the sidewalks at the three METRO stops along Lamar, Travis, and McKinney, elegant steel-and-

Main Street looking south to Foley's department store with Reliant Energy Plaza in foreground.

glass canopies project from the building's façade to shelter waiting METRO passengers. The abundance of retail space found at street level is reiterated below with a combination of shops and restaurants surrounding the 40-foot-high atrium of the building's 90-foot-wide rotunda where three tunnels converge into a modern-day agora.

Above the public zone and intentionally disguised from the street, 1,300 parking spaces are tightly organized into one of Houston's largest internalized parking garages where the garage and office tower share the same block. Elevators from the garage descend to the lobby level for transfer to the block of elevators serving the office tower. Except for the Reliant's trading floor, a double-height space built just above the last parking level, the remaining tower floors, each 30,000 square feet, are identical in configuration. From outside, the tower appears to ascend from just above the lobby level—the northern half of the full-block parking garage is architecturally expressed as if it formed the lower floors of the office tower. Fusing the tower and garage in this way allows the high-rise element to be expressed as a singular form rather than a truncated tower built on top of a garage. The tower itself is comprised of three vertical slabs—the widest of which projects out from two slender bookend slabs on the north and south sides. The narrower end slabs are clad in a combination of dark gray glass and limestone-colored precast concrete studded with black aggregate, expressing the grid of the structural frame. The wider slab, which rises above the end slabs to form a high parapet surrounding mechanical equipment, is clad in a lighter mirrored glass, contrasting with the two outer blocks. The façades on the south half of the garage block are patterned in precast concrete, dark horizontal ventilation slots, and a combination of clear and frosted glass that masks the parking levels inside. A lux material palette was utilized both inside and out at street level, including flame-cut granite paving, and columns and interior wall surfaces clad in polished light gray granite. Exaggerated circular stainless-steel-faced columns support the rotunda ceilings; at street level, unframed glass railings follow the circumference of the rotundas. Crisply detailed, the combination of shiny and honed surfaces sparkles with reflective light.

At Reliant Energy Plaza the architects have resolved a complex assemblage of programmatic and building components into an uncomplicated formal package. The tower itself is purposely unassuming, an urbane background building surrounded by new and historic buildings, recognizable at night by its colorful electronic L.E.D. frieze moving around the parapet edge. The real life of Reliant Energy Plaza is found at the street and in the tunnel below, where public and private interests have been brought together. The combined participation of Central Houston, Inc., the Houston Downtown Management District, METRO, and the Main Street Market Square Redevelopment Authority with Century Development, pushed the project to a level of civic ambition seldom associated with Houston's downtown speculative high-rise office buildings. With these ambitions fully realized by Gensler's thoughtful design, Reliant Energy Plaza introduces a fresh approach to downtown's planning by consciously enlivening the streetscape with public activities and opening up Houston's underground network of tunnels to the life and light of the city above. ■

1. Boddy, Trevor, "Underground and Overhead: Building the Analagous City," in *Variations on a Theme Park*, Michael Sorkin, ed. New York: Hill and Wang, 1992.

GREAT EXPECTATIONS

BY BRUCE C. WEBB

1000 Main Street may be as close to a historic and psychogeographic center as Houston is likely to get. That's what the impresarios of a vision for downtown seem to have had in mind; even before METRO laid tracks at its front door, this block was seen as a staging point for downtown commuter buses and space was being reserved in the proposed new office building for a conveniently-located METRO store. But it was the rail line itself that dramatically changed Main Street, giving a boost to almost everything it touched or passed by. At 1000 Main Street the boost goes over the top, diverting two blocks of vehicular traffic to create Main Street Square, a pedestrian space bracketed at either end by a pair of light rail stations. A reflecting pool flanked by a series of arcing water fountains highlights the transit tracks and celebrates the arrival of trains with a watery reception line.

Main Street Square is a small remnant of the Ehrenkrantz, Eckstut and Kuhn master plan that won the Making Main Street Happen design competition in 1999. Their entry envisioned a series of invented urban spaces strung out along Main Street that ranged from the oneiric (the world's tallest observation platform and "dining experience" at Allen's Landing) to the agoraphobic ("Stampede Square," a ten-block-long plaza whose length was in part determined by the "distance it takes to stop a herd of running cattle"). Other large spaces included Astro Square, Grackle Square, and finally, another four blocks in front of South Main Baptist Church which EEK proposed to set aside for "religious events or personal contemplation." The EEK plan had little to offer in the way of artistic vision, but it was big on hyperbolized Houston metaphors, and left plenty of space for private developers to deal.

The centerpiece of Main Street Square is an elaborate fountain designed by EEK (with local affiliate Pierce Goodwin Alexander & Linville, designers of the downtown portion of the Main Street light-rail project). It's a great credit to Central Houston, Inc. that they saw the possibilities of the site in grand terms and put together a deal to make it happen. But the scheme comes off more as a perpetual celebration of light rail than a prominent downtown people space. With nothing further to commemorate and no historical sense of the site to portray—and none of the artistry and sensuality of the Transco fountain—the Main Street fountain is an empty symbol, like the commercial water features in a shopping mall. And like many contemporary water features, it is more machine than fountain; less about the sensuality of falling water than the noisy technics of pop jets and the power it takes to launch water into the air like a giant squirt gun.

A second water feature, "Water Screen," by artist Mike Davis, projects images of downtown scenes on a surface of falling water—though I am depending on a rendering and a description by a maintenance person since after several trips to the square I have yet to see it work. There's a priceless message of irony and double meaning chiseled into its top lintel: "As We Build Our City Let Us Think That We Are Building Forever."

Still, at night on the square there is much razzle-dazzle. It is a sensory oasis with the water arcs and columns, the special lighting, the electronic wall on the parking garage on the east side, the paintings displayed in the street-side windows in Reliant Energy Plaza, and, of course, the coming and going of trains. What it needs most is more life around the fringes.

At this point Houston's light rail is less about addressing a need than it is about engendering desire. And although one shouldn't deny that there are people who want to travel sans automobile from downtown to Reliant Stadium or whose daily commute coincides with the narrow line, METRORail is still in the novelty stage, needing to coax people into the corridor. But trying to augment the depleted resources along Main Street with more attractive and desirable places is a case of abiogenesis. The Main Street Coalition, authors of Making Main Street Happen, anticipated this problem when they called for competitors to create a signature street with signature urban markers.

Reviewing John Updike's *Memoirs* for the *New York Times Book Review*, literary critic Denis Donoghue wrote, "a novel will be deemed successful if the reader is persuaded that the picture is not the writer's composition but life itself, making its appearance on its own authority." Some measure of this imperative holds for the design of successful civic spaces as well. This may help to explain why the light rail system is such compelling urban design: The technical authority and functional aesthetic of everything associated with it—the cars, the overhead power lines, the stations—lift it out of the realm of arbitrary themes and urban decorations. Newness is part of its essence. Houston will have plenty to do to create new places that measure up. The effort to redevelop Main Street into a "grand avenue" is an ideal subject for design competitions similar to the one that gave us Buffalo Bayou Sesquicentennial Park. The chance to look at a great many ideas for this string of spaces would add to our present-day understanding of urban place-making and focus attention on Houston's city-building project. ■

Water Feature at Main Street Square, Ehrenkrantz, Eckstut and Kuhn, 2003.

Alden B. Dow's work in Freeport, clockwise from top, this page: Dow Hotel, 1940; House Type J, 1941; House Type J interior; House Type G interior, 1941; House Type G. All photos this page by Elwood M. Payne for *Architectural Record*, May 1942.

Dow By the Sea

Modern Architecture's Moment in Brazoria County

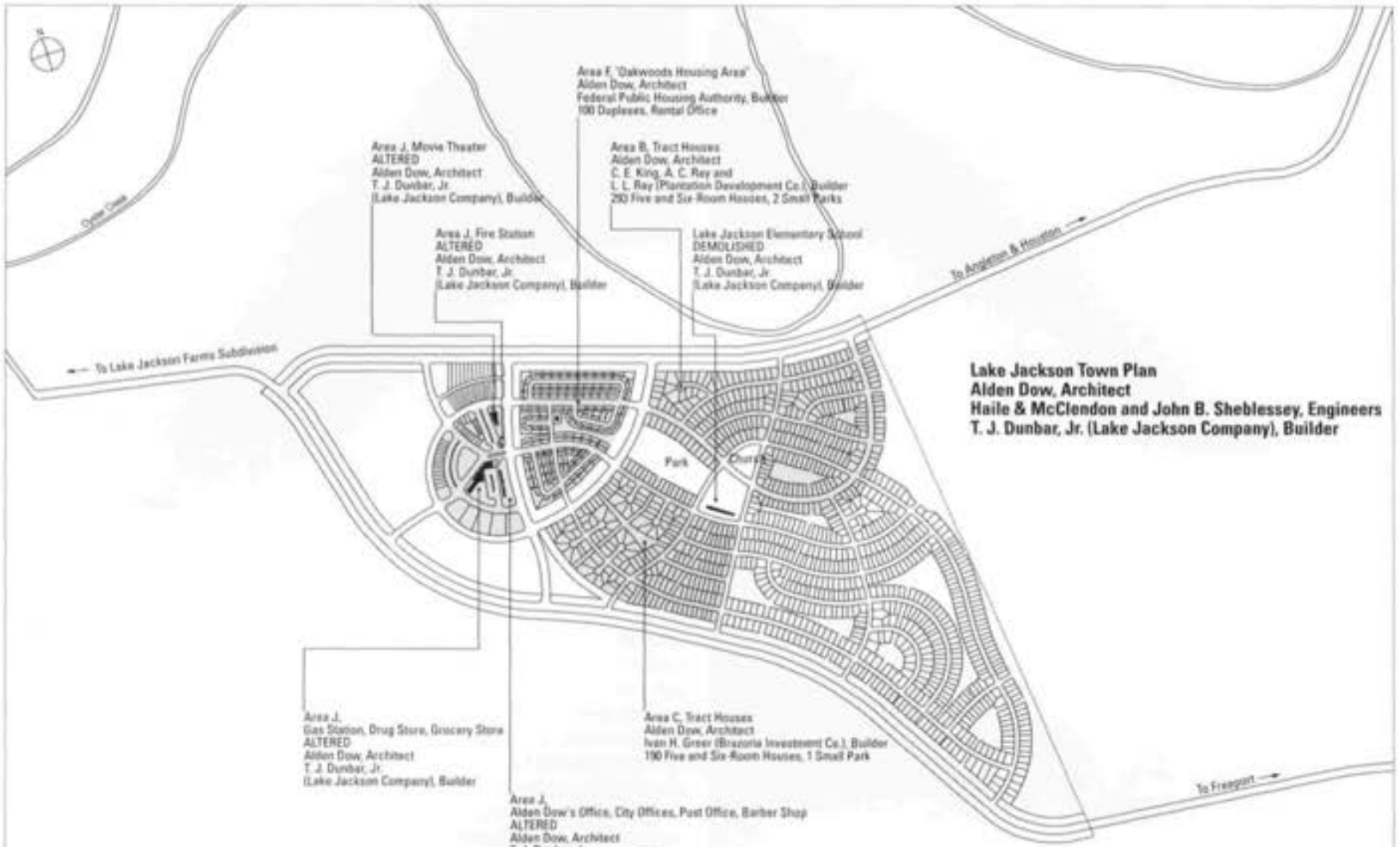
BY BEN KOUSH

Alden B. Dow's plans for Freeport house types G (left) and J (right). Reproduced from *Architectural Record*, May 1942.

For a few heady years during World War II, now-sleepy Brazoria County was one of the most frenetic, crowded, and energetic places in Texas. At its heart was Freeport, one of the country's first wartime company towns. There the Dow Chemical Company, based in Midland, Michigan, launched modern town-building on a scale never before seen in Texas, and rarely anywhere else. Luckily, this massive architectural opportunity was handed to Alden B. Dow, a Frank Lloyd Wright disciple who also happened to be the son of the chemical company's founder.

Dow Chemical Company's construction of two magnesium-processing plants in 1941 and 1942 (see, "The Riches of Brazoria County," p. 27) brought large numbers of people to the area. Freeport's population ballooned from 3,126 in 1939 to nearly 21,000 in 1942.[1]

Anticipating a dramatic need for new housing, the company called upon the services of Alden Dow immediately. The founder's son was an accomplished architect. His older brother, Willard, had taken over the family company after the death of their father, Herbert, in 1930, freeing Alden to pursue his passion for architecture. In 1933 Alden signed up for an apprenticeship-fellowship at Frank Lloyd Wright's Taliesin in Wisconsin. Though he stayed less than a year, his experience there affected him profoundly. For the



Map showing Alden Dow's building activity in Lake Jackson.

remainder of his career Dow would be known as one of the foremost disciples of Wright's organic architecture.

His first project, the 23-room Dow Hotel at 211 East Broad Street in Freeport, was built in three weeks in May 1940. The hotel was a long, low building clad in white asbestos shingles and surmounted by a shallow gable roof with wide overhanging eaves. The peculiar eaves, made of the exposed roof rafters and not covered, provided no shade. And they had another drawback: The exposed rafters soon rotted in the humid coastal climate and had to be replaced periodically.[2] But they evidently pleased the architect, who used them on nearly every building he designed in Freeport. After a dining hall addition was completed, The Dow Hotel became the social hot spot for Freeport's elite.

Dow next designed a series of handsome houses for company executives. Fifty-four full-sized houses, 22 one-room houses (since demolished), and one six-unit apartment block were built along Second, Broad, and Fourth streets, bounded on either end by Arbutus (now Dixie) and Mesquite streets. "The Alden Dow houses, completed in Freeport in the summer of 1941, were quite controversial," recalled Bill Colegrove, one of the first Dow employees to move to Freeport. "They had central heating and were on a concrete slab. He had them painted in California shades of orange and apple green."[3] (When the houses were featured in *Architectural Record* in May 1942, neither their "controversial" nature nor their paint colors was mentioned.)

These houses and apartments remain one of the most attractive groups of buildings in Brazoria County. They are notable not only for their exterior appearance but also for their ingenious floor plans, which used built-in furniture and storage units to great advantage. Their remarkable state of preservation shows that they have been appreciated by later generations.

The 54 full-sized houses Dow designed consisted of eight types, which varied by size and cost. The two largest, Types G and H, were built on Second Street facing the golf course. They were clad in stucco and had three and four bedrooms. Though their exteriors were very simple, the interiors were as well developed as Dow's much more costly Midland, Michigan, houses of the same period, which were designed mainly for upper-level employees of the company. The next-largest houses, Types B, D, and E, were built along Broad Street, and were also clad in stucco. The smallest houses, Types A, J, and K, built along Fourth Street, were clad in a mixture of stucco and wood clapboards. (Types C, F, and I were never built, and no record remains of their design.) The house types were further differentiated by lot size. The two largest house types were built on properties comprising three lots; the others sat on properties of two lots.

Dow also designed the Freeport Primary School, which was built in late 1941 or 1942 at Fourth and Magnolia and has since been demolished. Of this building only plans remain, but it was probably similar to the school he built in Lake Jackson—a long, low building like the nearby Dow Hotel. Plans for the Freeport Primary School show four wings of classrooms radiating from a central core. The core was to contain a large auditorium, but was never built.

Dow was not the only architect active in Freeport at this time. Several prominent Houston architects were also working there, primarily on housing projects for company workers. Alfred C. Finn designed 48 duplexes; Hedrick & Lindsley designed 44 duplexes and 11 houses; and Hermon Lloyd designed 209 houses and a medical clinic. The Alfred C. Finn–designed duplexes were the best of this group, with the units arranged in an interlocking pattern on the L-shaped site.

With the huge influx of Dow workers, it soon became apparent that these mostly privately funded efforts to build housing were inadequate. Many workers lived in appalling conditions on the outskirts of Freeport, setting up camp in their cars or in makeshift tents, with no sewage or running water. Additional temporary emergency housing was built closer to the plants, in part to ease the horrific traffic congestion. Dow arranged to build its own trailer park with space for 600 trailers just outside Velasco in September 1942. But its major housing push was called Camp Chemical.

Alden Dow was the architect of the giant Camp Chemical project, which covered some 900 acres adjacent to one of Dow's plants, about halfway between Freeport and what would later be Lake Jackson. Construction proceeded at an astonishing pace: Between February 21 and April 23, 1942, workers erected 2,300 prefabricated "vest pocket bungalows," 164 toilet buildings, 46 barracks, 23 laundries, 14 administration buildings, a 1,000-seat cafeteria, and an "old fashioned general store," along with the necessary electrical hookups and water and sewer lines.[4] The 16-foot-square houses were made of unpainted wood and set in rows across the site, 14 feet apart with 30-foot-wide access roads for cars. The result was described by *Houston Post* columnist Ed Kilman as a "cubist's victory garden."[5] Longtime Brazoria County residents disparagingly called it Camp Criminal. But Camp Chemical served its purpose, and at its peak housed some

Lake Jackson house, Area C, Lake Jackson, Alden B. Dow, 1943.

Top and above: Gas station-drug store-grocery, Area J, Lake Jackson, Alden B. Dow, 1943.

7,100 people.[8] It was shut down and completely demolished in late 1944 or early 1945.

Since Dow had made a huge investment in its Texas plants and had no intention of abandoning them after the war, the company planned a permanent settlement for its employees. The company's first proposal was to build 1,200 houses in Velasco, the nearly deserted town across the Old Brazos River from Freeport. But the Velasco city council rejected the plan on the grounds that it would overwhelm the town's meager infrastructure. Rebuffed, Dow purchased raw land and built its own community from scratch.[7]

The property selected by Dow because of its relatively high elevation was a 6,500-acre tract owned by Dr. Ernst W. (Bill) Bertner of Houston, best known for his role in the creation of the Texas Medical Center. Dow purchased the property on August 23, 1941, for $400,000.[8] Alden Dow largely completed his design for the town of Lake Jackson by October, and a crew of 380 African-American, Mexican, and white workers began clearing the site on December 8. The first buildings were under way by August 1942, and the first residents moved in on January 26, 1943.[9]

Alden Dow's curvilinear street layout for Lake Jackson reflects then-current urban planning theories concerning traffic safety and aesthetics. In a speech he gave at Lake Jackson in honor of its first year of existence, Dow noted,

> *Traffic hazards have been avoided as much as possible in the street layout. Through traffic by-passes all areas used by pedestrians and no residences face these through streets. They are lined with 100-foot parkways on each side. These park-bordered through streets also separate our commercial area from our residential area.... Newcomers and visitors to Lake Jackson may sometimes find our winding streets confusing. However, they will always find them interesting in that they give individuality to each piece of property. They will also notice that these streets are named in such a way as to help guide them through the town. All streets leading to the commercial area are called ways, such as Winding Way, Center Way and Circle Way. All through traffic streets are called drives, such as Oyster Creek Drive, Oak Drive, out here in front of us, and Plantation Drive, which will be the new entrance to our town. In short, dead end streets are called courts.*[10]

Observers have noted that the streets' names indicated their relative status. According to Brazoria County historian James A. Creighton, "The naming pattern was interesting also: hardwood tree names for the more opulent residence streets, on down through to shrubs and vines for small courts, duplexes, and apartments."[11] The most exclusive tracts, however, were outside the town proper. Lake Jackson Farms, an unincorporated subdivision platted in 1944 around the lake that gives the town its name, is where the local elite, such as company director Dr. A. P. Beutel, built their houses.

In addition to the winding roads, another novel feature of Lake Jackson was the series of pocket parks formed using the leftover space at the center of the largest blocks. The parks were linked to one another by pathways laid out along continuous drainage rights-of-way. (When other developers expanded Lake Jackson in the late 1940s, neither the 100-foot parkways nor the interior parks were continued.) The plan of Lake Jackson received national recognition for its merit when it was published in *American City* magazine in August 1944. It was also

Courtesy Lake Jackson Historical Museum

Camp Chemical, Freeport-Lake Jackson area, 1942.

featured as the best American example of privately financed war housing in the British book *Homes by the Millions*, published by Penguin in 1946.

The architecture that lined the meritorious streets, however, was not nearly so innovative. The privately built tract houses in Areas B and C and the Federal Public Housing Authority-built duplexes were unexceptional. The most interesting buildings were the quirky office Dow built for himself on South Parking Place, the combination gas station-drugstore-grocery store across the street, and the movie theater on Circle Way. These commercial and residential buildings still stand but are in a uniformly poor state of repair. The near-ruinous condition of Dow's office is particularly distressing, considering that its owner has repeatedly offered it to the city to be used as a historic site. (According to Lake Jackson Assistant City Manager Modesto Mundo, the offer came with the stipulation that the building be moved to another site. Currently there is no empty site owned by the city large enough to accommodate it.[12])

Alden Dow's last project in the initial phase of development was an addition to the Freeport Primary School in June 1947. He was asked to provide a scheme for rehabilitating the Lake Jackson commercial area in early 1963 after returning to the city for its 20th anniversary celebration and making critical comments on its run-down appearance in a speech. His plan, dated February 7, 1963, does not seem to have been fully developed, as no drawings exist. The plan that was adopted in July 1964 by the Central Business District Committee—a steering committee comprising seven Lake Jackson businessmen—proposed to remake the buildings in a "Plantation style of architecture…to recapture this Plantation environment… typified by the moss-laden trees and heavy greenery which was a characteristic of the Stephen F. Austin era in the early days of the Texas Republic…completely independent of Federal subsidy."[13]

Fortunately, after some 40 years this anti-modern remodel is being put right with a new plan to remove the worst of the plantation-style excesses and return the buildings to a semblance of their original appearance.[14] The City of Lake Jackson has surveyed its residents—many of whom cited the Rice Village shopping area in Houston as a source of inspiration—and hired outside consultants to produce a Downtown Revitalization Plan. The $17 million project will be funded through a half-cent sales tax, which voters approved last year. (The catch is that the funding won't be released until the 2008–2009 fiscal year.[15]) The intent to restore suggests that the citizens of Lake Jackson and Freeport have finally begun to recognize the buried architectural treasure in their midst. ■

1. "21,000 Increase in Population Booms Building." *Houston Post*. July 16, 1942. Section 2, page 8.

2. Chester, Susan, ed. *The Lake Jackson Chronicles: A History of Lake Jackson, Texas*. Lake Jackson, Texas: Lake Jackson Historical Society. 1993. Page 61.

3. Colegrove, Bill. *Episodes: Texas Dow 1940-1976*. Houston: Larksdale Press. 1989. Page 43.

4. Kilman, Ed. "$3,000,000 Camp Chemical is World's Only Federal Community for Workers." *Houston Post*. July 16, 1942. Section 2, page 18.

5. Ibid.

6. Frank, Morris. "600 Trailers House Dow Workers." *Houston Post*. Sunday, April 18, 1943. Section 1, page 13.

7. Chester, Susan, ed. *The Lake Jackson Chronicles*. Pages 15-16.

8. Ibid, page 10.

9. Ibid, pages 281, 283.

10. Text of speech by Alden Dow. 1944. Courtesy Lake Jackson Historical Museum.

11. Creighton, James A. *A Narrative History of Brazoria County*. Waco, TX: Texian Press. 1975. Page 370.

12. Phone conversation with Modesto Mundo. June 22, 2004.

13. "Lake Jackson Central Business Plan," July 1964. Courtesy Lake Jackson Historical Museum.

14. Phone conversation with Modesto Mundo. June 22, 2004. See also: http://www.ci.lake-jackson.tx.us/downtown.html

15. Phone conversation with Modesto Mundo. June 22, 2004.

16. Creighton, James A. *A Narrative History of Brazoria County*. Pages 333-339.

17. Ibid, page 324.

18. Haynes, Williams. *The Stone That Burns: The Story of the American Sulphur Industry*. New York: D. Van Nostrand Co., Inc. 1942. Pages 130, 257, 315.

19. "Dow Goes Down to the Sea." *Fortune*. Volume 26, December 1942. Page 192.

20. Colegrove, Bill. *Episodes: Texas Dow 1940-1976*. Houston: Larksdale Press. 1989. Pages 17-18.

The Riches of Brazoria County

The extent of Brazoria County's mineral resources began to become apparent at the beginning of the 20th century. Oil was discovered in January 1902 on Governor James Hogg's property, Patton Place, just outside the town of West Columbia. Large-scale production began on January 15, 1918, when the Tyndall-Hogg No. 2 well came in.[16]

Though oil is synonymous with modern Texas, the history of Freeport and Dow Chemical Company's Texas Division, and ultimately of Lake Jackson, depends on another less celebrated resource: sulfur. Also known as brimstone, the yellow mineral has a myriad of uses. It is a key component in fertilizers, insecticides, newsprint, paint, rayon, rubber and steel production, and is also frequently converted into sulfuric acid, which has many uses in the petrochemical industry. Sulfur was discovered in 1901 at Bryanmound, just southwest of present-day Freeport.[17] The Freeport Sulphur Company was incorporated by New York investors on July 12, 1912, and the first loads of sulfur were ready by November the next year.

Bryanmound was active from November 12, 1913, to November 30, 1935.[18] When Bryanmound ran out of sulfur, and production at the plant was curtailed, it appeared that Freeport might wither like so many other historic towns in Brazoria County. But in the summer and fall of 1939 a small, mysterious delegation of chemists from Michigan began snooping about town, taking water samples from the river and the Gulf. As a result of their findings, the Dow Chemical Company, headquartered in Midland, Michigan, bought 800 acres along the Freeport Harbor on March 7, 1940, for the production of magnesium from seawater.

Magnesium, which is substantially lighter than aluminum, was used primarily in the manufacture of aircraft. By the early 1940s each American plane was incorporating some 1,000 pounds in wheels, engine parts, gasoline tanks, cowlings and trim.[19] The Office of Production Management (later the War Production Board) decided that expanded production was needed with the imminent approach of American involvement in World War II, so Dow chemists began scouting across the country for a new plant location.

Freeport was ideal because of its unlimited supply of Gulf seawater, which through a fairly simple process of electrolysis could provide up to ten pounds of pure magnesium per each 1,000 gallons. The freshwater Brazos River provided a natural waste discharge completely separate from the intake, to prevent dilution. Additional natural resources necessary for the extraction of magnesium—sulfur, salt domes, oyster-shell lime, and oil and natural gas—were also nearby.[20]

The U.S. government's Defense Plant Corporation, headed by Houston's Jesse H. Jones, authorized construction of the magnesium plant. The Austin Company of Cleveland, Ohio, began construction of Plant A on March 15, 1940. The first magnesium ingots were produced on January 21, 1941. Plant B was built soon after in the astonishing span of six months, from January 1 to June 26, 1941. Later in 1941 bromine, caustic soda, ethylene, ethylene dichloride, ethylene glycol, and propylene dichloride were being produced at Plants A and B as useful by-products in the process to extract magnesium. — *Ben Koush*

New plantings along I-45 promise a nicer view for both homeowners and motorists, eventually.

Green Giants

Trees for Houston, 20 years and 170,000 trees later

BY LYNN M. HERBERT AND KARL KILIAN

Loopholes allowed owners to cluster the required number of trees at the backs of their properties.

As an advocate for Houston's canopy for more than 20 years, Trees for Houston has naturally branched out. But the volunteer non-profit group's evolution has been unusual: What started out as a polite beautification group has become an influential political force in Houston and the state.

As it enters its third decade, Trees for Houston has a quantitative measure of its success: 170,000 new trees are in the ground because of the organization's work. But the group has been busy on other fronts to ensure a greener future for our area. As current president Mack Fowler says: "We've come to realize that Trees for Houston can never plant the number of trees that are needed. So if our mission now is to protect the trees we have and to get others to do the planting, it's meant becoming more involved with the city and the regulation of trees here."

Before Trees for Houston, advocates for trees often found themselves at odds with the city's preference for expansion and development. Exceptions—like the brief ascendancy here during World War I of the City Beautiful movement, with its ideas of tree-lined boulevards and other civic improvements—succeeded because they were espoused and funded by members of Houston's elite, usually in their own neighborhoods.

One of the most visible legacies of the City Beautiful movement in Houston is the double rows of live oaks that flank Fannin and Main Streets and extend around Rice University. The story of their origin—and the private initiatives that funded them—was retold in the Winter 1980 issue of the *Houston Review*. That story galvanized local attorney Bill Coats, who lived in a neighborhood where those privately funded trees had come to splendid maturity. Coats had the idea, in 1983, of organizing a non-profit group that could accept contributions for planting trees. Then-City Comptroller George Greanias introduced Coats to Carroll Shaddock, who earlier had helped organize the successful "Trees for Main Street" venture, which encouraged busi-

Main Street near Rice University in 1928 (far left), before the planting of double rows of live oaks; and in 1995 (at left), after those trees (and the Texas Medical Center in the background) had grown to splendid maturity.

Courtesy Trees for Houston

nesses on Main to plant trees from downtown to the Medical Center.

Trees for Houston was formed that year with a mission to plant trees along Houston's major streets and freeways; Shaddock was founding chairman, Coats founding president. A volunteer group without office or staff, Trees for Houston worked whenever and wherever they could raise money. Recalls Coats, "We put out a little booklet on how to have neighborhood tree drives. People could give money to Trees for Houston, get a tax deduction, and have that money go into a segregated fund to plant trees in their neighborhood." There were subgroups like "Trees for Southampton," "Trees for Montrose," and one of the group's earliest successes, "Trees for Downtown" (see "The Tree Business," this page).

PTAs and businesses were encouraged to plant trees in their areas.[1]

Mack Fowler would like to see the equivalent of a tree ordinance applied to new construction by public institutions—be it the Texas Department of Transportation (TxDOT), METRO, the Harris County Toll Road Authority, Reliant Park, or the new convention center and hotel—and make landscaping part of an owner's responsibility. And on the national level? Fowler describes a recent effort to secure federal funds to landscape a portion of the Hardy Toll Road. "Large sums were involved—$250 million—and we effectively argued that Houston had not gotten anything close to its per capita federal share. Landscaping for the toll road and a score of other projects were funded. But the real issue is to get the toll road authority to adopt a policy to build future toll roads with landscape part of the design from the beginning."

Bill Coats suggests that we all speak up. "Our streets are not green, because we don't make them green. We need to say, 'If you're going to put a freeway in my part of town, it's going to look like Allen Parkway. Make it look good or don't build it.'" That was clearly the position of the Bellaire neighborhood that, fearful of the resulting noise, threatened to sue TxDOT in 1999 over its plan for rebuilding Loop 610. A solution was found that was also visually pleasing: Soundwalls were moved closer to the highway and landscaped to create four-foot-high hillocks. Says Fowler: "Over the next few years as you drive down that piece of freeway you'll have a different experience of Houston. And you won't see the service road."

There have been victories, but there continue to be losses. In the current Katy Freeway expansion, TxDOT displaced a mature forest in the northwest quadrant of the I-10-Loop 610 interchange. The 400 pines and oaks had been donated by the architecture firm Kirksey. John Kirksey, a past president of Trees for Houston, says the gift "was an example of the private sector saying to TxDOT, 'Here's what you should be doing.'"

It is increasingly understood that the case for trees is not merely aesthetic, that their value can be quantifiably measured. Large urban forests (such as the South Boulevard area) are typically seven degrees cooler than surrounding neighborhoods, reducing both the urban heat-island index and air-conditioning bills. Trees provide a buffer against rainstorms and help relieve storm-sewer runoff. They combat pollution and improve air quality because they clean and remove particulate matter in the air. (A major goal of Trees for Houston is to recognize the pollution-fighting power of trees in Houston's clean air plan.) There is also an economic impact—and it's here that Houston's customary irreconcilables, growth and planning, may finally find common cause. To remain competitive as a city—to keep businesses here and to bring new businesses in—it is now becoming accepted that the way Houston looks is important.

In 1980, the *Houston Review* concluded: "In Houston, the best in city planning and civic consciousness were the private contributions of a few and not the collective efforts of many."[4] Could that finally have begun to change? For Bill Coats, it always comes back to trees. "I think they're the answer for Houston because they'll grow here. We don't have any mountains or other beautiful things, but we can damn sure grow trees." Adds Mack Fowler: "The reason that some of us become quite passionate about trees is not for some distant Buddhist connection, but because they work. Our climate is salubrious, and the local palette is limited. You have the bayous, you have very moderate terrain changes, and you have trees. So what are you going to work with? You're going to work with your advantages." ■

"I think [trees are] the answer for Houston because they'll grow here. We don't have any mountains or other beautiful things, but we can damn sure grow trees." **Trees for Houston cofounder Bill Coats**

That, coupled with board member Kay Crooker's initiative to put new trees in every city-council district, extended Trees for Houston's reach throughout the city, and enhanced its ability to solicit funds from larger organizations and foundations.[2] Today, Trees for Houston has a staff of five headed by Executive Director Katharine C. Lord, and a budget that in the last five years has grown from $400,000 to $1.2 million. In 2002 it planted a record 10,232 trees (live oaks, overcup oaks, laurel oaks, white oaks, burr oaks, Chinese pistachios, drake elms, and pines), bringing the total since 1983 to 170,000 street trees and seedlings.

Trees for Houston has also worked with other environmental groups to eliminate loopholes in the city's landscape ordinance.[3] Formerly, developers had to plant one tree for every 30 feet of frontage, with no spacing requirement. Those inclined to violate the spirit of the law created "tree ranches" on their properties, areas behind their buildings where the required trees were all clustered. Now the ordinance spells out placement and extends into parking lots, where a tree is required for every ten parking spaces. (Reliant Stadium and Minute Maid Park can be considered victories for Trees for Houston: Both have trees in their parking lots.)

1. Trees for Houston maintains and waters new trees for three years. Landscape architect John Cutler discovered that 30-gallon container-grown trees work best in the hostile atmosphere of public streets; the trees are fitted with a pipe enabling water trucks to reach the deepest roots.

2. Past president Ann Lents credits Kay Crooker with expanding Trees for Houston's reach and its board. It was part of Crooker's Long Range Plan to have City Council members name streets in their district where trees should be planted. Lents also gives high marks to Bill Coats's earlier initiative, Trees for Schools, which took Trees for Houston into neighborhoods citywide.

3. The Tree and Shrub Ordinance (1996) and the Street Tree Protection Ordinance (1999) have been combined into one ordinance, eliminating several loopholes: (1) Required street trees must now be planted evenly around a project, and can no longer be clumped on the back side of the property; (2) Trees will be located inside parking lots, not just on the periphery; (3) For the first time, developers of single-family residential properties will be required to plant at least one tree in the right-of-way on lots 5,000 square feet or smaller and two trees on lots larger than 5,000 square feet. Trees for Houston works with the city planning and forestry departments to monitor the ordinance through the TreeScape Program, a coalition funded and managed primarily by Trees for Houston and the Park People with some assistance from Scenic Houston.

4. Bruce J. Weber and Charles Orson Cook, "Will Hogg and Civic Consciousness: Houston Style," *Houston Review*, Winter 1980, 21.

The Tree Business

Trees for Houston inspired attorneys Jim Rylander (later, a two-term Trees for Houston president) and Bill Weiland to launch an ambitious plan of their own. Rylander announced their project, "Trees for Downtown," on ABC's *Good Morning America* in the summer of 1984. "We felt like Don Quixote and Sancho Panza," recalls Weiland. "Money was tight, and there wasn't much interest in streets at the time." But Ken Lay, then CEO of HNG/InterNorth, agreed to serve as chairman of what came to be called The Living Skyline project. He, Rylander, and Weiland put together a blue-chip advisory board that gave the project cachet and—more important—financial support. It took two years, but The Living Skyline raised a million dollars and planted 2,000 trees across the city's central business district. — *Lynn M. Herbert and Karl Kilian*

Courtesy of Trees for Houston

Bob Eury of Central Houston (left) and Jim Rylander at a planting site for The Living Skyline in 1984. The water truck in the background is one of two lent by Texas Eastern (and christened by Lady Bird Johnson) to water the Living Skyline trees for two years.

Machine Mades

In two steel houses, refinement rolls off the production line

BY PATRICK PETERS

One of the goals of the Case Study House program—launched in 1945 in Southern California by *Arts & Architecture* magazine—was to demonstrate how industrially produced structural systems could make postwar housing more economical. Though the steel-frame homes in the program looked machine-made, they were in fact experimental prototypes and largely handcrafted. Manufacturing systems for translating them into mass-market housing did not yet exist, and when they were developed it was primarily for commercial applications. Only lately have production-line systems begun to be applied to residential construction.

Two recently completed steel houses in Houston develop on the Case Study experience. The steel-frame house designed by Wittenberg Oberholzer Architects with Susan Wittenberg in the Museum District is as eccentric a prototype as any Case Study house, despite the fact that it was assembled using an existing standardized steel-building system. In contrast, the refinement and resolution in details of a new steel house in the Memorial area by San Antonio firm Lake/Flato may cause it to be mistaken for a production model, though it is largely a handcrafted work.

The two Houston houses each employ their machine-made building parts in a different manner. And the contrasts between them illustrate how these components have the capacity to resonate both as typical elements (Le Corbusier's *objet-types*) and as unique and particular specimens. Common to both houses is the tension between the influence of unique site conditions and program requirements of owners on the one hand and the economies of the steel-frame systems now ubiquitous in Houston and around the world on the other.

Steel is an appealing residential building material in part because of its longevity. Being invulnerable to insect infestation and moisture-induced rotting, steel construction is sound building practice. But a steel frame becomes cost-effective only when it can use repeated modules, which may or may not be easy to reconcile with the particularities of a site and a client's needs. It also offers the appeal—and the limitation—of its inherent requirement of precise alignment, a characteristic much less essential in wood platform framing.

WITTENBERG HOUSE

This 7,000-square-foot duplex residence (winner of a 2004 AIA Houston design award) for architect Gordon Wittenberg's family and a close family friend is a three-story L-shaped urban block on a long-vacant east-west lot. An industrially produced prototype, it imaginatively exploits a low-cost pre-engineered steel building system more commonly used to construct mini-storage warehouses. Built for well under $100 a square foot, it derives its economy from a disciplined use of repetitive and narrow nine-foot-four-inch-by-20-foot column bays, thus eliminating the need for the secondary framing (such as bar joists) normally required in steel-frame construction. Its four-inch-thick composite corrugated-steel deck and concrete topping slab spans up to just under ten feet between primary beams, allowing for a very thin floor depth and resulting in a visually uncluttered metal ceiling. Air conditioning units and ducts are arranged behind walls along the mostly opaque north and east façades, rather than along or through the ceiling. Large hinged interior panels yield access to the hidden air-handling equipment and to shelving behind the walls. The hinged action recalls Pierre Chareau's Maison de Verre (1931), a steel "machine-like" house where movable mechanical devices allowed the space to be reconfigured as needed.

Using industrial building practices in the design of a custom private dwelling brings with it a number of constraints. These are revealed in an offhand manner, mostly in the form of unconcealed construction joints that casually expose the building's logic: uncovered bolts at the connection of column to beam; visible cross-bracing for lateral support; the bare steel-deck ceilings; the building's industrial skin. Exposing these details just as they might be in commercial construction allowed the house to be built much more quickly and inexpensively, but the appearance that results is raw and eccentric.

South-facing glazed wall at the courtyard of the Wittenberg House, 4714 Yoakum (top); living room with hinged walls on the right (left); and sliding glass wall separating the breakfast room from the glazed sun porch (above). Wittenberg Oberholzer Architects with Susan Wittenberg, 2003.

Corrugated siding and galvanized screen at the entry of 4714 Yoakum.

BRACKEN RESIDENCE

Much larger and designed for a heavily wooded suburban site, the Bracken Residence demonstrates the principles that earned Lake/Flato Architects the 2004 AIA National Firm of the Year award. The 8,000-square-foot two-building compound is modern, while also evoking an assimilated Houston vernacular, adjusting to the nuances of its low-lying site. Three parallel two-story rectangles stretch from east to west, surrounded by a pine forest. Long overhangs shelter high north-facing clerestories, while expansive glazed walls dramatically frame the vertical pattern of the native pines. A slightly larger ten-by-20-foot bay disciplines this house as well, but its steel frame is a custom fabrication. The secondary roof and floor framing is wood, which lends a warmer character to the interior. Structural elements are exposed but more graphic than spatial: They lie nearly flush with the planes of the walls in most cases, a condition accomplished through much on-site welding and field fitting. The result looks like machine precision, but is actually the fruit of the laborer's craft.

Delicate workmanship and time-consuming on-site fabrication—along with extensive planning and coordination among various construction trades—integrated the electrical, plumbing, and mechanical systems into the structure. As an example, what appears to be an exposed structural deck framing the second floor is in reality a furred-down ceiling that conceals a one-and-a-half-inch-deep utility chase. The final effect is one of openness and visual calm.

At $200 per square foot, the Bracken Residence has the "aesthetic of the machine" achieved only by meticulously handcrafted work, in this case painstakingly executed by Renaissance Builders, Inc. and its team of subcontractors. Such details as continuously field-welded steel framing joints that act as rain and temperature seals and rigid moment connections epitomize a pre-industrial approach to construction, though it may be read as an industrially produced building.

Glazed wall at the living room of the Bracken Residence, 606 West Friar Tuck Lane (above); sliding polycarbonate screen wall separating the living room and kitchen (top right); and ipé wood exterior screen at entry courtyard (bottom right). Lake/Flato Architects, 2003.

Two-story living room at 606 West Friar Tuck Lane.

STEEL-FRAME BUILDINGS CAN accommodate large expanses of glass, and both residences offer open views and clear connections to the landscape. Each provides the pleasures of a disciplined aesthetic. Both demonstrate how industrial building systems may respond to the specific conditions of a site. The Wittenberg House is pushed to the boundaries of its lot to shape an interior courtyard in a dense part of town. The Bracken Residence is woven into a grove of mature trees. What the industrial building systems used in both have yet to achieve is a level of performance that blocks unwanted heat transfer through metallic and glass elements. The Wittenberg House's site-built single-pane glazing and the Bracken Residence's through-wall exposed steel structure both transfer heat between inside and outside, belying the presumption of machine-like environmental performance.

And so we are reminded of the paradox of Le Corbusier's *machine à habiter*, which created the expectation of both machine-produced buildings and machine-like performance, neither of which were delivered in that architect's handmade works of the 1920s and 1930s. But those buildings inspired architects after him to pursue the elusive goal of industrially produced architecture.

In his catalog for the 1934 exhibition at the Museum of Modern Art, titled "Machine Art," curator Philip Johnson identified the geometric purity of machine components and machine-made products as a rarefied source of modern aesthetic beauty. His careful selection of industrially produced objects was not limited to those decorative objects employing the machine aesthetic that was promoted at the recently shuttered Bauhaus, but included tools and implements useful in the processes of industrial production. The more remarkable inclusions were such utilitarian objects as hinges, door knobs, and padlocks, standard plumbing fixtures, and aluminum and steel wide-flange beams. While his inclusion of locks and plumbing fixtures may have been inspired by Marcel Duchamp's conversion of off-the-shelf products into fine-art "readymades," Johnson's choice of steel beams seems a function of his appreciation for what Le Corbusier termed "the engineer's aesthetic." The beams' inherent refinement emerges directly from the logic of their production. This conflation of beauty and manufacturing suggests one way to measure the degree to which each of these two houses serves as prototype or production model.

The house at 606 West Friar Tuck is a completed work, the result of building processes intended to make the house appear like an industrially produced object. But at 4714 Yoakum, the process will continue indefinitely. Visiting the Wittenberg House with the architect on the summer solstice, I was struck by the degree of visual and thermal openness in the decomposed-granite courtyard to the south and the full three-story glass exposure it offers to Houston's southern sun. The house provides a modest seven-foot-deep roof overhang to shade the three-story fully glazed south-facing wall. Mr. Wittenberg, who is also a Rice professor with expertise in climate-responsive design, allows that the shading may need to be enhanced with an external vertical screen—but he will live in it for a time to test his assumptions. This is one of the rare opportunities for an unfolding exploration afforded when the owner is also the architect, analogous to the tinkering under the hood of a much-loved roadster over an extended period and the making of incidental and systematic observations of daily performance. As he notes, "it's hard to experiment with a client's house." ■





Top, from left: *B & B Double Header* by Brian H. Thomas, John Yowell's *Boat Car (TX-NOT 4 H20)*, *The Sunflower Car* by Timothy Young, two Elvises, *La Fairona* by Theresa Houston. Sunroof seating on top of *Shut Up 'N Dance!* by Kathy Whelan (above).

My Art Car Parade

A 17-year Houston tradition. My first time.

BY LISA SIMON | PHOTOGRAPHS BY PAUL HESTER





Top, from left: *Mobile Lisa* by Hector Garma, Ben Gibson's *Student Driver, Play Vroom* by Dawn Black, George Socaris's *The Slinger, Gulf Ghost* by Charlotte Wells. Blowing kisses from *Sandra's Botti-car-lee* by Sandy Scharr Newton (above).

It is morning on the day of the Art Car Parade. Tank Girl and I are standing in her driveway, drinking coffee and running down a list of things to bring with us. "Sunscreen…water…fire extinguisher."

Once we're through the list, we take all non-essentials out of Tank Girl's art car. *Everyday Treasure*, her glitter-covered Jeep Cherokee, is what is called a "daily driver," meaning it is her primary mode of transportation, parade or no parade. We are removing the junk mail and CD cases, the sweaters and garbage that tend to collect in backseats.

We are wheels up by 9 a.m., heading to a brand-name gas station. "We get premium today," says Tank Girl, "No cheap stuff on parade day." While she fills the tank, I watch a massive Big Wheel being towed by on a flatbed trailer. A sedan with a Piet Mondrian paint job pulls up to the pump opposite us. "Happy parade day," the driver wishes us.

Driving toward the parade route, we pass a scrap-metal dragon inching its massive, hinged way south on Waugh against a backdrop of drab townhouses. A rusted iron horse on a barely discernible car chassis blows past us as we stare.

There must be no art left in the museums. It's all in the streets.

When we arrive at Allen Parkway, which has been closed for the parade, we are waved through the blockade by a volunteer on skates, no questions asked. Exceptional cars are the rule today, and also apparently our tickets in.

The next skater we encounter glides over to the driver's-side window. "Happy parade day," he says. "Do you have your fire extinguisher?" Tank Girl points it out, our line up number is checked off a list, and we are waved on to the next skater. "Do you have your fire extinguisher?"





Top, from left: *Draka the Dragon* by Lisa Nigro, Shelley Buschur's *Pink Slip*, *Noggin del Fuego II* by Brian Mahaney, KPRC-TV's *Scrap Dragon*, *Under the Sea* by Jim Griffes. Mayor Bill White smiles from the back of *Uncle Sam* by Russell Janise (above).

Our line up spot is a good one: in the shade of the Montrose overpass. We park, stand up and stretch, and start receiving visitors. Two hundred and fifty cars are lined up for the viewing. Tank Girl gamely fields questions about glue and where she gets her ideas. Along with the strolling sightseers and day-trippers are roving journalists and on-air personalities.

"What's the feeling of being in the parade?" asks a hairdo with a microphone and a cameraman. "Aaaaaaaah!" screams Tank Girl, with her hands up by her face, and I know she's made the six-o'clock news.

The lead skaters zip down the line. "Drivers to your cars! Drivers to your cars!" I take my seat on the rim of the shotgun door, and the parade is off. Tank Girl mans her car's PA system. "Look at me," she says in the falsetto singsong she uses to voice her car. "I'm so sparkly." The crowd laughs when I snap their pictures.

The parade is so long that it wraps around its own route. We can see the first few cars—including the one carrying Mayor Bill White—across the median, heading back west.

Friends of our car and its riders break ranks with the spectators and rush up to us as we pass. One of them presses a pink flower into my hand, and I wave it at the crowd the rest of the way.

There are places along the route where the crowd is close enough to touch, and looks happy. But when we make the turn at downtown, the crowd is held fast behind a barrier and eyes us more warily. This is where the girls wearing pink slips and riding in the overtly partisan, *Give Bush a Pink Slip* truck are called whores.

But mostly the crowd loves us, and we love them back. I've never had my picture taken so many times, not even on







Top, from left: *Mildred the Mad Cow* by Dave & Gina Hamperson, Bonnie Blue's *The Women Rock Art Car*, *Splinter* by Isaac Cohen, Charley Scott's *Belinda*, *No Float Boat* by Bill Wise. Pretty grills, clockwise from top left, above: *Car-tography* by Allan L. Griffin, Jr., Donna Dommel's *RU GAME*, *Play Vroom* by Dawn Black, Konnie May's *Flutterbug*.

my wedding day. "Swimming party at my house," announces Tank Girl on her PA as we reach the end of the route. "Come on over." By the time we turn off the route and drive back through the looking glass, back up out of the rabbit hole, I feel as sparkly as the car, and so ready for a swim. ■

Tank Girl (Rebecca Lowe) and *Everyday Treasure*.

Paul Hester

Street Between Pennzoil Place and RepublicBank Center from Above, 1999, Paul Hester.

The Machines in the Swamp

Architecture Through Photography: Three Views
De Santos Gallery
May 8–June 19, 2004

Reviewed by Kelly Klaasmeyer

Water smoothly cascades over angular, blocky forms, which in Clay Harmon's photograph look like natural features from an alien planet. Maybe that's appropriate. The photo was taken at Houston's Tranquility Park, the public space designed by Charles Tapley in 1979 to commemorate the tenth anniversary of the first lunar landing. It seems pretty optimistic to call anything in downtown Houston "tranquil," but the park was named after the moon's Sea of Tranquility. In Harmon's photograph it looks about as inviting as a lunar landscape.

Harmon's work, along with that of Valentin Gertsman and Paul Hester, was a part of "Architecture Through Photography: Three Views" at De Santos Gallery. The photographers in the show are primarily drawn to the formal qualities of architecture, the modern structures of Houston's downtown in particular.

One of the goofy steel cylinders that sprouts from Tranquility Park and serves as a fountain dominates another Harmon image. The stark, stolid form could be an understudy for the monolith in *2001: A Space Odyssey*, but it's backed by the gothick-y retro '20s-skyscraper profile of Philip Johnson's RepublicBank Building (now Bank of America). Harmon's palladium printing gives the photograph a dark, warm tone and a burnished texture that feels vintage. The image calls to mind the antique futuristic visions of Fritz Lang's *Metropolis*.

Harmon's eye and choice of printing process work well together. Even when he photographs the concrete columns of a parking garage, he imparts a static gravitas to the forms. But Harmon is also slipping in a hint of irony by presenting the contemporary structures in such a self-consciously stately manner.

Cite photographer Paul Hester seeks a sort of architectural portraiture that presents buildings as functioning machines. His camera peers down the steep chasm between the towers of Philip Johnson's Pennzoil Place; Johnson's RepublicBank building fills the background. The dark angles of the Pennzoil towers energize the image. Hester's silver-gelatin prints are cool and clean, enhancing the impersonality of the grids formed by a myriad of building windows. The open door of a tiny white car on the asphalt below is the only hint of life.

The show reminds you that, for better or worse, Philip Johnson has a tremendous presence in Houston. Another of Hester's photographs captures the Johnson-designed Gerald D. Hines College of Architecture building at the University of Houston. The image was taken at night—all of the windows are aglow, and the building is undoubtedly filled with students pulling all-nighters. The mini-Parthenon on the roof is illuminated. It sits like a tiny, silly post-modern party hat plopped squarely on the head of an exceptionally squat and humorless man.

Valentin Gertsman is the photographer who subjugates architecture to his artistic will, with close crops that isolate colorful geometric forms. There is a dynamic, constructivist sensibility to his work, possibly related to the artist's biography: The 79-year-old artist is an émigré from the former Soviet Union.

Gertsman's dramatic cropping of the George R. Brown Convention Center leaves a gratifying abstract composition: a grid of white panels cut by a shadow, angled against an ultramarine-blue sky. Circular red air ducts peer over the edge.

The mirrored glass blocks of the Glassell School of Art are the close-in focus of another image. The grid segments and distorts reflections of the building's surroundings: A figure on a bench stretches across several squares—a section of an arm here, a section there. A man walking across the courtyard has three levitating heads. An unexpected touch of the surreal interrupts the geometric regularity.

And then it's Philip Johnson—*again*. This time pop sculptor Claes Oldenburg's bold circular mouse ears frame the architect's RepublicBank tower. The red steel mouse pops against the rich blue sky in the large-scale image, showing Gertsman's deft hand with color as well as composition.

Other works by Gertsman are composites. His image of a shiny red wall shoots for a Malevich-esque Suprematism, but others lean toward the gimmicky, with buildings mirroring themselves or overlaid with other forms. The curved tower of the Holocaust Museum has a mute, weighty presence in the lower half of one photograph. But when you look closer and see a faint pattern of menorah shapes covering the image, it seems too heavy-handed. Gertsman is at his best when he finds his images rather than builds them.

The show's works weren't limited to the architectural phenomena of Houston—there's more Philip Johnson, this time from New Canaan, Connecticut. Paul Hester presents a montage, melding an image of countryside with an interior shot of Johnson's Glass House. Ghostly trees underlie the living room furniture and the roof has dissolved to reveal branches and sky. Thankfully, this tactic is an anomaly in Hester's work. He too is much more successful when he doesn't manipulate his images.

Hester's also got a shot of the cavernous interior of Momentum Place in Dallas. (Only Dallas would call something "Momentum Place," though it has since been renamed Bank One Center) Open floors are packed with desks, and cubicles look very crowded. It was designed by—well, you know who.

Looking at many of the Houston images in the show you see the bold, new, dynamic face that our city, with varying degrees of success, seeks to present to the world. Houston is all about the new; we really, really like to bulldoze the old.

But there are images here that stray from the confidently modern, like Clay Harmon's shot of the back of an abandoned Galveston building. The windows are boarded up, and two snaking fire escapes run down each side with rusty symmetry. The fronds of a palm peek around the edge of the building, and a small tree grows out of the corner of concrete steps. The feeling of decay is palpable.

It's an image that illustrates the futility of all our grand aspirations. We may build dramatic edifices, but our humid, verdant, subtropical environment is ready, willing, and able to retake anything we abandon. Houston will always be the progeny of an Allen brothers' swampland real estate scam. Leave downtown unattended for a couple of years, and it'll be completely covered in vines, an Angkor Wat on the bayou. ■

It Hurts to Look

Between the Eyes: Essays on Photography and Politics
by David Levi Strauss. Published by Aperture, 2003. 224 pp., $29.95

Reviewed by Jack Massing

The essays of David Levi Strauss explore some of the most difficult of human conditions, as recorded in hard-hitting photographic images. The images and Strauss's words are enough, at the least, to move anyone to deeper thought and, at the most, to inspire some level of political action. Written between 1986 and 2002, the 18 essays are culled from exhibition catalogs for artists including Francesca Woodman, Miguel Rio Branco, and Hannah Villager, and from magazine articles written for *The Nation*, *Camerawork*, *Aperture*, and *Artforum*, among others. Also represented are collaborations with visual artists including Alfredo Jaar, Jim Goldberg, and Bobby Neel Adams.

Essays on photography and politics have never been more important than they are today. Evidence of some sort is at the center of most political decisions, and problems arise when that evidence is politicized and used as a weapon instead of a treatment for the better health of the political body. *Between the Eyes* is about reading photographs and understanding the interpretation of their truth.

Pain permeates each of Strauss's essays, whether his subject is the falling of the World Trade towers, the disturbing photographs of Sebastião Salgado, the pervasive landmine problem in Cambodia, runaway teens, or the tragic suicide of the talented young photographer Francesca Woodman. Strauss's compassion for the story within the image cuts through politics and opens up the wounds of the individuals affected in and by the photographs that he discusses. In the essay "A Sea of Griefs Is Not a Proscenium: The Rwanda Projects of Alfredo Jaar," there is the powerful story of Gutete Emerita, a Tutsi woman who bore witness to a brutal act of genocide carried out by the Hutu, at her church during Sunday mass. The slaughter of 400 people included her husband and two young sons. Emerita somehow escaped with her daughter. Her eyes are the subject of Jaar's "The Eyes of Gutete Emerita" (1996), a work that serves as the frontispiece for the dust jacket of this book. Strauss writes that his first encounter with this artwork made him physically ill; he still has lingering nausea when remembering it.

© Bobby Neel Adams

Isabella, a landmine victim in Tica, Mozambique, with her children. Photograph by Bobby Neel Adams.

As John Berger writes in his introduction, "Any tyranny's manipulation of the media is an index of its fears," summing up in a single sentence the difficulty of making simple political decisions. We all have some fear and we all manipulate others to some extent. Berger goes on: "I am talking about the pain of living in the present world," effectively describing the overriding tone of the book. No matter who is in power at any time anywhere in the world, there seems to be thoughtless violence and pain.

The book's opening quote from Wim Wenders's *The Act of Seeing* reinforces this:

> *The most political decision you make is where you direct people's eyes. In other words, what you show people, day in and day out, is political... And the most politically indoctrinating thing you can do to a human being is to show him, every day, that there can be no change.*

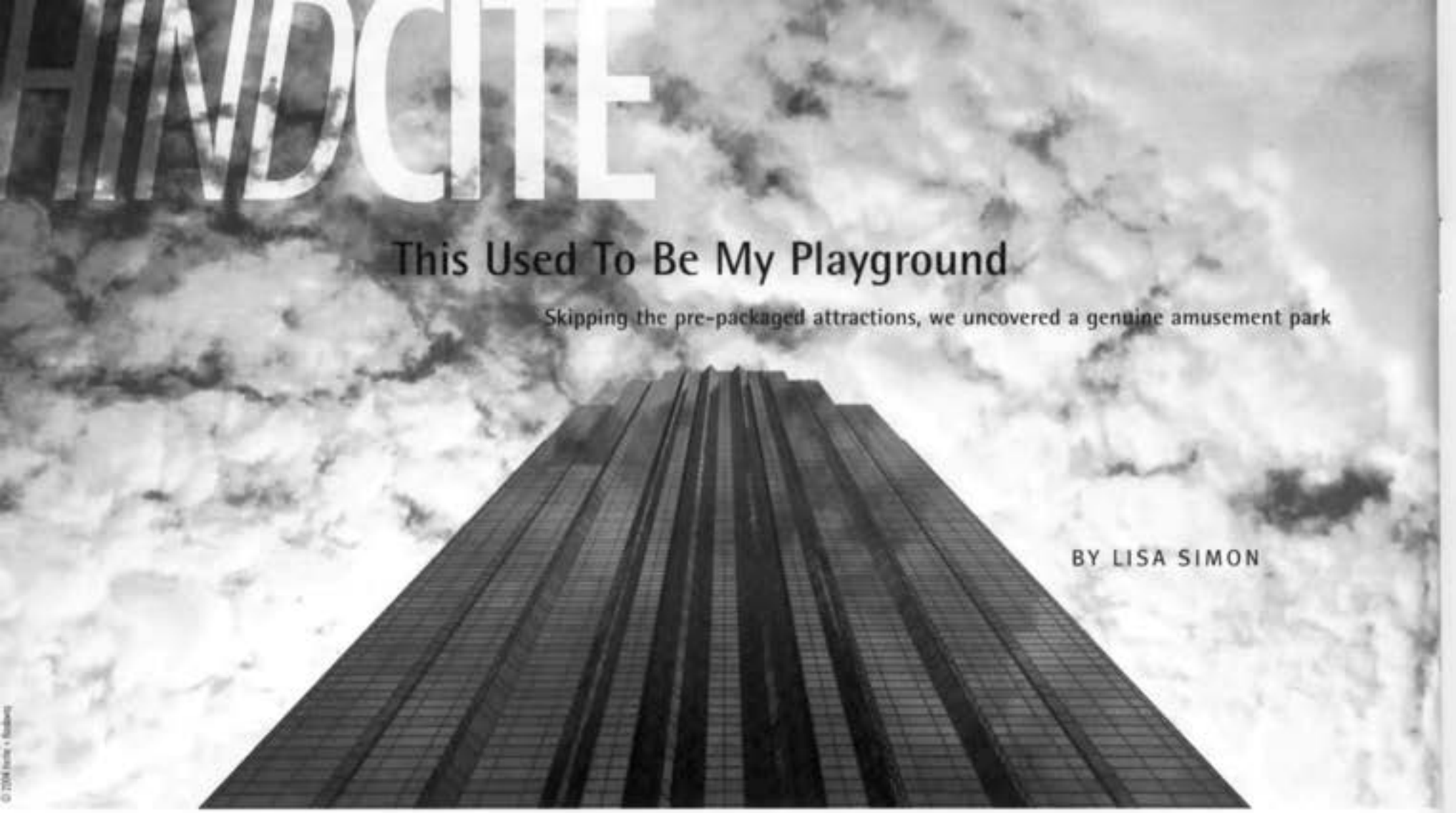
Strauss is as careful a thinker and as serious a viewer of images and their disposition in media and culture as anyone writing today. The information age is both the advantage and the burden that Strauss has over the pantheon of critical thinkers who came before him. On one hand, the endless digital resource of the Internet aids his research and gives him the chance to gorge his eyes on images scattered throughout the world. On the other hand, the media boom, with its plethora of periodicals and books, aided and abetted by the Web, makes it difficult for any one person to stand out and be heard. Luckily for us, Strauss's mind is precise and thoughtful. His ability to seek out and expose humanity's most horrific images is perhaps the reason he generally works at night, in the protective embrace of darkness and silence. At night, Strauss has the time and attention to sift through the pain of the world. Time to reflect on the images that are magically rendered by the photographic process and the ability to analyze and understand what is being spoken by those images. Time to ask his readers about their politics and how their empathy may change when they confront the inevitable onslaught of compelling photographic evidence in the future.

We are the same cruel barbarians now that inhabited the planet thousands of years ago, and we are here to stay. We will not change. We have the photographs to prove it. The growing documentation of conflict, crime, and brutality has been made possible by ever-smaller camera equipment and faster technology. Today we have live coverage and instant reports of the world's pain as it happens. Photography has replaced our collective memory. Painting, illustration, and writing prior to the dawn of photography had their effects, but they are nothing compared to the widespread distribution of easily reproduced and easily shared photographic images. David Levi Strauss's is a hand that writes very well, and with his gifted fist, he punches you right in the nose. ■

HINDCITE

This Used To Be My Playground

Skipping the pre-packaged attractions, we uncovered a genuine amusement park



BY LISA SIMON

CHILDREN, IN THEIR QUEST for play, will turn any environment into a scene of fun and games. In fact, the more effort required to adapt a setting to recreation, the more fertile a setting it becomes. The fort made of couch cushions or the tea party at the bottom of a swimming pool provide far more diversion than a spin around Candy Land or Snakes and Ladders.

Once my friends and I reached the age of 16, the state of Texas considered us to have matured sufficiently beyond the stage of play to be ready for the responsibility of driving. We accepted the responsibility with a giggle, knowing that we would, in fact, play with it. We would use our new mobility to search Houston far and wide for fun.

Just when we needed it, my best friend was handed down her grandmother's old rust-red convertible. At night, when the humidity closed around us like a wet slap if we stood still too long, that convertible was the perfect car. (During the day in the blistering sun, a hermetically sealed and air-conditioned interior was preferable.) Yes, the wind in our hair made us feel free, and yes, the air flow helped to combat the stickiness of summer nights, but rooflessness was only part of the car's appeal.

The best thing to do with the convertible was to park it in the circle drive in front of the then-new Transco Tower, sit on the doors, and look straight up. If there were any clouds at all (and especially if there was a bit of lightning or thunder), the view was cinematic, like a modern-day *Frankenstein* in which the mad doctor's lab was up a glass-skinned tower instead of in a castle on a hill.

Even though we were right there, my friends and I never went to the neoclassical water wall just across the lawn from the tower. It was lovely, but—lit up, mesmerizing, drawing crowds of visitors—it was too obvious and seemed too ordinary. How could a person feel a part of Houston while behaving like a tourist?

By this time I had read "The Loss of the Creature," a 1958 essay by physician and novelist Walker Percy, in which he writes that what a tourist sees, especially when it is a well-known and heavily photographed sight, is only what he expected to see. Therefore, the tourist has not truly "seen" the thing he came to see at all. That is, he has not experienced it directly, but through the filter of his expectations. I had taken this essay wholly to heart, because it flattered my desire for a more authentic, unexpected relationship with the sights of my hometown.

Visits to pre-packaged attractions like the water wall, NASA, and AstroWorld did not generate any new intimacy with the city. Those attractions may have been local—Houstonians, like we were—but in a plastic, symbolic way. Only the weather at those spectacles was recognizably ours.

If we had been able to think of an alternate use for the water wall that wouldn't have landed us in the back of a squad car, we would have done it in a heartbeat, for the chance to have a genuine experience there. This desire to shake up our expectations of a place found its greatest expression in our atypical use of Houston's most famous mall.

The interior of the Galleria was vast, even in those days before Galleria IV. The more devoted fashion plates in my group had spent many hours there, drinking cokes, watching shoppers, and unintentionally memorizing the mall's layout. A couple of our best thinkers got the idea to use our knowledge of the stores and corridors of the Galleria for noncommercial recreation. They drew up a fiendishly difficult mall-wide scavenger hunt, and gave us the Galleria Games.

In the Games, each team followed a different route through the mall, via clues written in perfect rhyme and meter. Every clue riddled the next one's location, until all the teams converged on a single endpoint. Often a clue would force the team to interact with store personnel to obtain the next clue in the chain. We found that the Galleria's workers—so very like the costumed players at AstroWorld—were eager to participate in anything out-of-the-routine.

But our greatest success at mining the city for bona fide experiences was our subversion of downtown Houston, accomplished just by being there at night. On foot.

The grid's pristine sidewalks saw precious little use even during the day, when people who needed to move around downtown preferred to use the tunnel system. On our nights downtown, we stuck to the sidewalks in part because they seemed to cry out for the caress of shoe leather. But that was not our only reason for staying north of the curbs.

At night, downtown was ruled by the Urban Animals, a roller-skate posse that also practiced a doctrine of city-as-playground. At night *they* made principal use of the broad, flat roads, which the office workers (and their cars) abandoned every weekday after 5 p.m. Crossing the streets and skyscraper plazas, we only had to leap out of the Animals' way. There was no motor traffic at all to trouble us.

My group liked to park near downtown's western edge, then slowly stroll the depopulated canyons, trying on apocalyptic visions. After all, the only things we had seen comparable to the deserted city streets of downtown Houston at night were the aftermaths of grave disasters in end-of-the-world movies. Unfettered by the rules of a society that was nowhere apparent, we climbed Miró's sculpture at the foot of Texas Commerce Plaza and pressed our faces against buildings' cool façades. Once, a musician friend brought along a recorder, and as he tootled, we made up ballads about the graceful curves of Allen Center and an (imaginary) band of destitute itinerants known as the "One Shell Plaza tramps."

But as we grew older and our entertainment horizons broadened beyond Houston, we strayed. We made comparisons. We thought our city was diminished by its lack of a non-subversive downtown nightlife. We talked about how nice it would be to see foot traffic and cars on the streets, restaurants and bars open late, providing the kind of kicks we'd had in other places.

Now we have our wish. We happily take advantage of Main Street's light rail thrill-ride and downtown's proliferating clubs and cafés. We consider ourselves lucky. With excellent timing, our hometown grew up along with us. ■

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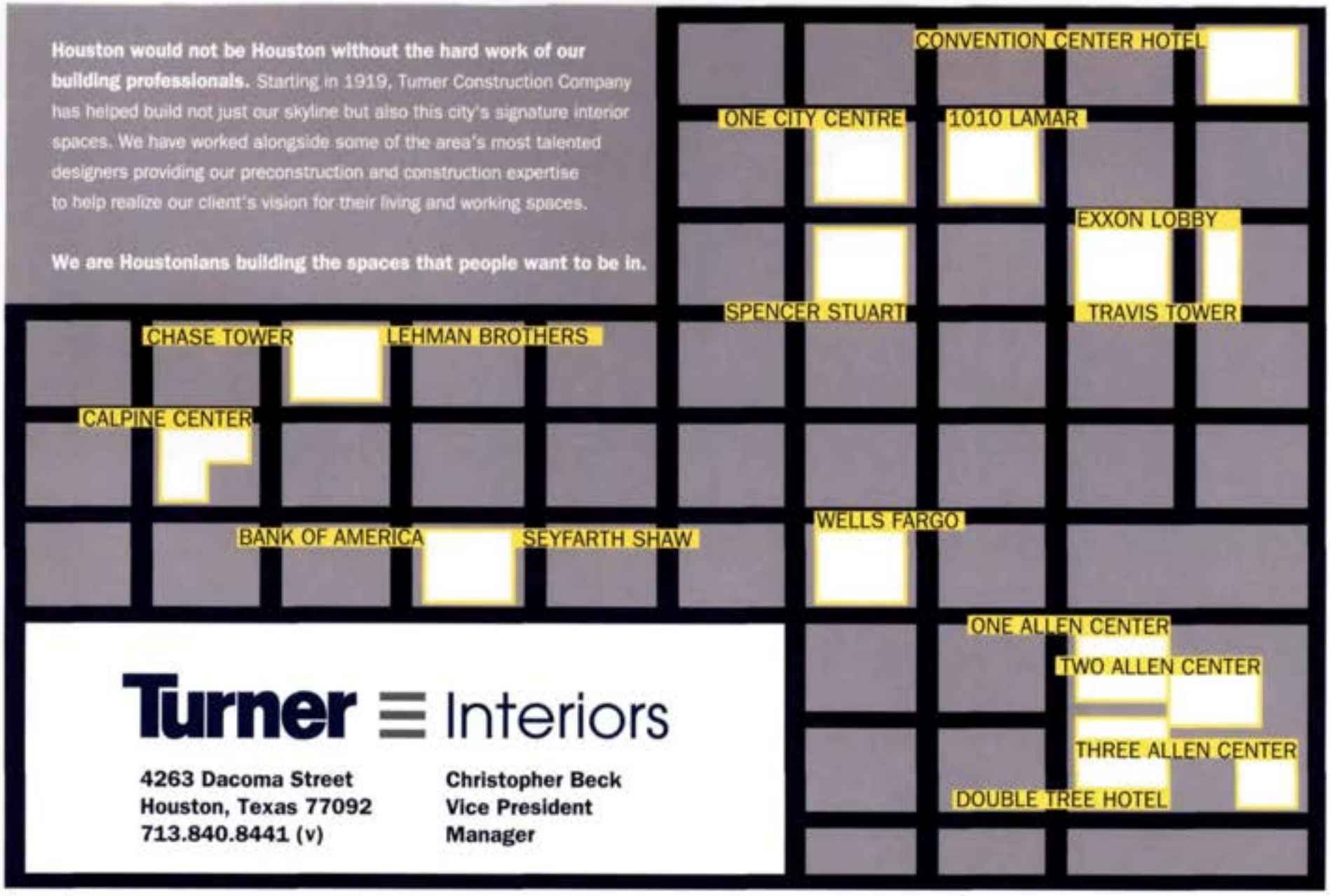

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