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31: Winter – Spring 1994

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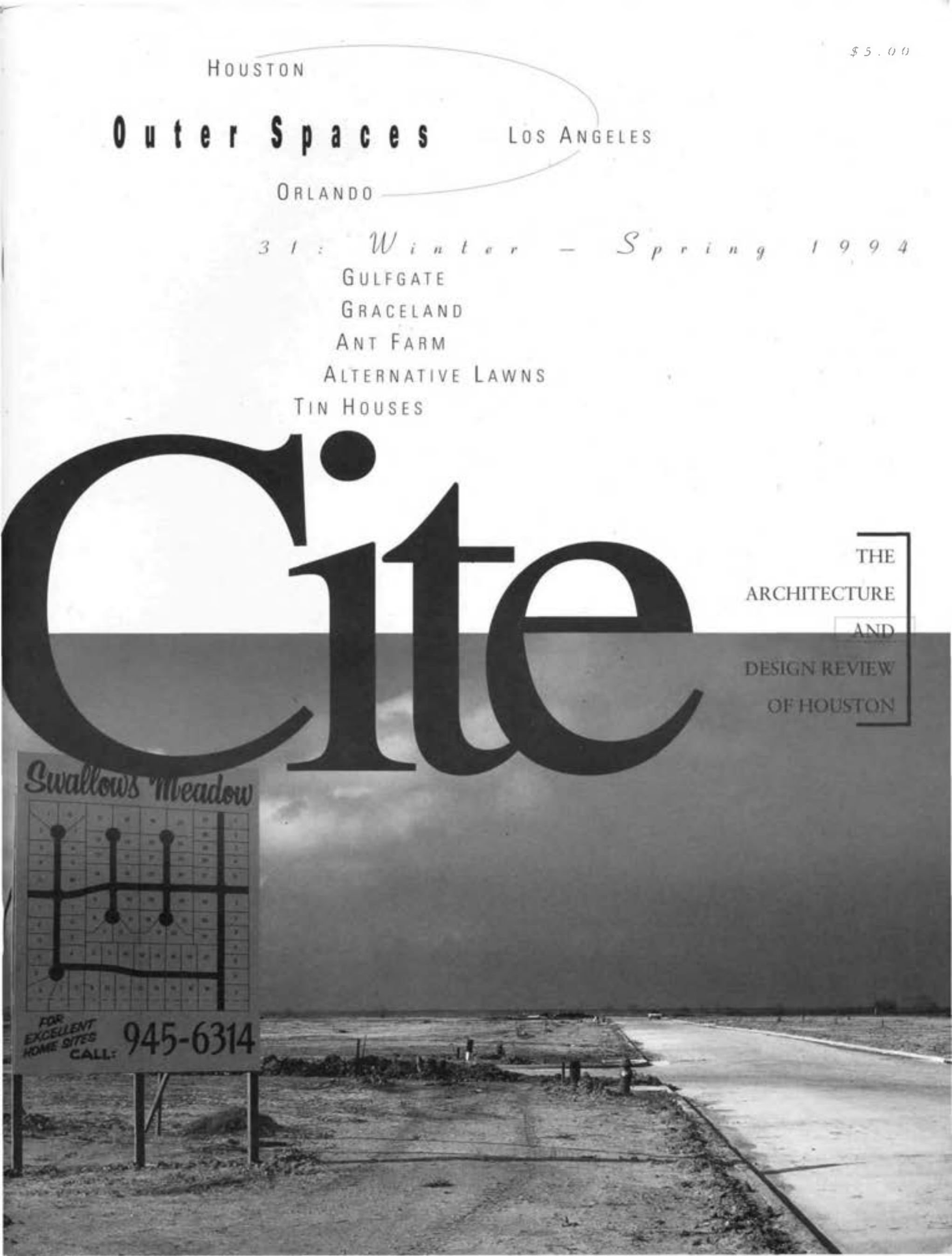
Cite

THE ARCHITECTURE AND DESIGN REVIEW OF HOUSTON



Cite

The Architecture and Design Review of Houston

A Publication of the Rice Design Alliance

31: Winter - Spring 1994

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Out of *Cite*: *Cite* has been recognized with three awards for its Spring/Summer 1993 issue, *On the Border*. The issue, edited by Stephen Fox and Rafael Longoria, discusses the regional culture of the Texas- Mexico border region. The magazine includes a pull-out architecture tour booklet of the region between Harlingen and Laredo. The awards include the Texas Award for Historical Preservation by the Texas Historical Commission; the Presidio of La Bahia Award, third place, by the Sons of the Republic of Texas for *Cite*'s outstanding contribution in the field of the Spanish Colonial period of Texas history; and the Bronze Medal by the Art Directors Club of Houston to *Cite*'s graphic design firm, Minor Design Group, in the 38th annual competition of the Houston club.

OverCite: The Killam Hunting Lodge and the Lasater House were designed by Ford, Powell & Carson, for whom David Lake and Ted Flato worked at the time (*Cite*, Spring-Summer 1993). In addition, the stonework used on the Vallecillo Hunting Lodge was first used in this manner on the Tom Slick residence, designed by O'Neil Ford in 1956 and constructed using Vallecillo stone.

Cover photograph © Bruce C. Webb

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Cite is printed on recycled paper.

Editorial

Re: Cite 30

Stephen Fox's article in the recent issue of *Cite* (Spring-Summer 1993) on the Kraigher House, designed by Richard Neutra in 1937, was of particular interest to me. He states, "Neutra never traveled to Brownsville." That is correct if one considers only the time during construction. Neutra did visit the house in 1951, 14 years later.

While serving as an associate architect in the Austin firm of Fehr and Granger, I became aware of a proposed addition to the McAllen Municipal Hospital and that architects were to be interviewed for selection. Charles Granger, FAIA, knew Neutra and solicited his participation as an associated architect. Neutra assented, and after appearing before the selection committee (the job went to Ford and Colley even though Neutra handed the three-member committee copies of *Time* magazine with his picture on the cover) asked if we could drive him to Brownsville to see a house he had designed but had never seen. Charles Granger and I agreed, and we drove to the address he gave. As we pulled into the driveway, Neutra was visibly shaken by what he saw. The white stucco was badly discolored, with massive cracking. Charlie and I were shocked, Neutra was appalled.

But Neutra was the master of the moment. As he stood looking over his woefully dilapidated creation, he said: "It is aging beautifully! It is wonderful!" I learned much from his marvelous sense of bravado, and that there was no time for humility. It was aging beautifully like some past lover.

Neutra then walked to the door, pushed the doorbell, and, when the lady of the house appeared, proudly introduced himself in his elegant Continental manner: "I am Richard Neutra, the architect who designed this house many years ago. May we come in?" We did go in, had a pleasant tour, and left for McAllen after about 30 minutes. The Kraighers had gone and the name of the lady of the house I cannot recall. Neutra never mentioned the house again during his stay in Texas. I did see him several times over the years, and as late as 1967 we talked about our trip to Brownsville.

So in 1951, as now in 1993, the Kraigher House was in bad condition. I hope that this fine example of modern architecture can be restored and maintained. It is an outstanding monument of its time.

This is a footnote to Stephen Fox's excellent article. I have told this same story to Dr. Jay Henry, the architectural historian whose new book on *Texas Architecture* (University of Texas Press, 1993) includes photographs of the house.

George S. Wright FAIA
Arlington, Texas

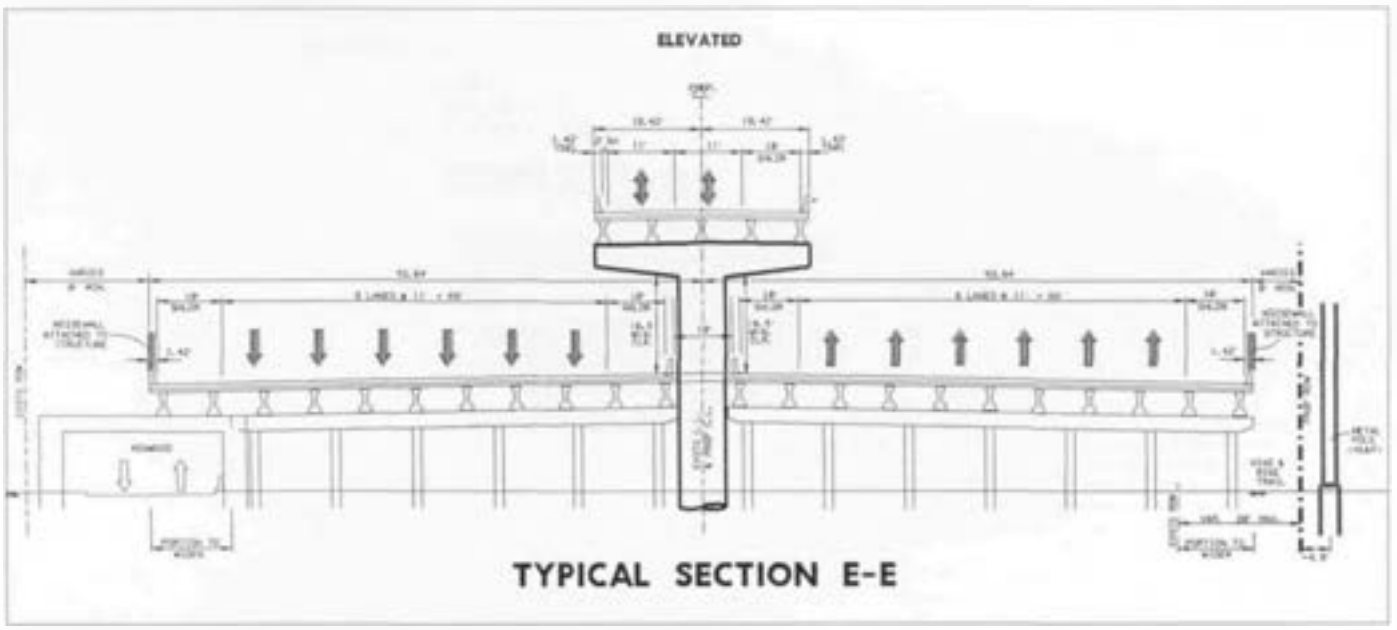
Down With the Southwest Freeway

Deyan Sudjic, the London architectural critic and editor, in his recent assessment of Houston and other cities of the late 20th century suggests that the best hope for achieving a measure of quasi-urban grace here lies in the nurturing of our tree-lined boulevards. These, he argues, can provide a setting for the kind of public life the city now experiences only in bits and pieces. Montrose is the only boulevard Sudjic mentions by name in this connection, citing its tentative sprinkling of cafes and the long-running Museum of Fine Arts, with its Mies van der Rohe pavilion and gardens fore and aft. Montrose and Renzo Piano's Menil Collection, located in a "leafy suburb" nearby, he suggests, provide "coordinates" around which Houston may "one day begin to solidify," although vision is still needed to make that happen.

Unfortunately, since the opening of the Southwest Freeway in the early 1960s, Montrose Boulevard and its environs have been assaulted in the most obnoxious manner by ten lanes of elevated expressway that ascend from a comparatively benign open-cut configuration to form a viaduct just east of Mandell that overbears Montrose, Main Street, and much of the old South End with noise and fumes before dipping below grade once more to intercept State Highway 288. Equally offensive is the underside of this viaduct – a dank, hypostyle no-man's-land that few care to use even for parking (although the homeless are out in force at Fannin and San Jacinto). At a time when other cities are dismantling elevated expressways (Boston, San Francisco) and covering over depressed ones with parks (Seattle, Phoenix, Duluth, San Diego, Hartford), the Texas Department of Transportation seeks to compound rather than rectify its longstanding abuse of Montrose and Main Street by adding additional elevated lanes on either side of the offending viaduct and by superimposing a third-level high-occupancy-vehicle lane down its middle. The cost of adding insult to injury is projected at $30.7 million – approximately a tenth of what the Department of Transportation plans to spend on Houston highways in 1994. (Metro is contributing the $9.6 million cost of the HOV lane; the rest of the project is funded by TDOT.) Construction will take 18 to 24 months, if work commences as planned late in 1995.

The cost of demolishing the elevated section of the Southwest Freeway and replacing it with below-grade traffic lanes covered over by a grassy, tree-lined mall is perhaps four times greater than the Department of Transportation's Rube Goldberg approach. But it would be money well spent in consideration of what Montrose Boulevard and its environs already represent to the city (even from a stranger's perspective), no less than what they might someday become if given the chance. In rethinking the project, careful consideration should also be given to improving the on- and off-ramp-access characteristics of Montrose and Main Street, something the current plans also neglect to remedy. Federal ISTEA (Intermodal Surface Transportation Efficiency Act) funds might be used to help defray some of the added expense, as would increased tax revenues from properties whose valuation continues to be depressed by the effect of the freeway in its current form. In no case should public expense of any sort be incurred in making the Southwest Freeway even more offensive than it already is to this particularly promising slice of Houston, even if the project must be deferred until sufficient appropriations are available to allow it to be done right the second time.

One of the mottoes inscribed in the foyer of City Hall comes from another distinguished English critic, John Ruskin, who wrote in the mid-19th century, before the streets of Houston had even begun to be paved, "When we build, let us think that we build for ever." Perhaps it needs to be added to the lobby of the Texas Department of Transportation too.



Texas Department of Transportation, proposed section, Southwest Freeway expansion, 1992.

Spring Architecture Events

Rice Design Alliance
P.O. Box 1892
Houston, Tx 77251-1892
(713) 524-6297

Spring Lecture Series:
Virtual City. A five-part lecture series that will explore the effects of the new technologies of communication and information exchange on urban life. The series will include the following speakers:

23 February – Deyan Sudjic, editor and critic. His latest book, *The 100 Mile City*, reviewed in this issue, chronicles the new shape of the world's great cities in the postindustrial age.

2 March – Bruce Sterling, science fiction writer. His most recent book, *The Hacker Crackdown*, describes the law enforcement and computer-crime activities that led to the creation of the Electronic Frontier Foundation in 1990.

9 March – Howard Rheingold, editor of the *Whole Earth Review*, a consultant to the U.S. Congressional Office of Technology Assessment, and the author of numerous books, including *The Virtual Community: Homesteading on the Electronic Frontier*, reviewed in this issue.

23 March – Bruce Tomb and John Randolph, principals in the firm of Interim Office of Architecture (IOOA) in San Francisco. Their recent work explores architectural space constructed through the electronic feedback of urban phenomena.

30 March – Sanford Kwinter, 1993–94 Cullinan Professor of Architecture at Rice University, cofounder and editor of *ZONE*, a serial publication of philosophy and contemporary culture, and editor of *Zone Books*, a collection of 20th-century documents in philosophy, ethnology, and history.

All lectures will be given at the Brown Auditorium, Museum of Fine Arts, Houston, at 8 p.m. This series is made possible by generous grants from Compaq Computer Corporation, Southwestern Bell Telephone Company, and the Texas Committee for the Humanities, and by support from the Corporate Members of the Rice Design Alliance and the City of Houston through the Cultural Arts Council.

6 March – 3 April
Cinemarchitecture V: Virtual City, a film series in association with the Museum of Fine Arts, Houston. The following films will be featured:
6 March – *Entr'acte* and *Blade Runner*
13 March – *Prospero's Books*
20 March – *Strictly Propaganda: The Rise and Fall of a Totalitarian State* and *The Architecture of Doom*
27 March – *Videodrome*
3 April – *Kisho Kurokawa* and *The Icicle Thief (Il Ladro di Saponetti)*

All films on Sunday evenings at 7 p.m., Brown Auditorium, Museum of Fine Arts, Houston. For weekly film information, call (713) 639-7515.

23–24 April
Tin Houses: An Architecture Tour and Fireside Chat. Sheet metal usually has been associated with farm or industrial buildings, but recently it has been used successfully in domestic architecture (see "Powers of Tin," p. 40).


Bennett House and Studio, 802 Knox, Val Glitsch, architect, 1992.

The Rice Design Alliance will hold its 17th annual architecture tour on **Saturday and Sunday, 23 and 24 April, from 1 p.m. to 5 p.m. each day.** This year's tour will highlight six sheet-metal houses in Houston's West End, a series of late-19th- and early-20th-century Houston neighborhoods located on the north bank of Buffalo Bayou. At its center is the oldest of these neighborhoods, the A. Brunner Addition, platted in 1888. Brunner, as the subdivision was commonly known, set the pattern for future development in the West End: a right-angled grid of streets, blocks bounded by open drainage ditches, and white-painted wood cottages with front porches that housed families of different ethnic and racial backgrounds, but all of modest means. This historic landscape persists in Brunner and its successors, Magnolia Grove to the east and the Rice Military Addition to the west, even though Houston has encircled them and transposed them from beyond the outskirts of town to the heart of the city over the course of the 20th century.

During the past 20 years, the West End has acquired a new identity as Houston artists, in search of attractive, affordable, well-located working and living places, have moved in. Signaling their arrival has been the development of a distinct West End architectural style, evident in the pre-engineered metal-shed structures that dot the neighborhood. This unpretentious neighborhood is where some of the most exciting and unconventional experiments in Houston domestic architecture occur.

The tour is open only to RDA members and guests. Memberships are available on the tour and include a complimentary tour ticket. The following houses will be included:

5003 Blossom, Urban Architecture, architect, with Ian Glennie, 1984
5421 Dickson,
Natalye Appel, architect, 1992
5420 Floyd, Frank Zeni, architect, 1990
5423 Gibson, Cameron Armstrong, architect, 1993
802 Knox, Val Glitsch, architect, 1992
507A Roy Street, S. I. Morris Associates (Eugene Aubry), architects, with Ian Glennie, 1974

19 April
Tin Houses: A Fireside Chat. Tin house architects and homeowners will participate in a moderated discussion about the phenomenon of house design using galvanized sheet iron as an architectural material.

Rice Media Center, Rice University, entrance #8 off University Boulevard, 7:30 p.m.

20 May – July 1
Best-Laid Plans: Buildings and Projects by Houston Architects and Designers. RDA, in association with Lawndale Art and Performance Center, presents an exhibition of built and unbuilt work by Houston architects and designers. A catalogue will accompany the exhibition.

For more information about these programs, please call the Rice Design Alliance, (713) 524-6297.

Rice University School of Architecture
P.O. Box 1892
Houston, Texas 77251-1892
(713) 527-4864

The Rice School of Architecture introduces **Friday @ Five,** a series of lectures for spring 1994. The participants are Lars Lerup, dean, Rice School of Architecture (January 21); Scott Strasser, architect (February 11), Bruce Mau, graphic designer (February 11); Christian Hubert, architect, Los Angeles (February 18); Aaron Betsky, architectural critic, Los Angeles (February 25); John Biln (March 11); Rodolphe El Khoury, historian, Princeton University (March 18); Spencer Parsons, professor, Rice School of Architecture (March 25); and Karen Bermann, professor, Iowa State University (April 8).

18 March – 30 April
The Architecture of Light and Color. An exhibition open to the public, in the Farish Gallery of the School of Architecture.

University of Houston
College of Architecture
Houston, Texas 77204-4431
(713) 743-2400

28 March – 3 April
Tension Builds. A multidimensional sound collage, structural installation, and performance (1 April at 8 p.m.) dedicated to the music and memory of John Cage. In the Atrium, UH College of Architecture. Please call the college for times.

10–14 April
Jefferson Week Lectures. In the Theater, College of Architecture. Call for speakers and times.

Sally Walsh Lectures in Interior Design: The Realm of the Interior.

31 March – James Coote, Cass Gilbert Professor of Architecture, University of Texas at Austin, will speak on "The Technique of Illusion: Robert Adam at Osterley Park."

7 April – Charles Kifer, director of design for the Houston office of Gensler & Associates, Architects.

21 April – Frances Halsband, partner, R. M. Kliment & Frances Halsband, Architects, New York, and Dean of Architecture, Pratt University, New York, will hold "A Conversation About Collaboration."

All lectures will be held at the College of Architecture, University of Houston, at 7:30 p.m. The Sally Walsh Lectures are sponsored annually by the Houston Architecture Foundation.

9 and 10 April
Woodland Heights House and Garden Tour. The Woodland Heights Civic Association will introduce its spring tour of houses with a lecture by Stephen Fox, "Origins of the Woodland Heights and Its Place in Houston Development," at 12 noon, 9 April, at Travis Elementary School, 3311 Beauchamp. The tour follows and will take place from **1 p.m. until 5 p.m. on Saturday and Sunday, 9 and 10 April.**

Woodland Heights, begun in 1907, incorporated comprehensive deed restrictions and extensive planning, including a neighborhood landscaping plan that remains evident in the majestic canopy of live oaks lining Bayland Avenue. Its architectural legacy still stands in rows of Craftsman bungalows and houses of other styles, which are being renovated at a furious clip.

Lines

RDA Honors Constantine S. Nicandros at the Ball of Energy

The Rice Design Alliance held its most successful fundraising event ever on Friday, 12 November 1993, when more than 550 RDA supporters gathered at the Doubletree Post Oak Hotel for the Ball of Energy, chaired by Yvonne and Scott Ziegler. Net proceeds from the ball totaled $120,000, which will help fund RDA programs and *Cite* magazine.

The evening's theme was a salute to the energy industry, which has shaped Houston's magnificent skyline, endowed public art, enhanced city parks, and provided the city with green spaces. RDA recognized the industry's contributions in a video prepared especially for the evening by writer and director Barrie Scardino. The Rice Design Alliance hopes this recognition will encourage more environmental awareness, promote design excellence, and stimulate greater participation by the energy industry to enhance the quality of life for future generations.

The 1993 RDA Award for Design Excellence was given to Constantine S. Nicandros, president and CEO of Conoco and vice-chairman of DuPont, for his commitment to urban design, the built environment, and the arts. RDA president Leslie Davidson presented the award, a Steuben bowl donated by Neiman Marcus.

Constantine Nicandros and his company have demonstrated leadership in adopting environmentally responsible measures for the industry and setting high corporate standards of quality by creating an exemplary working environment for Conoco employees. It was through Nicandros' influence that Conoco commissioned architect Kevin Roche of Kevin Roche John Dinkeloo & Associates, the 1982 Pritzker Prize winner and American Institute of Architects 1993 Gold Medalist, to design its headquarters building, completed in Houston's energy corridor in 1985.

The Rice Design Alliance would like to thank gala chairs Scott and Yvonne Ziegler, auction chair Valerie Vaughn, underwriting chair David Watkins, environment chair Scott Strasser, video chairs Barrie Scardino and Peter Rockrise, student chair Angelo Directo, and all the many volunteers who helped make the Ball of Energy a success.

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New York Yankees – Yankee Stadium
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Whole Health Associates
Wierzbowski Gallery
Mark Williams Custom Men's Clothing Co.
Windsurfing Gale Winds & Wheels
Jan Yates Designs
Judy Youens Gallery

Left to right: Gala chairs Scott and Yvonne Ziegler, Tassie and Constantine Nicandros, and RDA president Leslie Barry Davidson.

Back in the Saddle

Venturi, Scott Brown's Austin Museum of Art

The Laguna Gloria museum's future is still ahead of it, after all. Austin is booming: building permits and population growth are approaching the levels of the early 1980s. And reborn along with the city's economic vitality is a previous proposal to build an art museum downtown (*Cite*, Summer 1985).

The design for the museum – admired by critics from Dallas to Zurich – was completed in 1986 by Venturi, Scott Brown and Associates of Philadelphia. The bonds to pay for its construction have been authorized by voters and partially sold. The political tradeoffs needed to secure its day-to-day operations have been largely worked out. All that is still needed is enough money to pay off the debt on a downtown site.

Originally conceived in 1983, the museum project was to have been built with city funds on land donated by Watson-Casey, a development company that planned a large mixed-use development in the warehouse district at the southern edge of downtown. The Laguna Gloria Art Museum, a private museum founded in 1946 and housed in a West Austin mansion, would operate the new museum. The building Venturi, Scott Brown designed was to comprise three stories and 25,000 square feet in an arrangement of lineal galleries and circulation spaces. A rambla walkway system, also devised by Venturi, Scott Brown, was to introduce public spaces into the new zone of development.

Everything looked promising: voters passed a $14.7 million bond issue in 1985 to fund design and construction, and the city began selling some of the bonds in 1986. But the real estate market went sour and Watson-Casey folded. The bank left holding the property refused to drop a clause in the contract stating that if the city stopped operating the museum, the land would revert to the bank. At the same time, other local arts groups feared that the Laguna Gloria project would consume all the available arts funding in the city and, with a no-growth vengeance virulent in Travis County, actively opposed the museum. In 1990, the city council voted to kill the project.

Other ideas were put forward for spending the money from the 1985 bonds, including the possibility of a new museum on the nearby University of Texas campus. The bond issue had specified a downtown museum on donated land, however, so the money stayed put. In 1992, Laguna Gloria hired Lake/Flato Architects of San Antonio to create a master plan for the museum's West Austin campus, with a new, smaller gallery addition as part of the program – apparently giving up on the downtown museum and the bond issue.

Venturi, Scott Brown & Associates, Laguna Gloria Art Museum, 1983–87, perspective view at Fourth Street front.

But Laguna Gloria's backers, led by Albert King, chairman of the museum board, worked behind the scenes to keep it alive. Ironically, the failure in 1992 of a bond package that would have funded facilities for two minority-community arts groups probably did more than any other event to resuscitate the Laguna Gloria project. Working through a group called the Austin Comprehensive Arts Plan Committee, representatives from Laguna Gloria joined with people from the Mexican American Cultural Center and the George Washington Carver Museum and Cultural Center to develop a long-range plan for adoption by the city council that emphasized cooperative planning for all the groups. "We had to work with the council to help them understand that funding for the arts is not an expense but an investment," says King.

One of the first recommendations from the arts plan: build the downtown museum, reconstituted as the Austin Museum of Art, which would be run by Laguna Gloria under a board made up of representatives of all three groups, with space to be shared among them.

A new site, owned by the Union Pacific Railroad, was found at Third and Guadalupe streets, one block away from the original Watson-Casey site. The Meadows Foundation of Dallas donated $250,000 toward the purchase price of the land, and the city issued a note, to be repaid by the Austin Museum of Art, for a portion of the rest of the purchase price. Venturi, Scott Brown's plans were taken out of the drawer at the city's public works office, and the city announced its intention to proceed with construction as soon as the land was taken care of.

According to Daniel Stetson, Laguna Gloria's director since 1991, the design for the museum is to be virtually identical to that of 1986, when Venturi, Scott Brown last changed the building's façade. However, the foundation needs to be restudied for the new site, and the building will be set back on its more generous half-block site, rather than abut the sidewalk as it would have on the sliverlike first site. "The drawings have appreciated," says Stetson. "This would have been Venturi, Scott Brown's first major public building. Now, after the Salisbury Wing, after the Seattle Art Museum, after the Pritzker Prize, the plans for the Austin Downtown Museum are worth a lot more than they were ten years ago."

In town to talk to the press in early 1993, when the project was reannounced, Robert Venturi said that he was "pleased and surprised, coming back after ten years, to find that the design stands up." But daunting financial problems remain for the new museum. Stetson says that projected operating expenses should be about $2.5 million per year – about ten times as much as Laguna Gloria currently nets from its annual fundraising efforts. And museum membership is currently only about half what it was before the downtown museum idea was killed four years ago. Nevertheless, with growth in the population and the local economy, and with a new sense of cooperation from city government and other arts organizations, King and Stetson say they are confident they will be able to fund the museum and perhaps break ground as early as spring of next year.

Joel Warren Barna

Dallas's Freeway Zamboni

Barrier transfer vehicle, developed by Barrier Systems, Inc., works the R. L. Thornton Freeway in Dallas.

House raising, Habitat for Humanity, Houston chapter.

The Dallas Area Rapid Transit Authority has come up with an expedient solution for creating designated HOV (high-occupancy-vehicle) lanes from the existing freeway rights-of-way to respond to the daily cycle of traffic demands. Called a Barrier Transfer Vehicle System, it depends upon an ingenious machine developed by Barrier Systems, Inc., of Carson City, Nevada, that looks like a cross between a berserk piece of farm machinery and an oversize Winnebago. It plies a heavily congested section of the R. L. Thornton Freeway (Interstate 30), adding an inbound lane in the morning and an outbound lane in the afternoon.

The first of its kind in the country, the system has been in operation in Dallas since September 1991. The $14.6 million project (including an estimated $600,000 annual operating cost) was jointly funded by DART and the Texas State Department of Highways and Public Transportation.

Before rush hour, the Barrier Transfer Vehicle sets out like a concrete-gobbling Zamboni from one of its storage sheds at either end of the HOV corridor, sidling along the inner lane and picking up one of a line of modified Jersey barriers (called "quickchange movable concrete barriers," or QMBs) from the median, then repositioning it gently to form a protected "contraflow" lane. The 31-ton machine has two operators on board (one fore and aft) but is actually guided by a buried cable and an on-board computer that directs the placement of the barriers to a tolerance of one inch. It scoops the barriers up in its front corner and directs them on rubber guides along a flattened-S-shaped track, then deposits them out the back opposite corner. Because of the oblique movement of the barriers, the vehicle sidles like a crab, at an angle to the direction of the freeway. The operation is reversed at the end of rush hour. Should a mechanical failure occur in the vehicle, it can complete its operations by being towed along by a special truck.

The contraflow lane exploits the significant directional split in traffic volume on the two sides of the freeway, estimated at 65 percent on the busy side to 35 percent on the slow side during rush hours. HOV users are estimated to save seven minutes on the 3.3-mile outbound trip in the afternoon and nine minutes on the 5-mile inbound morning commute. Reductions in travel time for DART buses using the contraflow lane are estimated to save approximately $355,000 yearly.

DART has plans to extend the system to other area freeways. The present R. L. Thornton system is projected to have a four-year life cycle, because traffic volume will eventually increase in both directions. But this innovative and entertaining solution has bought time for Dallas traffic planners while they search for a more permanent solution to metropolitan commuting problems.

David Payne

Habitat for Humanity, a nonprofit developer of low-income housing whose volunteer help includes presidents of the United States among other weekend carpenters, is accelerating its building program in Houston. Since 1987, the Houston chapter of Habitat has built 48 affordable single-family houses, priced between $36,500 for a three-bedroom unit and $39,000 for four bedrooms. This year it plans to build 24 new units in clusters of five or more and is seeking donations of land as well as materials and labor.

If you have potential house sites you wish to donate that are already served by utilities and are convenient to schools, public transportation, grocery stores, and community services, please contact Karen Young, Executive Director, Houston Chapter, Habitat for Humanity, P.O. Box 8467, Houston, Texas 77288-8467; telephone (713) 521-2816.

Basket Case

Houston artist David W. Warren's Wide Swing (1989) is made by joining parts of two off-the-aisle, classic chromed-wire shopping carts (Nest Kart, Sylvan N. Goldman, 1947), which can then be chain-linked to the porch ceiling of one's choosing (cushions optional). When Warren moved from Montrose to a porchless G.I. tract house in Oak Forest in 1991, he installed the prototype on the porch of the Menil Collection Bookstore.

David W. Warren, Wide Swing, 1989.

Pole Sitters

Deep in the heart of the 1950s San Antonio subdivision of Cresthaven is one of the city's most arresting displays of yard art – a virtual forest of miniature pole-mounted buildings crafted by Sam Mirelez. A retired civil servant and a San Antonio resident for over 40 years, Mirelez works from postcards and library books to create as many as three buildings a week from discarded metal gutters, scrap aluminum siding, and even the remains of an above-ground swimming pool. The top of his fence and carport accommodate a portion of his work, with the balance perched atop poles throughout the front and back yards.

Mirelez's handiwork includes several White Houses and San Fernando Cathedrals, some Alamos and Golden Gate Bridges, and a few dozen interpretations of the Disneyland castle. There is a Taj Mahal with Christmas lights, a Jefferson Memorial, a Washington Monument, several Towers of the Americas (complete with lighted elevator shafts), a number of generic bungalows and churches, the five San Antonio missions installed in the correct north-south sequence, the Houses of Parliament with Big Ben, some Oriental pagodas, Dutch windmills, and a few Eiffel Towers. The U.S. Capitol serves as a home to purple martins.

The miniatures have been purchased by drivers-by – one woman insisted on a blue-roofed Disneyland castle as a Mother's Day gift – as well as neighbors. What Mirelez enjoys most is watching people slow down or stop just for a moment to admire his special form of brake-able art.

Bruce Martin

Wilshire Village

Daniel Armstrong (Eugene Werlein, architect of record), Wilshire Village Apartments, 1940. View along Dunlavy Street.

The magnolia-shaded Wilshire Village Apartments are Houston's next-of-kin to Sunnyside Gardens, Queens, and Baldwin Hills Village, Los Angeles. Inside Wilshire Village's brick gates are a series of well kept lawns in courtyards defined by the fronts of long, rectangular two-storied apartment blocks straight out of Clarence Stein. Most social life, however, takes place on the back sides of the apartments, where small "individual" stacks of rear entrance stoops and stairs face onto service courts. There one can observe elderly residents discreetly breakfasting on these postage-stamp terrace/landings behind potted plants and hanging baskets.

Wilshire Village's concrete pathways, cracked and buckled in places by the roots of immense live oaks that share pride of place with the magnolias, have become an integral part of my morning path. Small pinwheels and flags sprout among plants in flower beds edged with brick; wind chimes ring from tree branches. Bright pink, blue, and violet flowers bloom under the bosky canopy, playing against the creamy buff brick of the apartment blocks as do such unexpected combinations of architectural details as English Regency canopies hung over glass-block side lights, sharp-pointed triangular bay windows, and wrap-around corner casement windows, vaguely nautical railings, and close-meshed steel screen panels.

The interiors admit generous amounts of air, light, and view. The apartments are raised up off the ground, and in the days before air conditioning, in a neatly integrated inversion of the attic fan principle, large fans drew air through screened grilles just above grade into the plenum below the ground floor and from there into the units; the second floors were cooled by attic fans drawing air in through louvers in the roof. At one time, Wilshire Village was also served by its own artesian well and electric generator, making it almost energy self-sufficient.

Wilshire Village consists of 144 units in 17 buildings located on seven and a half acres at the southwest corner of the intersection of Alabama and Dunlavy streets, half a mile west of Montrose Boulevard. It was designed by Daniel Armstrong (with Eugene Werlin as architect of record) and developed with FHA-insured financing in 1940 as one of only three such projects authorized for Houston.[1] (The others, the River Oaks Garden Apartments, located behind the River Oaks shopping center [Fooshee & Cheek, 1937], and the Park Lane across from Hermann Park [F. Talbott Wilson and S. I. Morris, Jr., 1940], have both been demolished and replaced by much denser condominiums.) The layout and general typology of the units were predetermined to an appreciable extent by FHA guidelines, which in turn had been influenced by the work of Stein and his collaborators. Wilshire Village was built during a time when modernism was becoming an accepted style, but the architects working under the FHA guidelines made a distinction between modern forms and a modern home – the latter "constructed to afford comfort, convenience, and livability." The distinction put the emphasis on livability rather than image. At fewer than 20 units per acre, with its mature, well-tended landscape, decorous and inherently pleasant units, and affordable rents, Wilshire Village remains a housing type that Houston could use more of.

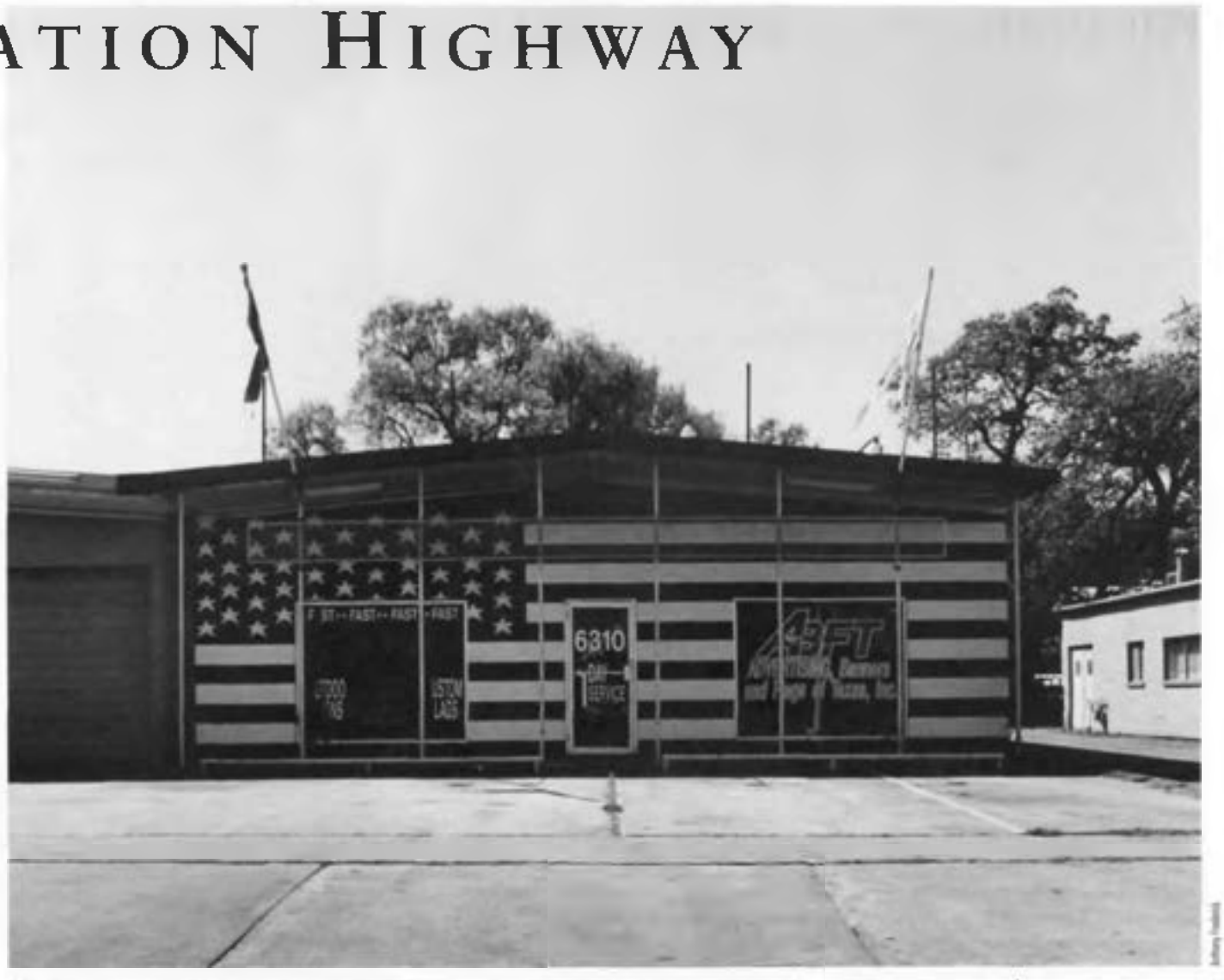
Sheryl Tucker

1 *Houston Chronicle*, 7 April 1940.

Information Highway

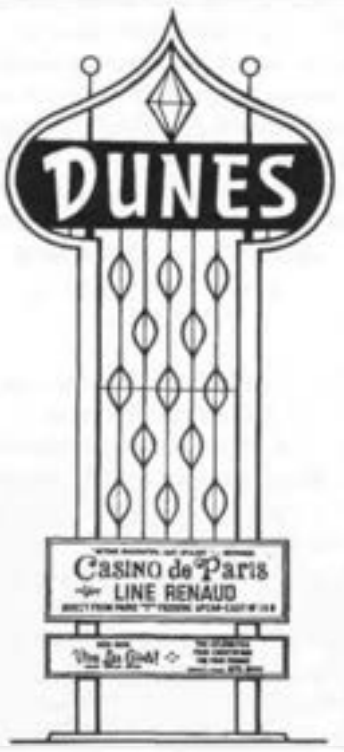
Recent Spottings

Half concealed among the upheld hoofs and blazing udders of the colossal cows atop the canopy of Amy's Ice Creams and Coffees in Shepherd Square is evidence of a heretofore unknown hide effect of bovine growth hormone – a dairy king to keep more than the malts all shook up. The happy Holsteins are the work of Laurie Smith Design Associates.



Star-Spangled Building

The Gulf Freeway storefront of Advertising, Banners, and Flags of Texas, Inc. (Christine Vesellea, artist and proprietor) added a touch of glory on the way to Hobby Airport until last spring, when it moved to an off-off ramp site.



Dunesbury

The sign of the Dunes Hotel, a landmark the authors of *Learning From Las Vegas* described as "an erection 22 stories high that pulsates at night," hit the sand last fall under cannon fire from the "pirate ship" of Steve Wynn's Treasure Island. The 180-foot-high Dunes pylon, designed by Lee Klay and built by the Federal Sign and Signal Corporation of Los Angeles in 1964, set off a wave of pylon envy that endowed the strip with five of the world's six tallest electrical signs.

Roach Clip

It's hard to keep a good roach down. The Holder Pest Control Company's once wall-mounted shrine to the city's patron insect – a 1:1 translation from the chalk outline of an average-size specimen – was moved to the roof of its Southwest Freeway premises to counteract the effects of a recent widening of the highway.

Amen Corner

The steeple-cornered Forest Cove Baptist Church, Kingwood (Hatfield Halcomb Architects, 1993–94), is a matter of Gibbs and take – a 4,000-seat mega-church that is to ordinary churches as "shopping malls" are to "individual retail stores," in the words of its architects (*Texas Architect*, November-December 1993). Forest Cove's inspiration point finds a soulmate in the Grecian formula of the Children's Museum of Houston (Venturi, Scott Brown and Associates and Jackson & Ryan, 1989–92, *Cite*, Spring-Summer 1993).

Saxual Politics

When Bob Daddy-O Wade and R. A. Hilder's 65-foot-high saxophone for Billy Blues on Richmond Avenue topped out 23 feet over the height permitted by the city of Houston's sign ordinance, the wailing didn't stop until the Municipal Art Commission certified it as a work of art outside the jurisdiction of the sign control commissariat. The club's management pointed to the sax's lack of lettering as evidence of unfettered artistic purpose, although Jakob Chernikov's theater set of 1931 spelling out "Music for the Masses" advances the (still?) revolutionary idea that letters, even whole words, can coexist artfully with horns aplenty. For the record, Chernikov's sub-manifesto, *The Melody of Constructivism*, grooves (if not exactly swings) to just such an assemblage as Billy Blues' totem of surfboards (mouthpiece), beer kegs, washtubs, canoes, inverted Volkswagen (bell), and other proletarian detritus: "We are affected by the whole aggregate of elements combined together in a definite scale. The feeling of pleasure we experience on contemplating a constructive creation, i.e., the impression we receive, depends on the specific features that this or that object possesses. Certain inner qualities introduce this distinction. It is extremely difficult to establish the limits and boundaries of certain points at which constructive forms affect us. . . .When authentic grandeur and aspiration are combined in any creative work of man, and when functional movements are present in it, we obtain a definite 'melody.'"

RICHARD INGERSOLL

Utopia Limited

HOUSTON'S RING AROUND THE BELTWAY

HOUSTON HAS FEW TOPOGRAPHICAL IMPEDIMENTS TO ITS CONTINUOUS CENTRIFUGAL EXPANSION. THE NETWORK OF CONCENTRIC, RADIALLY CONNECTED FREEWAY LOOPS HAS PROVIDED AN ARMATURE FOR SUBURBAN TRACTS THAT SATURATE THE LAND LIKE HUGE OIL BLOTS, OOZING ACROSS AN INCORPORATED TERRITORY OF ABOUT 580 SQUARE MILES. FOUR OF THE LARGEST AND MOST SUCCESSFUL MASTER-PLANNED DEVELOPMENTS IN THE UNITED STATES ARE TETHERED AT THE OUTER EDGES OF THIS UNREPENTANT SPRAWL.[1] THE WOODLANDS, FIRST COLONY, KINGWOOD, AND CLEAR LAKE CITY ARE THE MOST PROMINENT OF A SERIES OF SELF-ZONED SUBDIVISIONS SMUGLY SURROUNDING A CITY THAT WOULD NOT ALLOW ITSELF TO BE PLANNED.

DISTINCT FROM mere subdivisions and Planned Unit Development schemes, these "new towns" have a considerable mix of land uses, including retail, commercial, social services, and parks. Each has a population ranging from 30,000 to 40,000 and an area varying from 10,000 to 25,000 acres (the grid of downtown Houston covers approximately 2,000 acres). During the 1980s, the majority of new-home starts in the Houston metropolitan area gravitated to the master-planned developments, indicating a victory in real estate terms for the fully planned suburb over the rest of the city.

A master-planned development is different from a city in that the development corporation guarantees infrastructure and services that otherwise would be the result of a democratically mandated municipal authority: it privatizes what has traditionally been the prerogative of the community. Home buyers, who pay a yearly fee to the developer or community association for maintenance of services (something like 60 cents per $100 assessed value), are attracted because these havens of zoned orderliness appear free of the problems of the city, such as poor public schools, lack of recreation space, and high crime rates. These developments are, moreover, the ultimate eugenic experiment for PLUs ("People Like Us"), since they are generally reservations of that rapidly declining species, the aspiring white middle class. A great deal of breeding goes on out in what might be called Houston's fertility crescent, where the safety of children, access to good public schools, and well-organized sports programs are the highest priorities.

Like the original Humanist paragon of planning, Thomas More's *Utopia* (1516) – the name of which is a play on words meaning "no place" – these settlements on Houston's edges cultivate a certain placelessness. Although each of the four developments described below reflects distinct topographical characteristics, and a great deal of design effort has been applied to their landscaping to create a market identity and special physical attributes, all give the strong impression of being nowhere in particular and are in some ways interchangeable. The redounding lack of orientation created by looping roads and the anonymity and remoteness caused by the setback fabric of these environments suggest a kind of existential camouflage.

The cities on the island of Utopia were all identical and were located approximately 24 miles, or a six-hour walk, apart. The Woodlands is 27 miles and First Colony, Kingwood, and Clear Lake City each 22 miles from downtown, all on the circuit of the proposed Grand Parkway, Houston's beltway beyond the Beltway. All the houses in Utopia were of the same model and were arranged 30 to a street with a community house in the center; this bears some correspondence to the conformity of suburban houses (which are now marketed by national mass builders like packages of potato chips) built on cul-de-sacs with a tot-lot or neighborhood park in the center. Utopians were obligated to change houses every ten years so they would not feel proprietary about their dwellings. Americans change their homes on the average of once every five years, usually for the purpose of trading up, and thus the house is always conceived in terms of the value it will have for some normative other who will be the next to acquire it. Utopia, now with the goal of private rather than communitarian well-being, is closer than was previously thought.

Suburban, low-density developments have, in the half century since World War II, become the site of the new majority of population distribution, accounting for more than 40 percent of the U.S. population in 1990. The suburbs are in general architecturally undistinguished and difficult to represent in plan or through perspectival means, and they seem beyond the pale of human drama, only suitable for the bathos of television serials. Nothing can happen in the master-planned landscape except sheltered breeding to ensure the survival of *Homo suburbanis*. Because of the suburbs' exceptional banality but overwhelming economic and social importance, there is something unexpectedly meaningful about their ascendancy. By inverting the conventional semantics and values of urban space, history and its oppressive janissaries, architecture and the city, have finally been usurped. Life on the edges of Houston is yet another instance of space apparently overcoming time.

The ambivalence of the suburbs as placeless places and history-free shapers of civilization is symptomatic of the semantic crisis of the late 20th century, when meanings no longer seem to adhere to words, when signs and referents are constantly betraying rather than portraying. Take, for instance, the fact that new suburbs such as The Woodlands or First Colony are generically called "new towns," that their advertisers promote them as "communities," and that they are usually broken down into 1,000- to 2,000-acre packages referred to as "villages." Not formally, structurally, socially, or in any other way do these developments resemble the entities referred to by the words that are attached to them. Was there ever a town without a

◄ ELS Architects, model of proposed Town Center for The Woodlands, 1992 – .

commercial nucleus, a village without a main street, or a community without historical continuity? The language is so delusional that recent arrivals to this real estate package deal, such as the offices of Duany and Plater-Zyberk or Peter Calthorpe, have felt it their rhetorical mission to supply a form that better corresponds to the name, in hopes of restoring the "traditional" values of the phenomenon the original words describe. But the rupture in meaning has already occurred, and there is no turning back.

The master-planned development's street patterns derive from the picturesque, curving streets deployed by Frederick Law Olmsted in such plans as that of Riverside, Illinois (1869), and from the patterns used to separate traffic that were devised by Raymond Unwin for the early garden cities in England during the first decade of this century. The practice of the latter led to street configurations that avoided frequent intersections and provided secluded streets. Arterial fast streets with internal loops and cul-de-sacs were the ingenious solutions.

Locally, Houston's master-planned developments aspire to a combination of the elite 1920s Olmsted-style subdivision of River Oaks, which was given easy automobile access to downtown by Allen Parkway, and the quick-profit middle-class development of Sharpstown, Houston's version of Levittown, located in the next ring of western expansion on U.S. 59. Sharpstown, begun in the mid-1950s, supplied more-affordable houses on smaller lots with such amenities as schools, a golf course, and a shopping mall.[3] The decline in the status and security of Sharpstown, which now embraces a significant minority population, is not likely to be repeated in the current new towns. The new new towns are not named after their developers and tend to have neighborhoods named after natural features, such as Bay Oaks in Clear Lake City, Sweetwater in First Colony, Panther Creek in The Woodlands, and Elm Grove in Kingwood. Although The Woodlands has some commitment to the concept of human diversity, the process of real estate competition has confined it to marketing strategies that inevitably focus on a middle-class clientele.

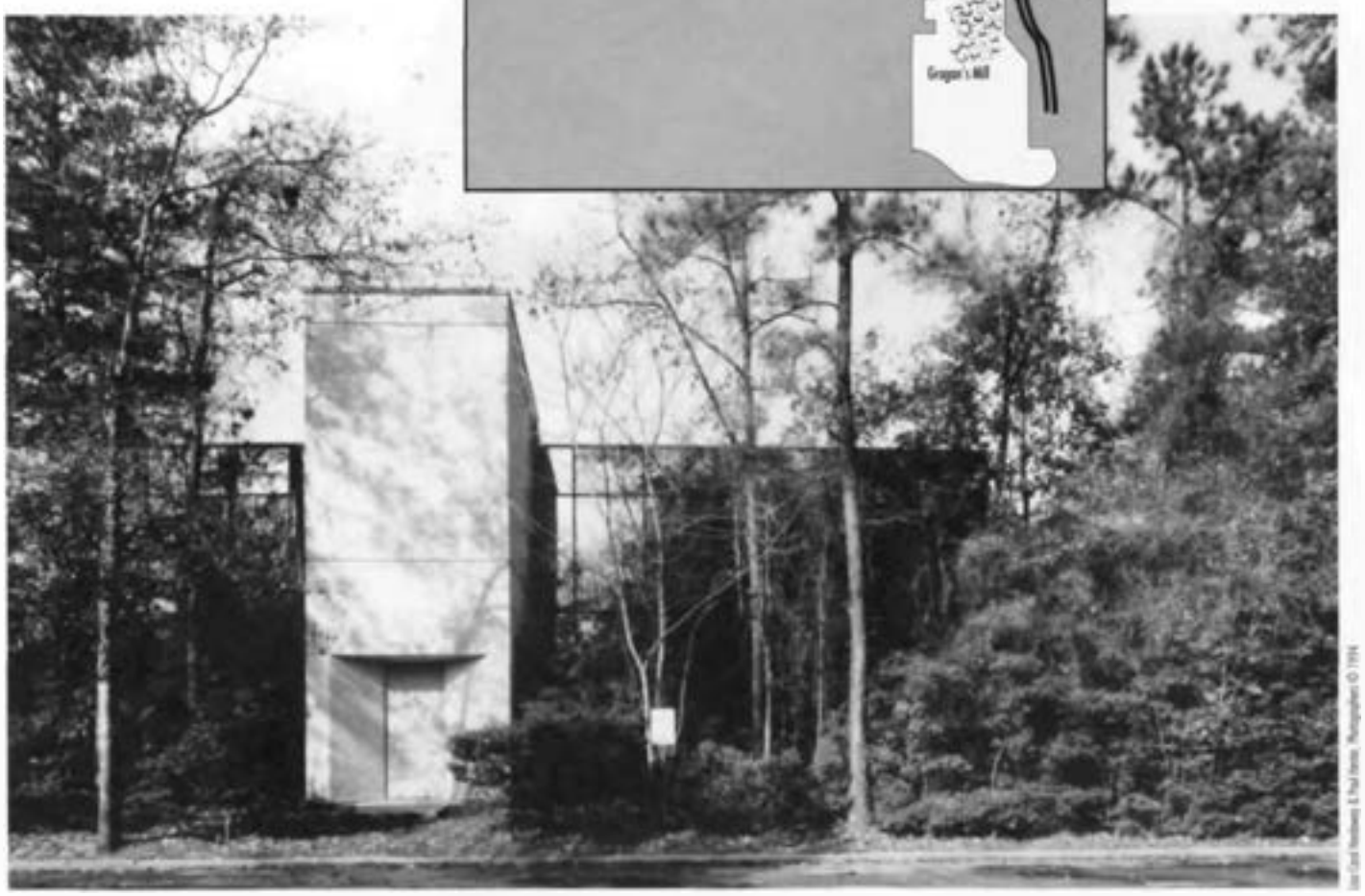
Squiggly street patterns as an alternative to the conventional grid made particular sense to developers during the car-crazed 1950s and were encouraged by the FHA guidelines for subdivisions, since they provided a method for keeping houses from facing directly onto loud and dangerous thoroughfares. But while such systems facilitated movement on a larger scale, they tended to fragment the urban fabric and limit interaction at the local scale. Viewed from the air, the patterns of arteries threaded with cul-de-sacs and internal loops bear a remarkable resemblance to plates of microchips found in the innards of a computer, a correspondence first intimated by the novelist Thomas Pynchon in the 1960s, when he referred to suburbs in terms of printed circuits.[4] There is a peculiar morphological resonance between the formal patterns in the item that densifies information into miniscule packages, tools that make spatial contiguities irrelevant, and the formal patterns of the system of maximum dispersal that produces irrelevant space.

The irresistible logic of these street patterns is determined by the primary role the automobile plays in American life. To drive in Houston is a political act. It means support of the industry that linked the city's economy to the destiny of the nation. The settlements at Houston's outermost limits are so intimately linked with the oil economy that the relationship cannot be seen as casual: Friendswood Development Company, an Exxon subsidiary, developed Clear Lake City (1963) and Kingwood (1972); Mitchell Energy developed The Woodlands (1974); and the Royal Dutch Shell Pension Fund has replaced the Ford Foundation as the primary financial partner of the Gerald D. Hines–initiated First Colony (1976). (Mobil Oil is currently developing 11 master-planned suburbs throughout the Sun Belt.) It is, of course, in the interests of the oil and automobile industries to encourage development on the edge, thereby making the demand for their products integral to a way of life – a round trip to one of these new towns is equivalent to half a tank of gas in my car. That Gerald Hines and George Mitchell supported both light rail and zoning does not necessarily contradict this scenario, since these measures would benefit the center and the edge, where both developers have a lot at stake.

The Woodlands

THE LARGEST of Houston's master-planned developments, at 25,000 acres for a projected population of 150,000, is The Woodlands, and it is by far the most utopian. The developer, George Mitchell, has persevered with undying idealism in planning a real estate domain that will foster social diversity and respect for environmental concerns while attracting employment and culture. Mitchell is one of the great self-made *condottieri* of the energy business, one of the last of the Texan "can-do" entrepreneurs, and it is hard not to admire his progressive approach to environmental and social issues. The Woodlands indeed aspires to provide an alternative to existing urban and suburban conditions. But despite the expenditure of so much talent, imagination, and investment, the question lingers as to whether The Woodlands is appreciably different from the suburbs or its rival new towns.

McHarg, Roberts & Todd, William Pereira & Associates, and Richard Brown & Associates, The Woodlands, Montgomery County, Texas, 1970–74. ▶



Neuhaus & Taylor, architects, The Woodlands Corporation Headquarters, 1974.

Horst Berger and Sasaki Associates, architects, Cynthia Woods Mitchell Pavilion, 1990.

The most frequently quoted reason George Mitchell gives for having created The Woodlands is that the new town represents a sort of fiscal realpolitik by which to arrest the drain of tax dollars to autonomously controlled suburbs such as West University Place and Bellaire. Mitchell advocated a well-planned suburb that would remain within the city's ultimate jurisdiction.[5] The Woodlands is unincorporated, and although currently it is more dependent on the services of Montgomery County and the more proximate city center of Conroe, it nevertheless lies within Houston's statutory extraterritorial jurisdiction. But even if the tax base The Woodlands represents is ultimately retrievable, the drain of employment, cultural, and housing possibilities it encourages is less than salubrious for the vitality of the urban core.

Mitchell started planning The Woodlands with an eye to obtaining federal subsidies and loan guarantees as part of the U.S. Department of Housing and Urban Development's Title VII New Community Act. Approximately $30 million of an overall $2.8 billion investment came through federal grants. The public funding is one of the reasons The Woodlands is so much better documented and more accountable in social terms than its confreres. It is also more conscientious about fostering public resources such as the Houston Advanced Research Center, or HARC (to which Mitchell recently pledged $65 million in matching funds), and the Houston Symphony summer program. The terms of the New Community Act of 1970 stipulated that loans for development were guaranteed in exchange for provision of 15 percent low-income or assisted housing. Somewhat akin to the New Deal strategy of creating well-planned suburbs, such as the one built at Greenbelt, Maryland, for absorbing lower-income people from the inner cities, The Woodlands has continued to maintain, even after the terms of the initial contract lapsed, a small number of publicly assisted apartments. These constitute a far larger percentage of the available local housing than do the similar rental units available in Houston.[6] Until recently The Woodlands mixed the price ranges of houses in each subdivision, which is contrary to the prevailing practice in other master-planned developments. Currently about a third of the population of The Woodlands is employed there, predominantly by corporate and research facilities. Light industry, projected for the future, would help diversify the class and racial mix.[7]

From the outset, The Woodlands was intended to be a new type of development, closer to nature. The expertly prepared marketing literature emphasizes environmental preservation "so that people may live in harmony with nature." In the first areas developed in The Woodlands, in the village of Grogan's Mill, the buildings are concealed with remarkable consistency by obligatory trees and shrubs. The result, however, is an anti-architecture. The houses of this era, mostly modest and wood-sided, are completely hidden in the trees. The five-story office buildings, just barely taller than the treetops, are sheathed in mirror glass that makes them disappear in the reflection of the sky and other natural features. Every act of building in these early stages followed a strategy that pardons uninspired design through the mitigation of the forest.

Mitchell, who in the 1950s commissioned one of the more interesting houses in Houston from Karl Kamrath, a devotee of Frank Lloyd Wright, was conversant with the principles of Wright's organic architecture. His own house was a variant on Wright's Hanna House (Palo Alto, 1936), which used hexagonal planning and broad sloped roofs to blend in with natural features. Among those working on the early stages of the planning, which included Kamrath and William Pereira, was Ian McHarg, the Scottish-born doyen of environmental landscape planning.[8]

McHarg made studies, including an aerial survey, of the site's ecosystems and recommended ways of placing drainage to reinforce the effluent patterns of the land.

The result has been a noticeable environmental difference in The Woodlands. The ethic is to live in the forest, and thus everything in The Woodlands is set back and hidden by trees. The architectural guidelines encourage saving as many trees on a lot as possible and then planting indigenous trees and undergrowth wherever needed. There are no front lawns in the earliest subdivisions, which for the suburbs was revolutionary. Recently the guided "natural landscaping" has given way to more conventional front lawns and fences in order to remain competitive with the norms of upscale real estate. The development company itself is an agent of this stylistic transition, sponsoring such projects as the newly finished Bear Branch Recreation Center by Royce R. Leachman, which uses classical compositional strategies, arches and monumentalizing massing, in diametric opposition to the earlier passive approach to the same program. The design of houses in The Woodlands has also evolved, from humble, faceless wooden structures to larger houses with imposing façades, cluttered with pseudo-historical decoration and foregrounded by high-maintenance yards.

About 25 percent of the land in The Woodlands has been set aside for public space for parks and recreation. This is considerably more than any of its competitors can boast, and the green spaces, which include 40 neighborhood parks and four golf courses, are easily accessible and often quite impressively unspoiled. The minor streets retain the look of country roads because they have soft shoulders without curbs or sidewalks. Instead of sidewalks there are 64 miles of paved hike-and-bike trails, which depart from the 150-mile network of vehicular roads to form an independent system through the less-disturbed natural habitats. Unlike those at the other master-planned new towns, which have some intramural hiking trails, many of the trails in The Woodlands really break away from visual contact with the subdivisions – a virtue that someday may become a liability. Although the crime rate in The Woodlands is relatively low, there have been isolated incidents in the past few years of minor crimes or intimidating confrontations on these paths, which, because they are not visible from the road, are perceived as less safe.

Although the efforts to coordinate the hydrological impact of settlement and to disturb the forest as little as possible proved less damaging than conventional clear-cutting, the pattern of The Woodlands' villages does not discourage the use of automobiles, which remain the most deleterious threat to the environment. Neither shopping, schools, recreation, nor employment is situated in a way that would make pedestrian transits a realistic alternative. There are express charter buses going to downtown Houston, the Texas Medical Center, and the Galleria area, and there is the future option of a light-rail connection with downtown. But these commuter services cannot remedy the spread of local automobile-dependent patterns of movement. Housing for the elderly, for instance, is located far from any retail establishments. The needs of commuters in The Woodlands played a big role in the construction of the Hardy Toll Road, which provides a faster highway connection to downtown (the round-trip toll is insignificant for households with Woodlands-level incomes). This commitment to driving has been implicitly acknowledged in The Woodlands by the placement of public sculptures at major intersections of the arterial parkways, where there is no pedestrian activity.

Also problematic is The Woodlands' promise of community. Unlike conventional suburbs, The Woodlands promotes the idea that it will gather a diverse population and become a real hometown. Ancient Sparta or Mayan settlements in the Yucatán may have maintained a strong culture with a diffusely settled population, but overriding military and religious commitments provided the social glue in a way that is hard to imagine in an American suburb. During the early years in The Woodlands, when only a few thousand residents occupied the site, there was a stronger sense of togetherness. All the residents picked up their mail at the post office in the Grogan's Mill village center. Their children went ice skating at the Wharf or swimming at the YMCA. The residents, who mostly came from out of state (currently 46 percent come from outside the region), were eager to participate on the conscientious terms of the developer. Now that the population has grown to about 35,000 (the ultimate projected population is 153,000) and starting a new town is less of a novelty, the initial sense of intimacy among residents has declined. The post office was moved to an anonymous site, and mail is now delivered to each cul-de-sac. The skating rink has been closed because it was too expensive to maintain, although the Y is still a popular place.

The most frustrating impediment to a sense of community in The Woodlands is that there is no center; there is no place where the community can come together. The first "village" center at Grogan's Mill failed as a retail center – perhaps, one can speculate, because the architectural attitude was overly passive. On one side of the narrow pond of Lake Harrison is The Woodlands Country Club and Conference Center, designed by Edward Durrell Stone's office in the mid-1970s with a vague suggestion of Wrightian, wing-spread eaves. It is connected by a glassed-in wooden bridge to the other side of the narrow lake, where the retail facilities are located. The buildings were somewhat cheaply built and, like all the first buildings of The Woodlands, recede timidly into the trees, making impossible the creation of the sort of visual connections that make urban space interesting. It is difficult to see the parts of this so-called center, let alone the whole. Lack of visibility from the road was particularly disadvantageous to retail. The Woodlands Information Center (Bennie M. González, 1975), an expressionistic collection of irregularly shaped wood-sided wedges in the midst of tall pines, is perhaps the consummate example of the camouflage style, building too carefully according to the dictates of the trees. Even a building of modest civic intent such as Taft Architects' Water Resources Building is lost on its site behind a thick buffer of trees that thwarts an axial view of the building's portico. The recently expanded HARC campus has indulged in more monumental tactics, with a framed gateway, emulating Rice University, and a stout brick-clad, limestone-corniced administration center. All of the signs in The Woodlands are restricted to two-foot-high sandblasted wooden panels, a nice nonaggressive touch that for the driver only increases the difficulty of finding things. The major public building of The Woodlands, the Cynthia Woods Mitchell Pavilion (Horst Berger and Sustaita Associates, 1990), which because it is the site of numerous rock concerts and the summer residence of the Houston Symphony should be the place that people from other parts of Houston are best able to find, is hopelessly sequestered in the middle of the forest. The thrusting peaks of its white Teflon tents, held up with soaring web trusses, make it the most interesting building of the development, yet it is not visible from any of the major roads.

The combination of too great a respect for natural features (many of which, like the concrete-lined Lake Woodlands, are artificially induced anyway) and a self-effacing desire for humble structures (which became instead an excuse for cheap ones) failed to create places of assembly, where a sense of social involvement might continually be regenerated. The supermarket at Grogan's Mill went through several tenants without success and is currently used as a public library. Most people went back to the strip malls located outside of The Woodlands on I-45 to fulfill their shopping and entertainment requirements.

The new village center at Panther Creek shows that some lessons have been learned. Randall's has opened a hypermarket that is quite successful and more encouraging of social contact than any previous sites in the new town. The trees have been thinned a bit so that the complex of stores surrounding the market is visible from both Woodlands Parkway and the secondary artery. This ensures a better psychological connection. But it still does not foster the idea of public assembly the way a small-town Main Street does.

Standards of house design have also changed in response to the competition from Kingwood and First Colony. Many builders are producing grandiose mansions in the West University–South Fork Ranch idiom, with phony brick details, mammoth arched entries, and blind dormers. Natural landscaping is not appropriate to these statements of bourgeois self-importance, and high-maintenance yards have become the rule.

Few of the new, expensive houses are of much distinction except the enormous orange polygonal palace, a dubiously proportioned Taj Mahal, visible across Lake Woodlands from Woodlands Parkway. The design was mostly by the owner, an engineer from southern India who for 17 years has run a successful air-pollution-control company located in The Woodlands' business center. Its excess of taste – slender three-story columns are linked by alternating rounded and pointed arches, in vague emulation of Mughal style – masks an extraordinary steel-frame structure that allows the interior to have a very open section, 39 feet high, that shelters a marble fountain. There are other master-planned developments, such as First Colony, where such a house would not be allowed. It is to The Woodlands' credit that something remotely interesting, no matter how ersatz, got built. This exuberant aberration, expressing a transcultural affirmation of the American dream, met no resistance from the planners. The plan of The Woodlands allows for certain larger sites (in this case a two-and-three-quarter-acre lot) where exceptional houses can be built to give a sense of identity.

The missing ingredient at The Woodlands that is expected to change its entire social complexion is the new regional mall, currently under construction and planned to open in 1994. Optimistically called the Town Center (the same term is employed for the mall planned at First Colony), it does not promise at this stage in its development to add a greater sense of architectural or urban identity to The Woodlands. Codeveloped by Homart (a Sears subsidiary), the mall was designed by ELS of Berkeley and is a classic enclosed, double-loaded spine with anchor stores at each end. The first phase will be 550,000 square feet and its final phase 1.4 million square feet. Rather than occupy a position in the physical center of the new town, the mall is located on the easternmost edge of The Woodlands, adjacent to I-45, to catch freeway shoppers. It is completely surrounded by a broad apron of surface parking except on its southern side, where a link with Main Street is planned. The trees envisioned for the lot are insufficient to relieve its openness. An artificial lagoon has been dug to offset the center from the freeway and to

◀ **Llewelyn-Davies Associates, First Colony, Fort Bend County, Texas, 1976.**

ments and devote all their energies to transgressing the local limits. This had its most tragic expression a few years ago when a group of Woodlands teenagers went on a gay-bashing spree and murdered a man in the Montrose district. Last year, in an attempt to confront the problem, The Woodlands opened a teen center, a large clubhouse designed by Ray Bailey Architects, with a basketball court in the middle and video games in the side rooms. It is doubtful, however, that a mere container will be able to sublimate teenage aggression. Surveillance does not usually coincide with the concept of liberation or transgression. The weakness of the scheme for the town center is that it was not designed to answer these problems. It fails to provide enough interstitial room for slackers and, because it is hermetic, is unable to foster the streetlike connections that might permit casual socialization.

MLTW/Turnbull Associates, Charles Moore, and Richard Fitzgerald & Partners, Sweetwater Country Club (1983).

First Colony

connect the mall to a mile-and-a-half-long canal leading past the concert pavilion to Lake Woodlands. A transportation link is being planned at the canal level. Judging from the currently published plans, none of the buildings will come close enough to the edge of the water to make the water feature integral with commercial and social functions. There is no density imaginable and no reason for routes to intersect. The Rivercenter shopping mall on the San Antonio River Walk would have made an excellent model for stitching together outdoor assembly and recreational spaces with indoor retail. As planned, The Woodlands' mall is a thoroughly conventional scheme rather than one that would contribute to a real sense of community or place. The retail strips on the feeder roads on the opposite side of I-45 have recently been acquired by Mitchell subsidiaries and closed to eliminate the peripheral competition.

The single factor that might engender true solidarity among the residents, something equivalent to the threat of war, is the teenage problem. Teenagers in the Woodlands, like suburban teenagers everywhere, are the unanticipated factor that upsets the domestic tranquillity of most plans. The energy of sexual awakening is simply incompatible with the confinement of the single-family house, and there comes a point in a suburban child's life when sports no longer fulfill all of one's desires for contact with the world. Stuck out in the middle of nowhere, in an empty house (since both parents usually work), informed and stimulated through telematic excess, teenagers often become resentful of the ennui of planned environ-

THE PROBLEMS described at The Woodlands are present in all the other suburban new towns, where – perhaps because there is so little idealism – the contradictions do not seem as apparent. If The Woodlands is the best intended of Houston's new towns in terms of social conscience, First Colony is the most socially conscious. It offers no promises regarding nature, diversity, or any culture beyond that of sitcoms; its only reality is that this is status real estate. Adjacent to Sugar Land, which was the center of agricultural processing in this area, First Colony was preceded in the 1960s by Venetian Estates, a smaller subdivision of mostly one-story ranch-style homes situated on a series of artificially generated lagoons. Quail Valley to the southeast of First Colony, and Sugar Creek to its northeast, are smaller subdivisions begun shortly before First Colony opened in 1976. Since then, this area of Fort Bend County has seen a proliferation of master-planned subdivisions, including Greatwood, New Territory, Lake Olympia, Kelliwood, Green Trails, and Cinco Ranch, none of which has the size to sustain as many amenities as First Colony. Many of them in fact rely upon the higher degree of amenities and services, in particular the retail opportunities, of First Colony. (As investments, the smaller 1,000-to-2,000-acre developments reap the greatest profits, because they can

be realized in the shortest time and have fewer infrastructure costs.) Fort Bend County has the fastest-growing economy in the region, with "the lowest percentage of low income and highest percentage of high income in the Houston area."[10] The county offers aggressive tax-abatement programs, and more than half of the businesses relocating there receive reductions according to the benefits they will confer on the county.[11]

The success of these western zoned packages was due at first to the decision of the major oil companies, such as Conoco, Shell, British Petroleum, and Amoco, to locate their corporate campuses outside Loop 610 along Highway 6, in what has come to be known as the Energy Corridor. These postindustrial forms of high-income corporate employment are the perfect patron group for master-planned communities, and the relationship has become symbiotic, so that it is difficult to distinguish which has had a greater impact on the others' choice. Schlumberger Well Services recently decided to consolidate its administrative offices in the area, partly because of the access to this type of housing.

In many ways First Colony reverses the strategies of The Woodlands. The landscape, mostly old rice and sugarcane fields, had few trees. The look of the development was created by introducing a new – and often striking – formal landscape. The SWA Group, which specializes in the landscaping of corporate campuses, has given an orderly look to the street-scape. The regular rows of teardrop-shaped, nonbearing Aristocrat pear trees that frame the last of First Colony's three freeway exits at Sweetwater Boulevard are a stunning reminder of the displacement of the regular agricultural striation of the land by the cash crop of single-family homes. During the past 15 years, 10,000 street trees were planted and paved sidewalks laid along every street to give the edges of the streets more definition. Some streets have the charm of Houston's older oak-lined boulevards, although the plantings have not been uniformly successful: Palm Royale Boulevard was lined with tall palms that were unable to survive in this climate. In the more expensive neighborhoods, decorative landscape features such as pergolas and fountains give a lush quality to the outdoor spaces. Because the landscaping is so ambitious, all of the houses and retail are much more visible than in The Woodlands. This should not imply that they are more pleasant to look at, only that it is easier to orient oneself.

First Colony spreads out over 9,700 acres with a population of over 30,000 (projected build-out population is 50,000). The name implies the good WASPy stock of Pilgrim fathers but actually refers to the fact that Stephen F. Austin established the first (Anglo) colony in Texas nearby.

What is so astounding about First Colony is the sense of crowding where there is so much space. It is difficult, of course, to squeeze four-car garages onto standard suburban lots. If there is a style that is emerging in the expensive houses, it is not by accident. Sugar Land Development Company hired the firm of Ray Bailey Architects to develop design criteria. The builders were then educated through presentations and booklets about "enduring design characteristics" culled from the most admired parts of River Oaks and Shadyside. "Contemporary" houses (i.e., modern style, with flat roofs or strip windows) were thought to be inappropriate, as were styles not of Anglo derivation. A design for a house with onion domes and pointed arches was successfully discouraged. The result is a kind of nouveau riche Heimat style. Many of the houses at First Colony, especially those in Sweetwater Village, where the high-priced (between $300,000 and over $1 million) houses are, aspire to the girth of River Oaks houses with only a quarter of the land. They are abnormally high, capped with a big-hipped roof, studded with fake dormers, and smeared with Georgian or Colonial regalia. In contradiction to wood-frame construction, the typical First Colony house is liberally encrusted with gables, brackets, quoins, rusticated brick patterns, and pilasters. The rear elevations of these houses are almost invariably surfaced with cheaper siding materials. Such regular features as cathedral ceilings for the living rooms and private baths for each bedroom boost the square footage well beyond the needs of a modest family.

The developer, Gerald D. Hines Interests, owes some of its fame to its practice of hiring celebrity architects to make distinctive packaging for large commercial projects. In the privatization mentality of the 1980s, this meant that the developer took over as provider of the public realm, a transfer brilliantly portrayed in the fountain park at the base of the Transco Tower. At First Colony the firm of Johnson/Burgee was hired in 1982 to design an office park at First Colony's first freeway intersection. The only one of the buildings to be constructed is brick-clad, with a neoclassical tympanum placed at the top of the central wing and two wings spreading out at a 45-degree angle. It looks stranded, especially when glimpsed with the shimmering Fluor headquarters, the star resident of the office park, looming in the distance. Charles Moore and William Turnbull were engaged to design the Sweetwater Country Club in 1983 for the high-income neighborhood. Despite some interesting interior plays with light in this structure, its construction is generally cheap, and the overall impression is that it has the biggest hips of the big hipped roofs in the development.

Sugar Land Development Company has helped establish the First Colonial style with the design of several commercial buildings such as the Williams Trace Shopping Center, site of the extremely successful Home Depot, and in several of the commercial facilities, where brick elevations are given some articulation with striated bands of different-color brick, string course moldings, and limestone corners. One of the neighborhood recreation centers uses a prominent Palladian archway for its bathhouse. By far the finest buildings are not those of the famous architects, but the excellent design for elementary schools by Spencer Herolz Architects. At the Austin Parkway School, an arresting free-standing wall shoots out on a 45-degree tangent to serve as a canopied walkway from the automobile dropoff point. The design was so successful that it was repeated on another site for the Colony Meadow School with only a slight variation in brick color.

There are bike paths and greenswards at First Colony, but they are not conceived with the conviction of The Woodlands and are apparently little used except by joggers. First Colony is designed for those who like to drive. The ample retail areas have huge parking lots in front. The planned mall will be surrounded by parking, similar to the one planned for The Woodlands, except that its main axis will run parallel to the freeway. Among the largest green spaces on the First Colony map is the right-of-way of the high-voltage power lines. One idea that is currently being discussed is to copy an idea first used at Cinco Ranch: using white sand imported from Florida to create an artificial beach at the recreation center lake.

There is diversity at First Colony the way there used to be in the Old South. The only pedestrians to be seen are the domestics and gardeners, all people of color working hard to maintain the look of the American Dream while the occupants are off working hard to pay for it.

Clear Lake City and Kingwood

Both Clear Lake City and Kingwood are products of Exxon's Friendswood Development Corporation. They use nearly identical promotional literature and follow very similar layouts. Clear Lake City, the first master-planned new town in Texas, was begun in 1963 by Humble Oil and Refining and the Del Webb Company (famous for developing Sun Cities, Arizona), whose interest in the development was bought out by Humble shortly thereafter. It is located at the southeastern edge of Houston, off I-45 and near NASA, which opened in 1964. Kingwood is at the northeastern frontier, just north of the town of Humble, from which the Humble Oil and Refining Company, now known as Exxon, took its name. Friendswood has also developed Copperfield and Fairfield, both in the northwest quadrant of Houston, which are considerably smaller but similar in concept.

The logic of Clear Lake City, which has a population of 40,000 on 15,300 acres, is to provide a suburban setting for a major new employment center; about 80 percent of the residents work in the immediate

area. Following on the success of Sharpstown, Clear Lake City in many ways offers fewer amenities than the new towns founded a decade later. It occupies dubious land that once was used for oil exploration but no longer yields oil. The first thing one encounters from the off-ramp of I-45 are large oil pipes, surfacing and resubmerging into the soil. The breezes from the Ship Channel are seasoned with the unmistakable trace of petrochemicals. One of the big attractions

Clear Lake City, Harris County, Texas, 1963.

of Clear Lake City, which is not legally a city, since it was incorporated into Houston in one of the most hotly contested annexation disputes in 1977, is Clear Lake, which is not "clear" and is near but not bordering the development. The brackish inlet contains the third largest marina in the country and is the site of great sailing activity. There is some genuine Gulf Coast feeling around the lake, probably because the master planners were not able to include it in the package.

Like Sharpstown, the first plots of Clear Lake City were tightly packed on long, wavy blocks. The later subdivisions seem to have learned from The Woodlands and First Colony and use cul-de-sacs and loops more astutely for greater privacy. One of the chief characteristics of Clear Lake City is that the major thoroughfares are lined with ten-foot concrete walls that shelter the back yards of the internal streets. This gives the subdivision a particularly impermeable and forbidding feeling, as well as walls that are truly ripe for graffiti. There are schools, big churches, and strip retail centers for the spiritual and physical needs of residents, but the landscape exudes about as much sense of community as a Motel 6. The Wetcher House by Peter Waldman, with its fanciful metal extrusions visible from across the Bay Oaks golf course, is one of the few instances of architectural achievement amid some very cheap-looking, expensive property.

Clear Lake City and Kingwood have none of the landscaping coordination of First Colony, nor do they pay much attention to the natural features that are implied in their names and advertisements. Their approaches to siting and subdivision are more perfunctory.

Kingwood was developed on 13,000 acres belonging to the King Ranch on the edge of Lake Houston. The current population is 37,000. Built in a forested area much like the site of The Woodlands, it bills itself as the "livable forest"; but despite such evidence of good intentions as Charles Tapley's design for a nature trail for the first subdivision, Trailwood Village, which won a *Progressive Architecture* award in 1971, there is less of an apparent crusade here to preserve the forest. The publicity brochure shows a lush carpet of forest, but the trees of Kingwood have been unceremoniously cleared for construction, which has left lots of bald patches. The sites for the houses are quite visibly scraped, and front lawns are uniformly installed. The wetlands around the lake are preserved by law, so very few houses are close enough to see the water, and the golf courses are set out in this area to exploit the unbuildable land. As in Clear Lake City, the retail is clustered in strip-center packages that would be interchangeable with anywhere else. Each of the subdivisions is segregated by price range. The schools and churches are there, and the publicity boasts that 95 percent of the high school graduates go on to college – but with incomes averaging $83,000 here, should that be any surprise?

Kingwood has bike paths in emulation of The Woodlands (Clear Lake City is apparently the only new town without them), but they are fairly pathetic grassy alleyways, rather than wooded paths. The houses have the look of being too many square feet for the family they were built for, but because of the trees do not seem quite as cramped on their sites as similar houses in First Colony and Clear Lake City.

Like all the other new towns, Kingwood is spread out in such a way that people do not need to come into contact. The sad relic of Humble, a town that once had a thriving Main Street, is not far away, stricken by a melancholy sort of emptiness that cannot compare with the hollowness of the master-planned environment. The lack of life and spontaneity in the new towns, wherever they are settled, is unsettling. While The Woodlands offers unique access to natural features and First Colony provides a cheery revival of grand landscaping, there is something mortifying about the way the new towns' evasion of the center's human problems is contingent on the invasion of the forests and fields, displacing whatever natural or landscape feature that was there and transmuting it into a name, as the ultimate act of semiotic instability.

HOUSTON'S NEW towns are the latest outpost of what Robert Fishman in reference to the history of the suburbs called the "bourgeois utopia."[12] Although the 1982 film *Blade Runner* contained an advertisement for suburbs in outer space, it is difficult to imagine that real estate developers will be able to entice the middle class to move any farther than this from the center city. Yet retail establishments and jobs have followed – more than 10,000 people work at The Woodlands – making it conceivable for development to spread to an even wider orbit around these satellites.

Real estate agents in the new towns emphasize recreation and schools over all other features; the last priority in their pitch is cultural activities,[13] which are generally deferred to the center city. Seen from the new town, the center signifies poor schools, crime, and People Unlike Us. The viability of the edge plays no small part in the erosion of the center. Even the meaning of the word "center" has decayed, since one is just as likely to find a "center" on the edge.

If the new towns looked more like towns, they would not necessarily feel more like them. "Citizens make the town," Rousseau once said; but these people out on the edge, like most middle-class Americans, are perhaps too concerned about mobility, privacy, property values, and personal safety to really have time to participate in something like a community, which requires a continuous mediation of differences. For the bourgeois edge-dweller, history is a nightmare that can be awakened from as long as the mortgage payments are kept up.

New towns can be blamed for siphoning off the capital of the center and in the process helping to dissipate such notions as the public realm and civic virtue. They are extravagantly wasteful consumers of land and resources. They reinforce social and ethnic segregation. But among the greatest disappointments of the new towns is that there is so little architecture in them. Out there where the new wealth is breeding, and where the most building is going on, the demand for architecture is, paradoxically, at its lowest and most uninspired. ■

1 In *Developing Successful New Communities* (Washington, D.C.: Urban Land Institute, 1991), Reid Ewing identifies 58 master-planned new towns built since 1960 in the U.S. that have sufficient area, population, and diversity of functions to be called such. There are eight that merit this distinction in Texas. Nationally, the largest are Irvine, California (150,000), Coral Springs, Florida (75,000), Columbia, Maryland (72,000), Mission Viejo, California (70,000), and Reston, Virginia (53,000).

2 Kimberley Reeves, "And the Winner Is . . . Fort Bend County Master-Planned Communities," *Houston Business Journal*, 22 February 1993, p. 28. Arthur Andersen Real Estate Advisory Group data show that Houston leads the nation in sales of homes in master-planned communities.

3 Peter Rowe, *Making a Middle Landscape* (Cambridge: MIT Press, 1991). Sharpstown was begun by Frank Sharp in 1954. It contained approximately 25,000 residences on 6,500 acres, commercial and retail space, a country club (that went bankrupt), and six schools. The developer coordinated the donation of ten miles of freeway right of way for U.S. 59.

4 Ibid., p. 55. Rowe cites Thomas Pynchon's *The Crying of Lot 49* (1966).

5 Ann Holmes, "Town Without a City," *Houston Chronicle*, 1 November 1992, Texas section, p. 6: "My idea was that people would have the suburban lifestyle, in a carefully thought-out new town, and yet they want to be part of the big whole."

6 Ibid., p. 8. Of 2,508 rental units in The Woodlands, 43 percent are subsidized; in Houston only 8,781 units are subsidized.

7 The Woodlands is extremely conscientious about self-assessment and completely open with its findings. Richard Browne, who worked on the Rouse development of Columbia, Maryland, during the 1960s, leads a team of planners, architects, and economists whose coherency and sense of strategies puts Houston's planning department to shame. The available statistics reveal that median household income in The Woodlands is $50,000. First Colony claims that its median income is $80,000; Kingwood's is $83,000. The Woodlands gives a breakdown of its statistics, showing that elderly renters on fixed incomes lower the average and that those living in single-family dwellings average $62,000.

8 George T. Morgan, Jr., and John O. King, *The Woodlands: New Community Development, 1964–1983* (College Station: Texas A & M Press, 1987), pp. 27–30. Mitchell began acquiring land in 1964. He discussed his idea in 1966 with Kamrath, who did an initial study. Cerf Ross made another plan in 1969, which was submitted to HUD. The plan was approved for further planning studies under the Title VII new towns program of 1970. Robert Harrisfield was hired away from Caudill Rowlett Scott as the new director of planning. The final planning team included Gladstone Associates of Washington, D.C., for economics and marketing, William Pereira of Los Angeles for master planning and design, Richard P. Browne of Columbia, Maryland, for development, engineering, and HUD liaison, and Wallace, McHarg, Roberts & Todd of Philadelphia for environmental planning. Pereira was chosen because of his work on the planning of Irvine, California, Gladstone and Browne for their work on Columbia. The initial plan was submitted to the federal authorities in 1971.

9 Ibid., p. 34. McHarg suggested seven goals of land use: 1) minimum disruption of surface and subsurface hydrological features; preservation of natural woods; use natural drainage; preservation of existing species of vegetation; preservation of wildlife habitats; minimizing development costs; and avoiding life hazards.

10 Kimberly Reeves, "Census Indicators Put Fort Bend on Top of Houston-Area Counties," *Houston Business Journal*, 22 February 1993, p. 32.

11 Ibid.

12 Robert Fishman, *Bourgeois Utopias: The Rise and Fall of Suburbia* (New York: Basic Books, 1987).

13 Ewing, p. 63. Ewing did a survey of marketing priorities of 27 new towns. From highest to lowest, they were recreation, location, workplaces, master plan, schools, shopping, transportation, neighborhoods, housing, and social and cultural aspects.

37,000 WOODLANDERS CAN'T BE WRONG

PETER WOOD

ALMOST 20 YEARS AFTER ITS GRAND OPENING IN THE MUD AND PINE TREES OF WHAT SOME HOUSTON RESIDENTS CONSIDER "ALMOST TO DALLAS," THE WOODLANDS IS DOING QUITE WELL, THANK YOU. ITS POPULATION NOW NUMBERS SLIGHTLY MORE THAN 37,000 MOSTLY HAPPY LONG-TERM CAMPERS – NEARLY THREE TIMES AS MANY AS WEST UNIVERSITY PLACE (12,920), AND HALF AGAIN AS MANY AS FLOWER MOUND (24,000), TEXAS'S ONLY OTHER TITLE VII NEW TOWN, NORTHWEST OF THE DFW AIRPORT. STATISTICALLY, THE WOODLANDS BREAKS DOWN INTO 14,946 DWELLINGS; 6,612,800 SQUARE FEET OF COMMERCIAL SPACE; 476 EMPLOYERS; 11,347 FULL-TIME JOBS; 22 CHURCHES; 11 SCHOOLS; 64 MILES OF HIKE-AND-BIKE TRAILS; AND 175 MILES OF STREETS.

Based on my own not-too-random sampling of residents over a period of several weeks – parents of high school children who were volunteering to judge a speech tournament – I found that almost everyone, like me, appreciated the neighbors, the neighborhoods, the schools, and the security. They worried about the traffic and the problems of just getting around, and to a lesser extent about safety, particularly turning children loose on the bike paths. Looming somewhere on the very distant horizon is the prospect that Houston might someday exercise its right of extraterritorial jurisdiction to annex The Woodlands in whole or in part, a fate that befell Clear Lake City. Annexation would replace the efficacious and site-specific, if essentially corporate, governance of local affairs with a distant facsimile of home rule.

Rush-hour traffic *is* beginning to be a problem, as was the case in Lincoln, Nebraska, when I left in 1980. There the problem intersections were defined by the *Lincoln Journal* as those where motorists had to wait more than one cycle of the light to get through. It's about the same in The Woodlands these days; one can while away three or four idle minutes getting through a couple of critical intersections, courtesy of the Montgomery County Commissioners Court, whose approach to traffic engineering is still profoundly (and budgetarily) exurban.

For long hauls, access from downtown Houston has improved remarkably since 1980. During the early eighties, the traffic jam in the evening moved north on Interstate 45 at the rate of one exit each year. Then the combination of a soured economy, the widening of I-45, and the advent of the Hardy Toll Road conspired, along with a model van-pool program and a well-patronized park-and-ride, to make commuting a non-issue once more. In 1980, my transit by automobile from The Woodlands to the University of Houston consumed an average 45 minutes; by 1985 it had reached an almost intolerable hour and 5 minutes. Now, by using the Hardy Toll Road and maintaining the prevailing – if extralegal – speed of 65 miles an hour, the trip can be managed in as few as 35 minutes, with the aid of a little electronic device that sticks to your windshield and lets you zoom through the toll plaza at 30 miles per hour without even rolling down your windows, automatically charging the toll ($1.50 each way) to your Discover card.

The growth of The Woodlands has also affected the retail environment. The Grogan's Mill Shopping Center, once cherished for its little shops, banners, Jamail's gourmet grocery store, and ice-skating rink, is no longer its old self. The skating rink succumbed to what was said to be the high cost of keeping it up, although one suspects it was no longer essential for the marketing of the new villages. The space for the grocery store was perhaps too small and inefficient to be really profitable, and once the residential buildout reached a certain point, a much larger Randall's superstore opened in Panther Creek Village. Most of the surviving businesses eventually left Grogan's Mill to be close to the new Randall's, which has already expanded its premises once so far.

Another retail-related dilemma stems from the inability of The Woodlands to capture (and to some extent control) the thriving commercial activity that has grown up just outside its boundaries. The stretch of road between The Woodlands' southern edge and I-45 is a new edition of everything that is wrong with Houston. Automobile-focused shopping abounds: in less than a mile there are more curb cuts than curbs, enough neon to make street lights redundant, and, in short, just the kind of clutter to make anyone who lives along FM 1960 feel at home. By opting not to provide the inevitable Kmart, Wal-Mart, fast food, and "get your gas here" establishments within The Woodlands, we are confronted with them at slightly greater remove, but in an unbridled state.

The long-awaited Woodlands Shopping Mall, first announced in the early 1980s but put on hold when the oil bubble burst, is finally under construction. Unlike Reston, Virginia, where many of the tasteful green signs announcing "the future site of a . . . " were consumed by termites and the weather before anything was built, The Woodlands Corporation kept the sign for its shopping mall in good shape. The mall will undoubtedly be the undoing of many small shops now doing business in the village shopping centers, but it will give our mall rats and local sales tax dollars a more proximate venue than Greenspoint, Willowbrook, or Deerbrook malls.

The public schools in the The Woodlands are one of its principal assets, although in the interest of achieving economies of scale they tend to be somewhat larger than might be wished. And as is true almost everywhere else, we have a collection of neighborhood schools that few students can conveniently walk to. Despite a local preference for smaller high schools, the Conroe Independent School District recently determined that the swelling upper brackets of our scholastic population could be most manageably and economically accommodated by building a gargantuan new Woodlands high school, which would also make it possible to compete on favorable terms in football with the state's other mega high school sports programs. The North Harris Montgomery Community College is developing a 100-acre campus just north of The Woodlands, but the prospects for a branch campus of the University of Houston like that at Clear Lake City continue to be stalled by the Texas Higher Education Coordinating Board.

During my 13 years in The Woodlands, our family has owned homes in two distinct neighborhoods. One fit the ideal not only of The Woodlands but of upper-middle-class society as a whole. It was situated on a cul-de-sac one block long with 21 other houses. It was within walking distance of an elementary school, the high school, a major park and recreation area, and even shopping. The median home value was around $125,000, and most houses were owner occupied. As many as 46 children of high school age and younger held down the median age, although a few homes were occupied by empty nesters and childless couples. Almost every family had one spouse at home. It was a place of block parties and a neighborhood watch, where everyone put the car away at night and kids played in the street.

The other neighborhood was less privileged and more reflective of The Woodlands' commitment to socioeconomic diversity. Its houses were valued in the low $70,000s. Cars were seldom put in the garage, and nobody to speak of was visible during the day (or evening, for that matter). There were lots of kids, but they were kept hidden or were busy at school. The street was given over to traffic fast enough to nail an occasional pet, and except for a trip to the playground out back, everyone had to drive everywhere he or she needed to go.

As congenial as it is in most respects, The Woodlands still has room for improvement. It needs some kind of public transportation. Elder-care facilities have initiated their own para-transit services for shopping and getting to church, but it may be time to expand these to serve a broader population – particularly children, who are often stuck at home if there is no parent available for taxi service. The Woodlands could also benefit from a community newspaper, and/or more creative use of cable TV as a means of sharing news of purely local interest. Nor is there much to write home about architecturally – with very few exceptions, the trees are expected to do it all. But even so, I know of no other remotely affordable place inside or outside Houston where I would rather live ■

Way of the Locust Built Ecol

DIANE GHIRARDO

DURING WINTER, the Po Valley in northern Italy disappears under a blanket of thick fog. In cities such as Mantua, even at midday visibility often extends no more than a few meters, with street and house lights little more than hazy yellow blurs. Only by dint of severe eyestrain is it possible to seize the contours of the landscape, the configurations of buildings, the shapes of cities: everything lies concealed beneath a pervasive, bone-chilling fog.

Driving through the urban hinterland of Los Angeles offers a nearly identical experience, particularly heading east through what is called the Inland Empire. But here the eye-straining dimness occurs at high noon in the middle of summer, and the yellow-brown smog is illuminated by sunlight that feebly pierces the thick layer of atmospheric pollutants. Smog envelops everything from downtown L.A. east, but the farther east you travel, the thicker, stickier, and fouler smelling it becomes.

To southern Californians, smog seems almost a natural artifact, part of the price inevitably paid for a year-round temperate climate. But filthy air, far from natural, is a direct consequence of deliberate development policies relentlessly pursued in southern California throughout the 20th century. The urban form of the built environment in Los Angeles accords Angelenos the privilege of breathing foul air and thereby poisoning their lungs and those of their children on a level probably matched only by coal miners.[1] The building of Los Angeles and southern California brought other dubious achievements: it has allowed the inhabitants to simultaneously overpump and poison the rich artesian springs throughout the basin, then to foul the ocean with toxic runoff and emissions from a ring of refineries circling the south bay; it has so concentrated salts in the groundwater that eventually the Inland Empire will have to be abandoned; it has vanquished age-old ecosystems, consigning species of flora and fauna to extinction without a second thought; it has so recklessly reshaped and remodeled the landscape that, much like the areas adjacent to the Mississippi River before July 1993, it is a series of disasters waiting to happen.[2]

If the intimate connection between these facts and architecture is not readily apparent, it is because for too long architects have abjured any responsibility for the manifold consequences of the buildings, airports, subdivisions, shopping malls, office parks, skyscrapers, new towns, factories, and other artifacts that they design. Beginning in school, students are taught to disregard everything other than the form and internalized function of the aesthetic objects they produce. They are taught that the measure of their accomplishment is the affirmative judgment of their formal virtuosity pronounced by their professors and by other design professionals. In other words, they are taught that only by simplifying, abstracting, or ignoring most of the problems connected to their designs will they be able to achieve success as architects. The building of Los Angeles and its vast periphery, whether planned or unplanned, provides a towering counterpoint to the simple-minded verities of contemporary architecture.[3]

Although he drew entirely different conclusions from the same evidence, Reyner Banham was one of the first architectural critics to notice many of the characteristics of building and architecture in Los Angeles.[4] In *Los Angeles: The Architecture of Four Ecologies*, he chastised the conventional commentaries on architecture that ignored "pop ephemeridae, . . freeway structures and other civil engineering" on the grounds that they "are as crucial to the human ecologies and built environments of Los Angeles as are dated works in classified styles by named architects."[5]

But despite his wide-ranging appreciation of the built environment, Banham was almost oblivious to the imperatives of the natural ecosystem, the unbuilt environment: "Whatever man has done subsequently to the climate and environment of Southern California, it remains one of the ecological wonders of the habitable world."[6] Wonder, indeed; but only in its candidacy for supreme environmental destruction. For Banham, the first ecology, "surfurbia," and its spectacular beachfront homes and generous beaches only required "vigilance" to avoid becoming a dumping ground for cost-

Richard Haas, Sky Lobby mural in Home Savings of America Tower, Los Angeles, 1988. ▶

Judith F. Baca, *The Great Wall of Los Angeles*, Van Nuys, California, 1983.

ogies of the Los Angeles Rim

cutting industries and public services. Instead, the bay has been ruthlessly and systematically polluted by industries and cities, and the beaches themselves have had to be augmented by infusions of sand, since the systematic control of the Los Angeles basin's rivers has interrupted the natural cycles whereby beaches are created.

Banham also celebrated the housing built along the flanks of the Santa Monica Mountains and the Hollywood Hills as "classic Los Angeles foothill settlements."[7] Subsequent foothill developments – at Los Feliz, Beverly Hills, Bel Air, Pacific Palisades, and Brentwood around the basin, and then east to Highland Park, Pasadena, San Marino, Sierra Madre, and Monrovia – were simply variations on the same theme. Such hillside sites adjacent to wilderness areas "seem to cry out for affluent suburban residences. . . . Watered, [they] will carry almost any kind of vegetation."[8] Architects responded to the design challenges of hillside construction with flair and originality. Some of the most inventive houses – by Craig Ellwood, John Lautner, and Pierre Koenig – were lifted off the ground to afford spectacular wide-angle views of the city and the ocean.

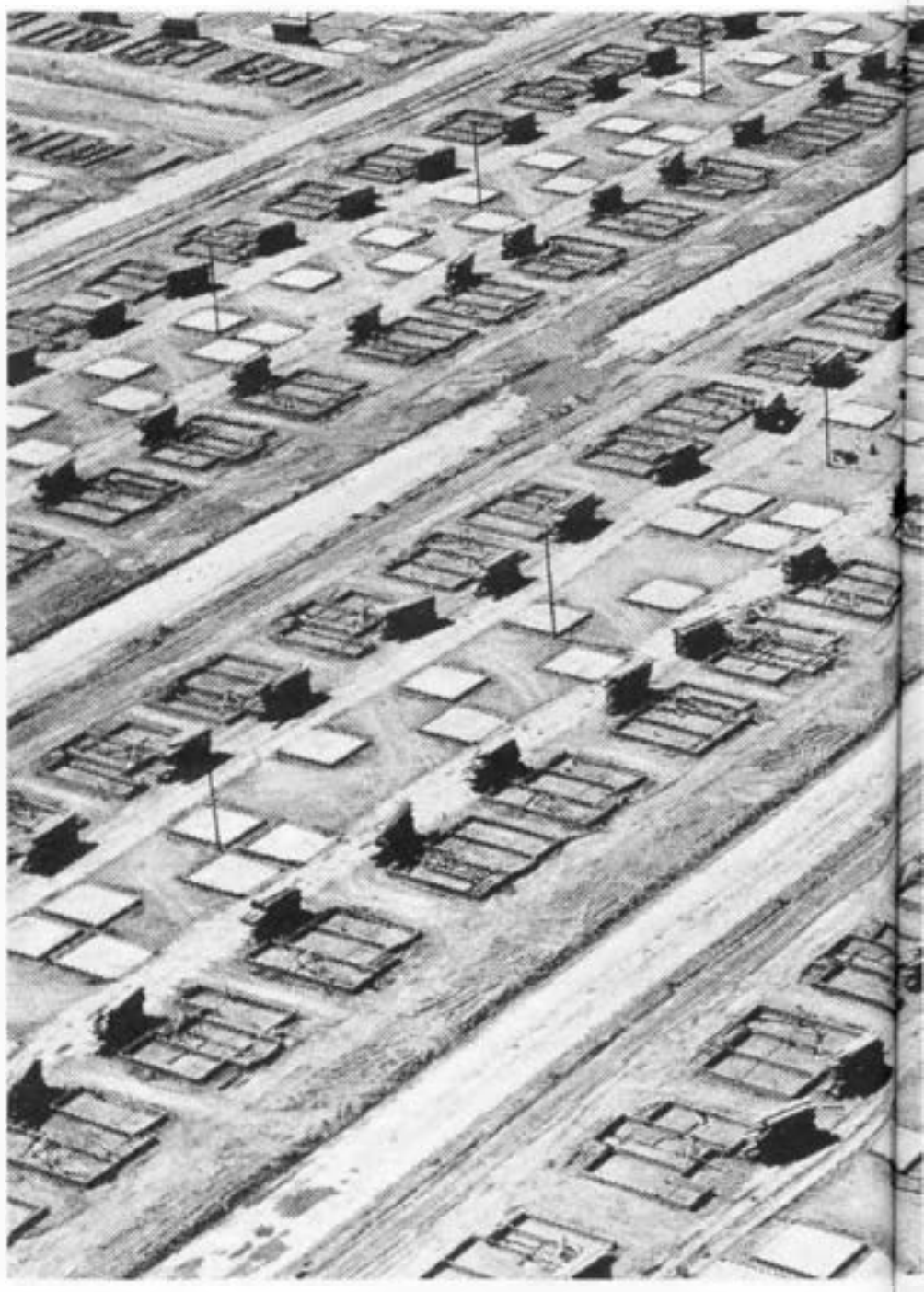
Elsewhere, developers were less individualistic and more ruthless. Banham described the tiers and terraces carved into the mountains that surround Los Angeles in order to build houses on level surfaces, but even though he recognized that there were ecological implications to this manner of building, he stopped short of adopting the position of the "Jeremiahs at Berkeley and in the Sierra Club."[9] With a classic faith in the power of people to move mountains, Banham insisted that regulations and codes could control the forces that led to major slides, and in any case, the worst construction had occurred in northern rather than southern California.

Events have given the lie to Banham's twin articles of faith in human ingenuity and well-enforced codes to contain the forces of nature: mountains rather than people have done the moving. The San Gabriel Mountains, relatively young tectonically, are rising steadily, and as they do, masses of boulders, gravel, and sand stream down their flanks in phenomena known as debris flows, plowing through homes, streets, barricades, and anything else Angelenos have confidently perched in their path. The enormous engineering works muscled against this relentless movement, including vast basins and dams built to contain the debris, are only minor impediments to the downward flow of the mountains. And still the houses go up, streets are paved, and homeowners profess ignorance and amazement when their garages and homes fill up with mud, gravel, and boulders.[10] Earthquakes also trigger movement in the mountains, which results in boulders and debris being shed, followed, when it rains, by the inevitable debris flows. Dozens of debris basins erected by Los Angeles taxpayers to protect the foolhardy require constant cleanouts and are unable to contain overflows.

The swath of territory to the north, east, and south of Los Angeles was built up at different paces during the 20th century. Development falls into one of two types: planned and unplanned. In this essay, I will examine the unplanned variant in the Inland Empire (Riverside and San Bernardino counties) and in Orange, Ventura, and Los Angeles counties, and the so-called planned growth in the Orange County city of Irvine.

Residential development exploded precisely in these seemingly remote areas from the late 1970s on – areas that could still be called the far fringes of Los Angeles in 1981 – smothering orange groves and agricultural land beneath concrete, asphalt, and tract houses. After World War II, the tide of settlement flowed east from the San Gabriels in a pattern familiar from early-20th-century development in the L.A. basin but that spread beyond, domino fashion, to the San Fernando Valley, to the western edge of the Antelope Valley in Leona Valley, to the San Gabriel Valley, and then out on all sides, to the northeast of Los Angeles toward the Mojave Desert, and to the southeast in former agricultural areas such as Temecula. A vast ring of bedroom communities sprang up in which the maximum number of people could live out the single-family-home version of the American dream. These pristine desert lands promised freedom from the urban ills associated with Los Angeles – traffic, gangs, crime. But the promise proved illusory, because those same problems followed the commuters right out to their new suburbs.

The commuter zone first extended some 20 or 25 miles from downtown Los Angeles and included the San Fernando Valley, some of the San Gabriel Valley, and the northern section of Orange County. By 1970 the commuter range had risen to 30 or 35 miles and by 1980 to 50 miles from downtown, beginning to penetrate Ventura, Riverside, and San



California tract homes under construction at Lakewood in the San Fernando Valley, 1950. ▶

Bernardino counties.[11] In the subsequent decade, the commuter zone extended deep into Riverside County as far as Temecula, Hemet, and Moreno Valley; farther into San Bernardino County to Apple Valley, Adelanto, and Big Bear; and finally to the northernmost reaches of Los Angeles County, to Palmdale, Lancaster, and Antelope Valley – distances of 60 to 90 miles, sometimes even more. Although the Inland Empire, hemmed in by mountain ranges and blasted by searing summer heat, endures the area's most devastating smog, air quality is only marginally better in communities closer to Los Angeles such as Pasadena and San Marino.[12]

Cities such as Palmdale, Moreno Valley, Rancho Cucamonga, Adelanto, and Valencia suddenly appeared in place of tiny villages or plots of desert land, now transformed overnight into endless acres of interchangeable tract homes serviced only by expansive shopping malls. At one time it even looked as if Kern County, just south of Fresno, would come to provide bedrooms for L.A.'s hungry laborers.[13] During the 1980s, population almost doubled in the Inland Empire, from 1.6 million to 2.9 million people. Exponentially rising housing costs within the L.A. basin intersected with increasing demand for low- and moderately priced housing from 1978 onward, as a mixed bag of junk-bond-laden nouveau riche yuppies, Rust Belt refugees, wealthy Iranians following the shah, Korean and Southeast Asian entrepreneurs, Central American victims of Reagan policies, and Mexican emigres all converged on southern California in the space of a few short years. The demand spilled over the San Gabriels into the Inland Empire, as communities closer to L.A. resisted attempts to increase the stock of affordable housing. The affluent communities of San Marino, Bradbury, and Rolling Hills Estates even proposed to count maids' quarters and caretakers' cottages in a desperate bid to meet state-mandated quotas for affordable housing – without actually having to build any.[14]

These suburbs serviced the city by sending workers on commutes of up to four hours per day, ensuring not only monumental traffic jams and slowdowns but also the persistence of intense smog for the better part of the year. An 80-mile drive might require one and a quarter hour's driving elsewhere, but here it could easily consume up to three hours, even in the absence of a major accident. In the building fever of the late 1970s and 1980s, builders, politicians, and residents were sublimely indifferent to the possible consequences of such development. As always happens in southern California when money is to be made, such questions were brushed aside as barriers to progress.

Opposition to the relentless expansion coalesces around two concerns: quality of life and environmental effects. Residents of rural communities oppose the suburbanization of mountains and deserts on the grounds that the quality of their life will be irreparably eroded by what they perceive as the unmitigated greed of developers. Such is the case for the residents of Antelope Acres, 12 miles north of Lancaster in the high desert. First settled in 1948, Antelope Acres consists of about 400 mostly frame cottages on lots of one and one-half to five acres, ample for horses, chickens, and even bird sanctuaries.[15] The city of Lancaster annexed 885 acres south of the town and plans to have the Larwin Land Company of Encino erect 2,000 homes on the site, effectively turning the original community into a tiny oasis in a sea of tract homes.

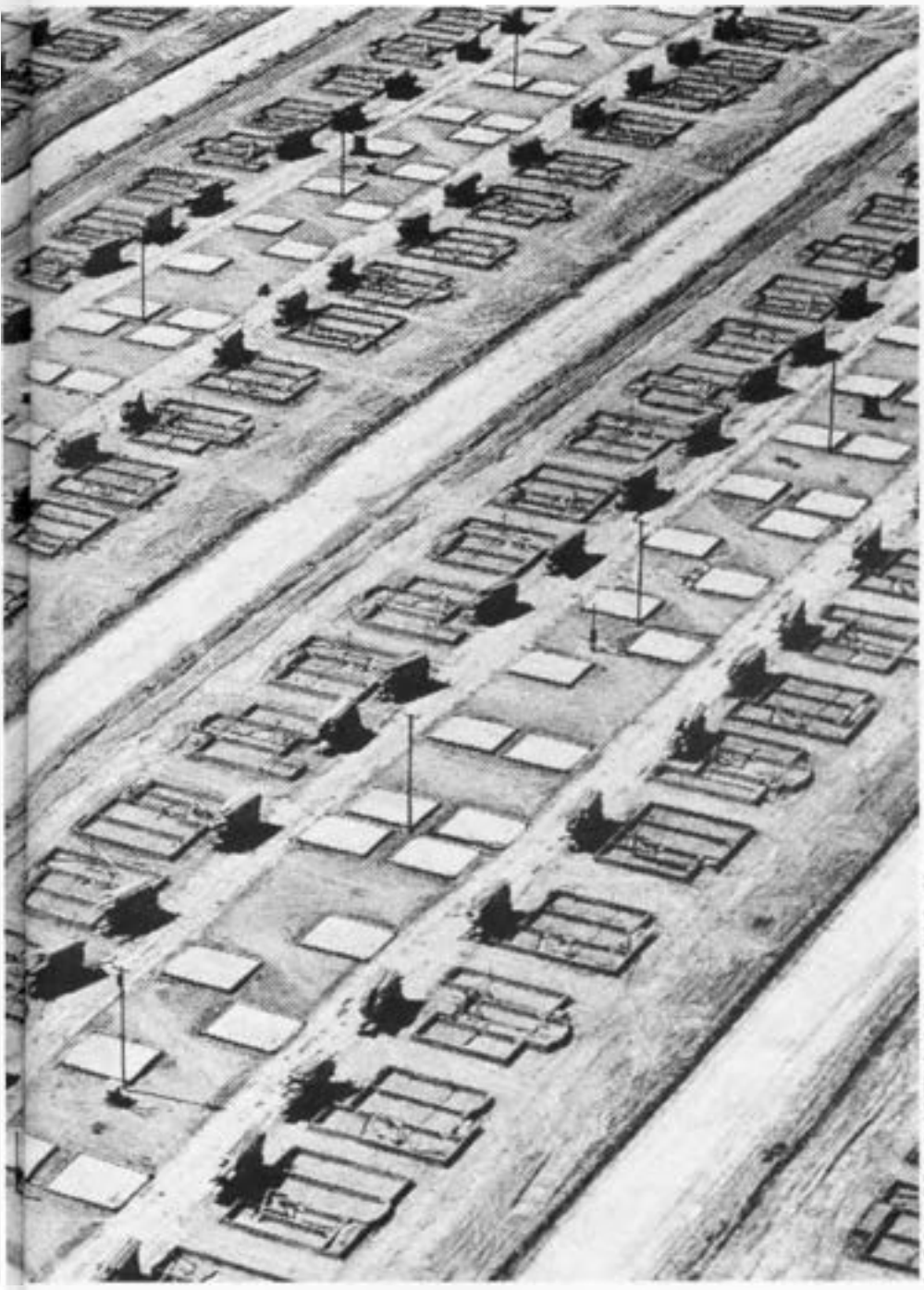
Not far away, a heated debate throughout 1992 pitted opponents of the $2 million Moreno Highlands megadevelopment in the San Jacinto Valley against other residents and even the city council. The town of Moreno Valley exploded during the 1980s, and the steady increase in smog and encroachment on open and wilderness areas brought planners, environmentalists, and residents into conflict with elected officials. The site where two Denver and Chicago families, the Cohens and Crowns, plan a mini-city of nearly 8,000 homes, serviced by 24 miles of new roads, also happens to be the habitat of peregrine falcons, golden eagles, and other endangered species. Although the developers claim that areas will be set aside for these animals, environmentalists and even state officials say that the planned reserves are totally inadequate. The 30,000 new residents expected for the area amount to an addition of one-fourth of the current population of Moreno Valley.[16]

The biggest white elephant of all is the proposed Tejon Ranch development, on a parcel of land the size of the city of Los Angeles along the Grapevine between Los Angeles and Kern counties. Although development is in the earliest stages now, the *Los Angeles Times*, which owns a third of Tejon Ranch's stock, is preparing the way with cautious articles about the environmentally sensitive plans being developed by the company.[17]

One of the great shibboleths of such developments is the claim that they will provide jobs in a time of recession.[18] But once the houses and business park have been built, not nearly enough employment will be generated to support the new community, particularly when the jobless rate is inching higher every month. Such is the case elsewhere in the Inland Empire, where factory outlets, shopping malls, and automobile dealerships can absorb only a limited number of workers. The steady decline in property values and the strains on Riverside County's social services hardly argue for yet more tracts of housing. Other losers from overdevelopment include Oxnard, whose prototypical American downtown has been destroyed by the proliferation of strip malls on the city's outskirts.[19]

To finish off the job that the mosaic of tract homes started, politicians and planners in Los Angeles County have their sights set on five desert areas in the Inland Empire as waste-disposal areas for Los Angeles. Waste-by-rail is scheduled for Eagle Mountain, an abandoned mine on the border of the Joshua Tree National Monument, and Amboy in the Mojave Desert, where trash is to be deposited in enormous caverns being dug for the purpose. Two more hazardous-waste sites and one low-grade nuclear waste dump are scheduled for Highway 40, between Barstow and Needles.[20]

The common view of the desert lands that extend to the Arizona border is that they are available for any speculative use, from a thoroughfare to Las Vegas or Palm Springs to a venue for dirt bikes or off-road vehicles. Yet the seemingly barren deserts are habitats for innumerable species of flora and fauna. Environmental concerns extend from the needs of endangered species to the problems of erosion and flooding to the most serious of all, contamination of groundwater. Although city and county officials insist that they can devise adequate protection, anyone who has followed the saga of Rocky Flats



in Colorado and other nuclear facilities will be skeptical of official assurances. The high fees that Riverside County will be able to charge for each ton of refuse accepted persuaded county officials to support the project, even though planners in the urban areas envision sending six trains and 200 trucks belching diesel fumes into the Inland Empire deserts every day.

During the booming economy of the 1980s, and indeed throughout the cold war years, when the proliferation of defense industry contractors and military bases created the illusion that economic expansion was destined to last forever, southern California seemed miraculously immune to the economic swings that afflicted other parts of the nation. Fifty years of prosperity seduced politicians, entrepreneurs, and citizens into believing that the boom would go on forever. Alas, capitalism endlessly repeats itself: with the steady closing of defense bases and defense industry suppliers, as well as the decline of international trade in the wake of a worldwide recession, unemployment there has risen dramatically over the last three years, and property values have dropped as much as 30 percent. The hopeful pursuers of the American dream who purchased dream houses in Palmdale, Temecula, and Adelanta suddenly found themselves with unpaid mortgages in amounts greater than the value of their homes. When unemployment struck their spanking-new communities, there were no jobs; forced to put their houses on the market, they found no buyers.

The human and environmental tragedies now being configured in these areas could have been predicted, and the disasters to come are being predicted today. Indignant urban planners and architects regularly decried the mindless sprawl that consumes hundreds of thousands of acres of pristine landscape every year. But planned developments in southern California are hardly an alternative. The city of Irvine was developed on the extensive lands of the Irvine Ranch Company, originally purchased in 1876 from drought-stricken Mexican-American ranchers and slowly transformed from range land to a giant agribusiness.[21] During the post–World War II suburban explosion in southern California, Myford Irvine began to turn the Irvine Company into a real estate development firm, taking advantage in particular of the miles of prime oceanfront land between Newport Bay and Laguna Beach owned by the ranch. Instead of selling the houses and lots, the Irvine Company offered long-term leases, retaining a degree of control unusual in American real estate.
The luxury subdivisions, with tennis courts, pools, and clubhouses, differed substantially from the endless FHA-financed tracts of middle-class homes prevalent in southern California. But the biggest development money lay with middle-income homes, so the Irvine Company came under intense pressure to sell blocks of land to developers. Instead, in 1958 the owners chose the option presented by the regents of the University of California: to build a new university on Irvine land, with a new city to service it. William Pereira, who had originally proposed the site to the regents, was chosen to design a comprehensive land-use master plan for the university, city, and environs.[22] The explicit program was to build the ideal city of the future, drawing ideas from the best designers and the most experienced planners, and especially benefiting from the errors of the past. Unlike ordinary, developer-built suburbs, Irvine would be neat and orderly, its infrastructure buried underground, its carefully bordered and trimmed roads leading to diverse types of housing, shopping centers, and business parks. Instead of a sea of tract homes, Irvine was to be divided into villages, each with a number of housing types and a dominant architectural style, not to mention schools, shopping districts, churches, and community pools.

Despite decades of scorn heaped on Levittown and its successors, the first thing the architects did in Irvine was embrace the key features of the archetypal suburb – identical rows of stucco townhouses, apartments, and houses whose modest variations only emphasize their uniformity. A second, equally timid gesture was to repeat the worst features of the average business park, surrounding glass-sheathed boxes with seas of parking. The abandonment of any comprehensive architectural vision is breathtaking. The inhabitants are equally homogeneous: middle- to upper-middle-class white professionals, a sprinkling of Asians, and a tiny number of Latinos and African-Americans. The glue holding it all together is the typically Californian obsession with maintaining property values, a dicey proposition in today's southern California. Hence the power of the homeowner associations, which aggressively contain any loose architectural or landscape cannons that might unwittingly roll in.

As the homogeneity of residents and residence configures the nightmare of modern architecture, the ideal of the perfect city crumbles in the face of market forces and real estate strategies. Although the initial idea was that residents could work and live in the same area, two things conspired against this goal from the outset. Housing prices and availability effectively limit the number and class of inhabitants, and the business parks, occupied chiefly by aerospace companies, electronics firms, and research-and-development industries, have been so successful that far more people work here than originally anticipated. Irvine is therefore a net importer of workers. Add this to a general design absolutely dependent on the automobile for even the most trivial activity, and you end up with traffic congestion and pollution comparable to that of older cities – precisely the models that Irvine's design was intended to surpass. The Irvine Company and the city council steadfastly resisted mass transit facilities, let alone low-income housing. A lawsuit charging the Irvine Company with violation of state laws regarding low-income housing was not settled until the company came into new ownership in the late 1970s, when plans were outlined for a dramatic increase in development.

Although this forced the admission of a marginally more diverse population, Irvine maintains control over the environment and potential troubles, from gangs to homelessness, in part through the most suburban of design strategies: there is no downtown. With their milling crowds and lingering strollers, downtowns are far less susceptible to formal and informal measures of control than are suburbs under the watchful eye of homeowners' associations. Most of all, they encourage visits from precisely those groups that the planning process sought to banish. It is not difficult to imagine that to youngsters brought up in Irvine, Disneyland's Main Street in nearby Anaheim offers the only remotely urban experience they are likely to have.

The University of California, Irvine – sprawling over a broad area, with signature buildings dotting the landscape and serviced only by a singularly unsuccessful

mini-mall – certainly cannot fulfill the role of a public arena. For architects, the university's most notable feature is its designer architecture: buildings by Frank Gehry, Rebecca Binder, Robert Venturi, Robert A. M. Stern, James Stirling and Michael Wilford, and Charles Moore, among others. With the exception of Gehry's engineering center and Binder's student lounge, however, most of the designs are dog-eared variations on well-known themes. Set far apart from one another and into thoroughly uninspired landscaping, only the occasional bright color distinguishes them from the nearby business parks.

It is no small irony that the Maguire Thomas Partnership plan for Playa Vista, just a few dozen miles away on the Los Angeles coast, has been presented as similarly bold, innovative, and future oriented, even though, as at Irvine, no controls mandate sales and rentals only to those who work in the area.[23] Hope springs eternal that architects can somehow pull solutions for the design of new cities out of their hats; but Irvine is an alarming indication of what Playa Vista might turn out to be. Worse yet, much of the Ballona Wetlands, one of the few remaining wetlands in southern California and certainly the only significant remaining open space within the basin, will be sealed with concrete except for a dainty preserve left over as a sort of eco-amusement park for L.A.'s prosperous west side.

More than 30 years ago, the Irvine Company brokered a deal to donate land to the University of California in exchange for development rights, just as President Donald Bren has recently donated 17,000 acres of land, including Limestone Canyon, in exchange for permission to develop adjacent land without cumbersome and irritating planning oversight. Only the occasional townhouse or apartment building in Irvine, Tustin, and other Irvine Ranch Company bedroom communities departs significantly from the relentless expansion into the desert by tract developers. The marginal gestures to preservation of the environment and open space are little more than shrewd maneuvers to defuse opposition to planned developments on other company lands.[24]

Despite the growing problems with water, subsidence, pollution, and waste disposal, the tide of single-family tract house development rolls relentlessly forward, from long-range plans for Tejon Ranch to eager plans to tame the Santa Clara River and line it with concrete, malls, and tract homes.[25] Although the plans for Tejon Ranch, a parcel of land the size of Los Angeles, are alarming for their scale and their intrusion into previously pristine mountains north of Los Angeles, the Santa Clara River is probably the most typical example of development southern California style, casting into high relief the battle between developers and conservationists. The hundred miles of the Santa Clara are the state's longest and wildest waterway and boast the largest, best-preserved riparian woodland in southern California. The river supports five endangered species – three birds, one fish, and one plant – and nourishes a $125 million citrus crop.

But the competing interests waging war over the river's future are irreconcilable. Developers covet 30 miles of the river between Santa Clarita and Fillmore, which they envision lined with five commercial centers, a shopping district, an industrial area, and thousands of homes. The farmers, on the other hand, want the river controlled to protect their orchards – planted here precisely because of the rich river-bottom soil – from dangerous winter floods. Although growers have bermed and bulldozed the river for decades, the Santa Clara meanders precisely where it wants to, which is often over their citrus orchards. Gravel miners, who plow up vegetation and disperse silt, have been raiding the river bottom's hundreds of feet of aggregate since the 19th century, and they want to increase their take rather than limit it. Like the developers and growers, they cite progress, development, and cultivation as automatic social benefits that justify taming the river, and they have no patience with environmentalists' concerns. The pro-development forces are convinced that the river can and should be controlled, but the U.S. Army Corps of Engineers flatly rejects their arguments. Fresh from the losing battle with the supposedly long-tamed Mississippi River and the ongoing struggle to keep the Mississippi from diverting its flow into the Atchafalaya River, the Corps has finally recognized that the grand engineering feats accomplished on rivers such as the Santa Clara always end up diminishing the resource and costing far more to preserve than is ever anticipated at the outset. Once tracts of homes go up along the river banks, extraordinary measures will be necessary to protect the occupants from floods, and even the most elaborate measures too often fail. Rivers go their own way, or exact a terrible price from those who attempt to confine them.

Where will it end in southern California? The natural barriers to endless development have been systematically overcome without regard to short-term or long-term costs, and the planning of Irvine only marginally improves on that of Moreno Valley or Palmdale. Developers still sweep up their profits and leave the social, political, and environmental costs for the taxpayers to shoulder. And nature, as the Mississippi tellingly demonstrated last summer, will not passively yield to the dictates of man.

Postscript: This article, based on class lectures I gave in 1992 and 1993, was submitted shortly before the Malibu Fire in November 1993 and the Northridge Earthquake of January 1994. In retrospect, I should have written, "Los Angeles is a *series* of disasters waiting to happen."■

1 The best study of the politics of air pollution in Los Angeles is Eric Mann and the Watchdog Organizing Committee, *L.A.'s Lethal Air: New Strategies for Policy, Organizing, and Action* (Los Angeles: Labor/Community Strategy Center, 1991). A study now in progress by this same organization is demonstrating that although air pollution spares no one in southern California, other kinds of toxic poisoning disproportionately strike the poor.

2 Norris Hundley, Jr., *The Great Thirst: Californians and Water, 1770s–1990s* (Berkeley and Los Angeles: University of California Press, 1992), pp. 373–80; Donald Pisani, *From the Family Farm to Agribusiness: The Irrigation Crusade in California and the West, 1850–1931* (Berkeley and Los Angeles: University of California Press, 1984); Marc Reisner, *Cadillac Desert: The American West and Its Disappearing Water* (New York: Viking, 1986); Barry Commoner, *Making Peace With the Planet* (New York: Pantheon, 1990); John McPhee, *The Control of Nature* (New York: Farrar Straus and Giroux, 1989), pp. 183–272. The best history of southern California's development in general remains Carey McWilliams, *Southern California: An Island on the Land* (1946; reprint ed., Salt Lake City: Peregrine Smith Books, 1973). More recent critical analyses of southern California and spatial change are Edward Soja et al., "Urban Restructuring: An Analysis of Social and Spatial Change in Los Angeles," *Economic Geography* 59 (April 1979), pp. 80–106; and Edward Soja, *Postmodern Geographies* (London: Verso, 1990).

3 I have written about the social and political role of design in Los Angeles elsewhere: see "The Postmodern Geography of Los Angeles," *Design Book Review*, Summer 1991, pp. 86–91; "Los Angeles Architecture, 1970–90," *A & V* 32 (December 1991); "What Price Paradise?" *Architectural Review*, December 1987, pp. 85–89. The most compelling account of Los Angeles to appear since McWilliams is Mike Davis, *City of Quartz* (London: Verso, 1990).

4 Reyner Banham, *Los Angeles: The Architecture of Four Ecologies* (London: Penguin, 1971).

5 Ibid., p. 22.

6 Ibid., p. 31. Banham's four ecologies – surfurbia, the foothills, the Plains of Id, and Autopia – playfully intersected with specific architectural styles.

7 Ibid., p. 96.

8 Ibid., p. 100.

9 Ibid., p. 107.

10 The best analysis of the debris flows is John McPhee's classic essay, "Los Angeles Against the Mountains," in *The Control of Nature* (see note 2).

11 A quick summary appeared in Rodney Steiner, *Los Angeles: The Centrifugal City* (Dubuque: Kendall/Hunt Publishing, 1981).

12 When this article had already been written, an article essentially corroborating it appeared in the *New York Times*: Seth Mydans, "With a Boom in the Desert Over, Transplants Are Feeling Stranded," 26 August 1993.

13 *Los Angeles Times*, 13 December 1992.

14 Ibid., 23 April 1993, sec. B, pp. 1, 2.

15 Matthew Heller, "A Quiet Getaway," *Los Angeles Times*, 28 May 1993.

16 Patrick J. McDonnell, "Backlash Hits Growth-Loving Moreno Valley," *Los Angeles Times*, 13 January 1992.

17 Jonathan Gaw, "As It Turns 150, Tejon Ranch Weighs Development," *Los Angeles Times*, 19 September 1993.

18 McDonnell, "Backlash"; McDonnell, "Referendum on Quality of Life," *Los Angeles Times*, 22 March 1993.

19 Fred Alvarez, "Looking for a Boost in Oxnard," *Los Angeles Times*, 2 February 1993.

20 Paul Feldman, "Trash Dumps May Intrude on Desert Serenity," *Los Angeles Times*, 28 October 1991; "Ward Valley Nuclear Waste Facility Approved," *Los Angeles Times*, 17 September 1993.

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23 Andres Duany and Elizabeth Plater-Zyberk, with Stephanos Polyzoides, are the designers and planners associated with Playa Vista.

24 Marla Cone, "Public Gets Invitation to Secluded Canyon," *Los Angeles Times*, 8 May 1993.

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I'll Take Irvine

TRUMAN POLLARD

After 11 years designing automobiles for Honda in Torrance, California, I accepted the position of chief designer for Mazda Research and Development in Irvine, California. At my exit interviews, each manager asked, "Are you leaving so you can live in Irvine?" Everyone I spoke to just assumed that if I was going to work in Irvine then I was going to live in Irvine, and to them, I was going to live the American dream.

I commuted my first year at Mazda, 40 miles from my home in Torrance, and I discovered that Irvine had a deserved reputation as an example of white flight from Los Angeles. It was populated by people who were seeking the yuppie lifestyle – a kind of suburban prison where things like choosing your own colors for the house or putting up a basketball hoop over the garage are simply not allowed. But I also discovered that those opposed to these restrictions were simply less experienced in the ways of property values. The idea of giving up some individual freedoms becomes important to a community of people who want control over the sights and sounds of their neighbors.

In between the large commercial building on the left and the high-tech athletic center on the right is Il Fornaio, a great Italian restaurant, a great place to watch people.

A reflective-glass office building. In the early seventies, mirror glass was certainly in vogue. The successful formula in Irvine is straight monolithic designs plus mirror glass minus high-wire poles plus an ample supply of trees and landscaping to equal a forestlike environment that lasts all year long. Even ugly buildings can look good with enough trees in front. The buildings simply become backgrounds that reflect the natural colors and light.

My home on the corner, across from 20 acres of Northwoods Park. This is the northernmost area of Irvine, a refreshing mixture of traditional homes interlocked with greenbelts, city parks, and farmland.

Northwoods Park: the view from my front door of 100-year-old eucalyptus trees left over from the Irvine Ranch.

The city of Irvine was incorporated in 1971, and within its 41.9 square miles is a variety of villagelike communities, each with its own distinct personality. Westpark is known for its combination of rich landscaping and Mediterranean architecture. The University Town Center, adjacent to the University of California, offers a distinctive academic atmosphere. There is even a neighborhood that resembles Cape Cod. Some of the oldest residential areas were developed with small, affordable housing, and the city can still provide homes that are competitive with the rest of Orange County. At the high end is Turtle Rock, a hillside community with a mixture of single-family detached and attached houses and apartments designed to preserve the natural terrain.

There is nothing about Irvine I don't enjoy. A map of southern California shows that Irvine is advantageously located between and around three major freeways that form an arrow pointing toward San Diego. This may not seem very important until you consider that the migration pattern of people leaving Los Angeles is always to move either north or south. It is also a popular belief that the only thing keeping Los Angeles and Orange counties from joining up with San Diego County is the fact that Camp Pendleton Marine Base, located right between L.A. and San Diego, serves as a divider, with a few good men keeping southern California from becoming its own state. If anything happens to the base, my family and I may have to go farther south again to discover the American dream.

Mirrors and trees, the same formula, creating a dynamic contrast to high-tech architecture, integrating it with the human need to breathe.

On my commute to work, I pass acres of peppers, orange trees, and tall rows of corn. For the first time in my life I get to observe the seasons changing through the cycles of planting and harvesting. This view from Northwoods shows the skyline of the Irvine business area, the helicopter marine base utilizing two old blimp hangars built in 1942 (and designated a national monument in 1978), and fields of peppers in the foreground.

Downtown Orlando.

Orlando

BETH DUNLOP

The helicopter-borne radio traffic reporters have a name for the Orlando out by Disney – a realm defined not by geography, demography, or reality but by high-stakes make-believe; one that compresses time and place into a small – and alluring, if entirely ersatz – world of its own. The radio reporters call it "the Attractions," and to most minds it has replaced Las Vegas as "the definitive sacred grove of popular taste in middle America," to borrow from Reyner Banham.[1] The symbolic and cultural appeal of Orlando is already a phenomenon of global importance that anthropologists study as they once did Lourdes or Mecca.[2]

There is another Orlando that few outsiders know, with a downtown and well-kept suburbs such as Winter Park, Maitland, and Longwood that have been around for more than a century. This Orlando has a legacy of modest but appreciable town plans and regional architectural landmarks (including the Maitland Art Center and the Rollins College campus, largely the work of Ralph Adams Cram and James Gamble Rogers II). This is also the Orlando that invariably gets lost in the shuffle between these world-famous Attractions and the acres upon acres of ill-wrought post-Disney subdivisions and endless highways lined with strip shopping centers, discount stores, and side shows.

South of the city limits, where not long ago cattle roamed, the Attractions have been herded together in a placeless place of their own: Disney World, Sea World, Wet'n Wild, and more. Spawned by Walt Disney when he opened his Magic Kingdom in 1971, the Attractions – including two movie-studio theme parks and sound stages (MGM and Universal, both cloned from California originals) – is now a world of Worlds, where a mock Italian opera house shares a mammoth parking lot with a mock medieval village, and where strip centers are disguised as Wild West stockades, Iowa "Main Streets," and Spanish colonial settlements.

The Magic Kingdom has inspired the admiration and envy of urban designers who yearn for the kind of order and control it offers. But the Attractions are jumbled together in a planner's nightmare – disorienting and chaotic, tasteless and bland, overstated and fake, yet at the same time exhilarating – a vast and amorphous sprawl that floats free of context or orientation. Besides the expected Worlds, as in Disney and Sea, there are Kart World, Shell World, Bargain World, even a hotel called Wilson World. Expressways veer through, and other roads start and stop for no real reason. International Drive, for example, culminates (or begins) in a vast complex of factory outlet shops called Belz Outlet World. At the other end is Sea World, although the road actually bypasses the vast marine theme park and goes on to link up with Interstate 4. That expressway parallels International Drive for much of its length, causing many of the tourist-luring buildings to put on identical faces, front and back.

"Caverns in Virginia may have neon lights, and California may have its dolphin shows, but Florida makes Worlds

out of everything," wrote John Rothchild in his informal history of the state, *Up for Grabs*.[3] In Florida there has always been an impulse to rearrange reality, to regard the land as a stage set – an impulse perfected in the Attractions. In that peculiar combination of the very drab and the highly ostentatious, there is little outside of Disney World (or perhaps one should say Robert A. M. Stern World, Arata Isozaki World, Michael Graves World, Gwathmey Siegel World, Arquitectonica World, and Venturi, Scott Brown World) that can be considered capital-A Architecture – although the design for Universal Studios' guitar-shaped Hard Rock Cafe (by Aura Architects of Maitland, Florida) won an honor award from the Florida chapter of the American Institute of Architects the same year that Isozaki's "Team Disney" building (realized in collaboration with the Orlando firm of Hunton Brady Pryor Maso) won both state and national AIA honor awards.

Orlando is one of America's most visited cities. Last year, more than 13.5 million pilgrims checked into its 81,000 hotel rooms, which are fitted into buildings of every conceivable persuasion, from inconspicuous, low-slung motels to Marriott's Orlando World Center and the Stouffer Orlando resort, both of which feature atrium lobbies that are among the largest anywhere, and a Hyatt Regency (Grand Cypress) with a half-acre swimming pool. Orlando now markets itself as a tourist destination in the manner of its desert twin, and in most respects Orlando could be considered a kind of family-values Vegas, with just the merest of titillations but plenty of the glitz. Not to be outdone, Las Vegas is now recasting itself as an alternative Orlando, with amusement-park offerings and hotels themed on classic childhood stories such as *The Wizard of Oz* – the very combination of story line and rides that has served Disney so well over the years.[4] The two cities' strategies now overlap, to the degree that the professional organization called Lighting Dimensions International, which specializes in both architectural and theatrical lighting, has scheduled next year's convention in Reno to include a study trip titled "Las Vegas: Learning From Orlando."

More, perhaps, than Las Vegas ever will, Orlando exports its products – not just stuffed Mickey Mouses and floppy-eared Goofy hats, but ideas, of sorts. The mammoth publishing company Harcourt Brace is based there (and at one point had a wonderful child's-garden-of-the-mind attraction of its own; but that was torn down to build more hotel convention facilities). With both Disney and Universal in Orlando, more and more movies are being filmed there. Nickelodeon Studios – certainly a leading purveyor of ideas and images to young television viewers – is based there as well, on the Universal Studios grounds.

The Orlando that Walt Disney found when he started buying up huge tracts of Orange and Osceola counties in the early 1960s was not precisely a time capsule. The arrival of the military during World War II (and the air force and naval facilities that followed) had spelled a certain end of innocence to what had been a sleepy town graced by a Kress-and-Woolworth's Main Street, spring-fed lakes, oak trees laden with Spanish moss, and neighborhoods stocked with Craftsman bungalows, neo-Tudor cottages, and Mediterranean villa-ettes. Orange Blossom Drive, a major north-south thoroughfare, was a sin strip for several decades; even into the 1980s it was honky-tonk enough to provoke civic despair. Now the strip is simply gritty, an ode to macho sensibilities, with topless joints interspersed among the tire and transmission dealers.

One might expect Orlando's downtown to have suffered with the explosive growth to the south; even the Orange County Convention Center was located on International Drive, in acquiescence not just to the location of hotel rooms. There were in fact low moments in the 1970s, when all the attention was focused on Disney's Main Street while the real one, Orange Avenue, lay desolate after business hours. Today, downtown Orlando has reinvented itself as a corporate and commercial success story, with its own NBA team – the Magic – housed in a sleek, contemporary Art Deco arena that forms the centerpiece of the civic center. From a distance, its corporate towers trade on the imagery of German castles and French châteaux – SunBank Center has little spires at its roofline; DuPont Center is a connected sequence of elongated, mansard-roofed blocks.

Yet Orlando by most standards of reckoning has a successful downtown, decently scaled, with an intact main street and a bustle of people day, night, and weekend. Its renaissance has a storybook quality of its own. Shortly after the arrival of Disney World, an entrepreneur named Bob Snow eyed a block of old buildings by the railroad tracks, including a vaguely Richardsonian train station and some freight houses, and imagined a ribald Victorian entertainment complex that would draw tourists away from the more wholesome theme parks. In 1974, Snow opened Rosie O'Grady's, full of imported Victoriana and tourists, who, happy to sing along, sat on benches from an L&N Railroad station or on chairs from an English monastery, under the dim light of a chandelier salvaged from the 1904 First National Bank of Boston. Soon the complex, called Church Street Station, began to grow, the authentic and the ersatz unabashedly interwined and metaphors happily mixed, Western saloon next to French *pâtisserie* across from English pub, bawdiness the only common theme. One restaurant boasts a table that Al Capone ate at; a set of guns owned by Jesse James is on display at the Cheyenne Saloon and Opera House.

If Church Street Station was full of borrowed times, places, and paraphernalia, at least it was not a copy of anything else. But where people shop, franchises follow, and by the late eighties Church Street Station had expanded to include a retail complex with plenty of familiar names. Not quite a festival marketplace or a suburban shopping center, it is red brick with simplified Victorian detailing, a suburban incursion into the center city. Downtown Orlando's salvation from the near ghost town of the 1970s was aided by a carefully nurtured plan that safeguarded shopping and encouraged restaurants, keeping a reasonable scale along Orange Avenue. A considerable collection of historic buildings was saved, including the old Woolworth and Kress. Along Pine Street, a fine row of two-story 19th-century brick structures has become a lawyers' row.

One building that did not make it was the 1958 city hall, described as a "pink and brownish-looking building" when it was dedicated.[5] It was replaced in 1991 by a new city hall more in the fairy-tale spirit of Orlando – a stubbily proportioned copper-domed structure with grandiose architectural aspirations that looks as if someone had lopped off the top of a much taller building and planted it on the ground. It has a three-story lobby, an art gallery, and even a gift shop that sells a $25 souvenir plate of the new building and a poster of the old one being imploded.

In many ways this is not the real town hall anyway, since the Magic Kingdom has its own (in fact the whole Disney empire – presuming an empire to be bigger than a kingdom – is run from Isozaki's imposing, up-to-the-minute "Team Disney" building). But Orlando's city hall is no more ostentatious than the various restaurants and hotels on International Drive or State Route 192, which runs from Disney World to the former cow town of Kissimmee (home of *the* Florida Turnpike interchange for the Attrac-tions). Route 192 boasts a full-fledged medieval village, a frontier trading post, a Capone's nightclub that offers dinner and a show and "handsome mobsters and beautiful dames," and a new "Old Town," tucked neatly into a strip shopping center next to a Days Inn, not to mention the Tupperware Hall of Fame. In December, these points of interest were joined by a new attraction called Splendid China, which carries the re-presentation of history a step further: its $100 million, 76-acre campus includes miniaturized versions of not only the Great Wall of China but also the Potala Palace of the Dalai Lama in Lhasa, Tibet, a picturesque if unseemly trophy of geopolitical aggression that no one thought to question until the deed was done.

Curioso

Tibetan monks protesting the inclusion of a replica of the Potala Palace as part of Splendid China, 1993.

There is more here than just Mickey Mouse. Orlando offers a weird meshing of popular fantasy and mundane taste.

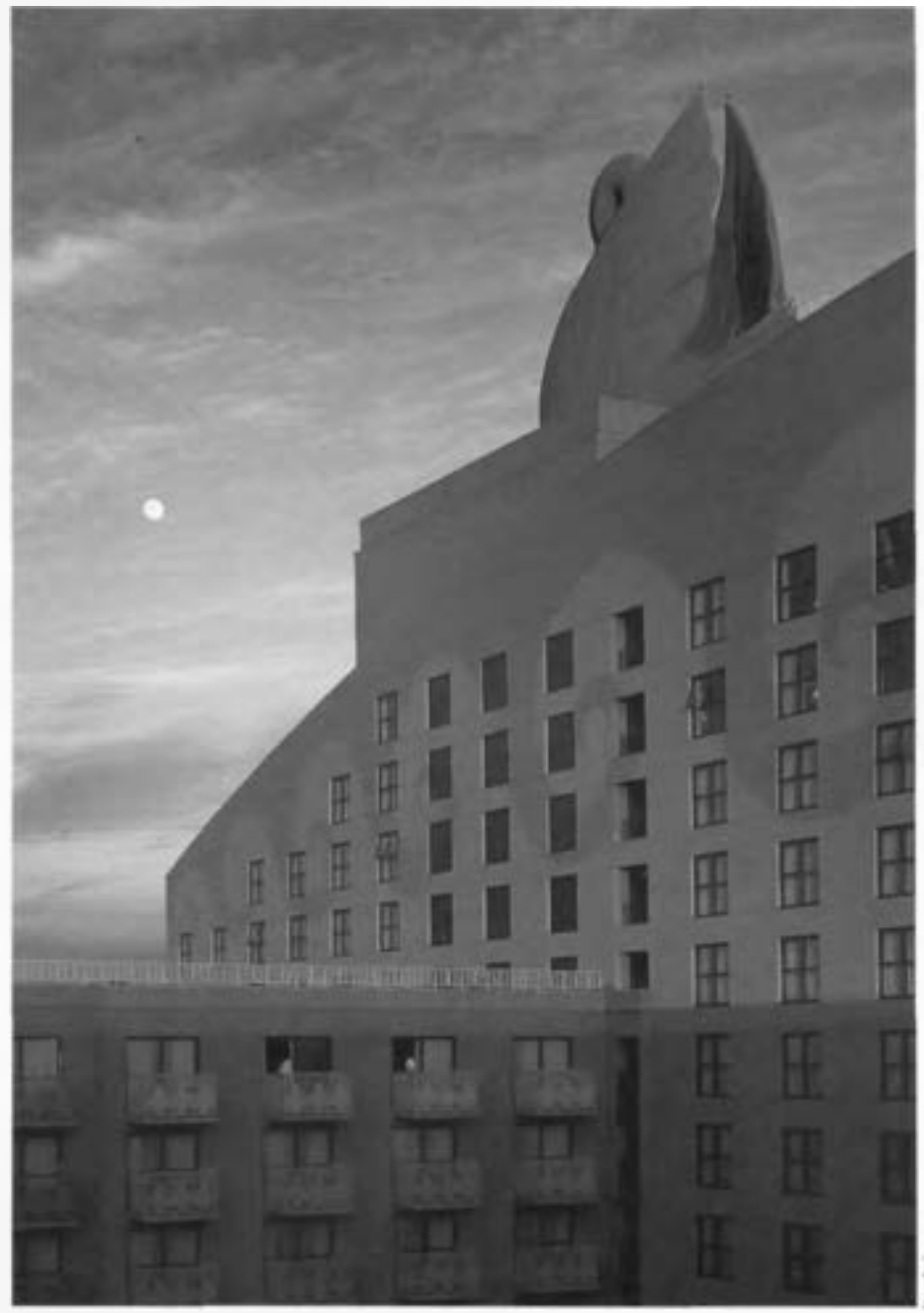

ORLANDO ATTRACTIONS
Lake Apopka
Silver Springs
Daytona Beach
Sanford Kennel Club
Altamonte Springs Mall
Universal Map
Seminole Plaza
Seminole Greyhound Park
Casselberry
Lake Howell
Apopka
Ben White Raceway
Interstate Mall
Seminole Jai-Alai
Shopping
Sanford - Lake - Monroe
Downtown Winter Park
Lee Rd
Winter Park Mall
Chamber of Commerce
Fashion Sq. Mall
Univ. Central Florida
Kennedy Space Center
Naval Training Center
Exec. Airport
Winter Garden
Pine Hills Shopping Center
John Young Pkwy.
Once Upon A Stage
Colonial Dr.
Valencia Community College
Florida Citrus Bowl
Expo Center
Downtown Orlando
East-West Expy.
Butler Chain Of Lakes
Universal Studios
Mystery House
Church St. Station
Little Lake Conway
Cartoon
Lake Conway
Wet 'N Wild
Malibu Raceway
Factory Outlet Mall
Elvis Museum
Orange Blossom Trail
Florida Mall
Dr. Phillips
Civic Center
Mercado
Gatorland Zoo
Tupperware Headquarters
Sunshine State Parkway
Lake Tohopekaliga East
Walt Disney World
Sea World
Water Mania
Two Jellystone Park Camp-Resorts
Fort Liberty
Arabian Nights
Silver Spurs Rodeo
Busch Gardens Tampa Bay
1 hr
KC Royals
Medieval Times
Kissimmee
St. Cloud
Lake Tohopekaliga
Today, downtown Orlando has reinvented itself as a kind of corporate and commercial magic kingdom

The appeal of Disney World is that its subject is the past and the future, not the present, and other places, not home. The past has always been a more successful byroad than the future – for Disney, for Orlando, and for America. Down on Route 192, for example, there is a $4.95 attraction called Xanadu, a strangely amorphous, sprayed-concrete "house of the future." As a tourist attraction it has a greater impact because of its smell, which is dank, than for its imagery, which is no more ahead of its time than a Jetsons cartoon. It stays empty most of the time, but because it looks like one of those dinosaur gas stations from the forties, it has a slightly wistful aspect, beckoning those few tourists who might turn off here rather than into Wolfman Jack's or Elvis Presley's or Al Capone's offerings, not to mention Shell World, Bargain World, or Kart World.

When "serious" attempts are made to find the future outside the Attractions, they too invoke the past, either distant or recent. After five years of debate and bureaucratic skirmishing occasioned by Florida's statewide growth management policy, Avalon Park – a 9,400-acre new town planned by Andres Duany and Elizabeth Plater-Zyberk for the Flag Development Company – is actually about to break ground.[6] Sited 15 miles east of downtown Orlando and 25 miles north and east of Disney World and the Attractions, it is planned to accommodate a population of 70,000. A greenbelt spine runs through it following the banks of the Econlockhatchee River, while neotraditional "villages" and neighborhoods on either side are intended to integrate the home and the workplace, schools and shopping, in most cases within walking distance of each other.

Disney is about to embark on the development of an "ideal" town of its own, Celebration, laid out on 5,000 acres for an eventual population of 20,000 by Robert A. M. Stern in association with Alexander Cooper and Jacquelin Robertson. As with much of Eisner-era Disney, it is an architecturally ambitious undertaking, a sort of Columbus, Indiana, South, with key buildings designed by Philip Johnson, Michael Graves, Robert Venturi, Cesar Pelli, Charles Moore, and Graham Gund, among others. Among the first to be built will be the Disney Institute – a Chautauqua-type conference and vacation study center designed by Aldo Rossi and Morris Adjmi as yet another locus for Orlando's expanding commerce in ideas. Celebration is intended to make good, if different, Walt Disney's unrealized dream of a utopian, residential Epcot ("Experimental Community of Tomorrow"), which devolved into the Epcot we know today of large commercial pavilions and the whirl around the world – a one-mile circuit with stops in Mexico, Norway, China, Italy, Morocco, Germany, Japan, France, England, and Canada, before landing back in the U.S.A.

Orlando's micro-cosmic impulse, begun 20 years ago with Disney's small world, now exerts an authentic global influence of its own. In 1939, the WPA guide to Florida reported that Orlando had, in less than half a century, "grown from a trading post on a cow range to a city resembling a great park." Today it still seems less like a city than like the world's first international park – an improbable, extravagantly scaled meshing of popular fantasy and the economic magic of mass leisure. ■



Michael Graves, architect, Swan Hotel, Lake Buena Vista, 1987–90.

1 Reyner Banham, *Scenes in America Deserta* (Layton, Utah: Peregrine Smith, 1982), p. 42.

2 Alexander Moore, "Walt Disney World: Bounded Ritual Space and the Playful Pilgrimage Center," *Anthropological Quarterly* 53 (October 1980), pp. 207–18.

3 John Rothchild, *Up for Grabs* (New York: Viking Penguin, 1985), p. 49.

4 Calvin Sims, "Family Values as a Las Vegas Smash," *New York Times*, 3 February 1994, p. C1.

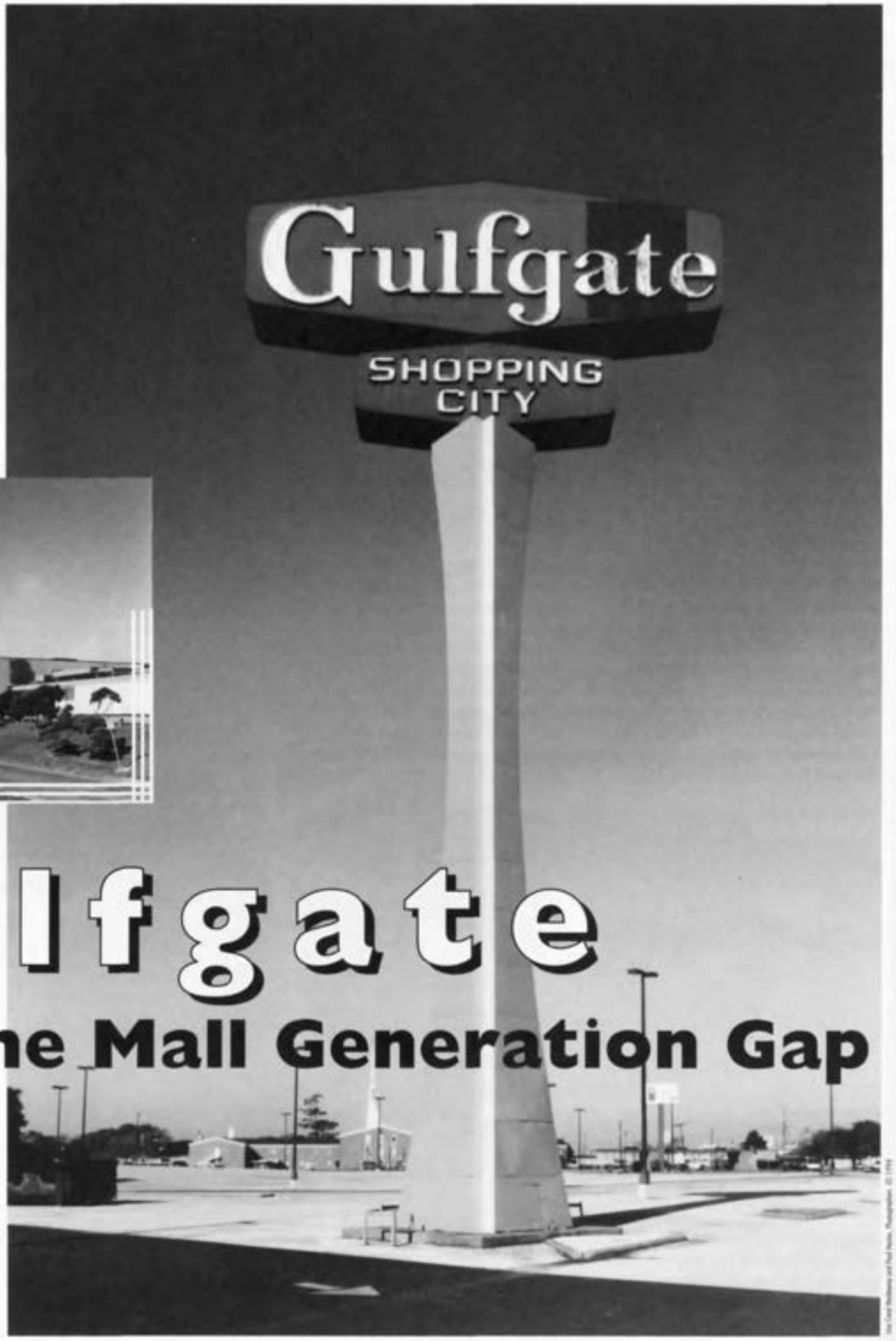
5 From the *Orlando Sentinel*; quoted on a wall plaque in the new city hall.

6 Andres Duany and Elizabeth Plater-Zyberk, *Towns and Town-making Principles* (Cambridge: Harvard University Graduate School of Design, 1991), pp. 88–94; Allan Wallis, "Florida's Urban Villages: Salvation or Sprawl?" *Planning*, December 1991, pp. 16–17.

"Places of Learning" Park.

HWH Architects, Harcourt Brace's "Places of Learning" Park, 1984–85, demolished. ▶

The mall before the roof was added in 1966.



Gulfgate, view from Loop 610.

Gulfgate

The Mall Generation Gap

BRUCE C. WEBB

Gulfgate in the late 1950s.

Gulfgate: view from the southeast showing entrance to underground service tunnel on right.

Gulfgate Shopping City during opening week in 1956.

THE PROJECT of relocating America's urban life into entirely new, free-floating suburban forms, begun after World War II, was accomplished in such short order and is now so pervasive that it is difficult to see it as a process at all. Particularly in a city such as Houston, whose character was established along the lines of a suburban model, growth has become synonymous with sprawl, and the automobile orientation is so deeply woven into the spatial fabric that even coherent remnants of the city past, when they are preserved at all, are splintered and fragmented so as to appear as simply another roadside attraction. For the new and growing generation of Americans it's no longer a question of Main Street versus the mall, but one mall versus another. The social cohesion that a generation ago was built into the concept of the downtown, where all the institutions of the society were together in a public place, is by now Disney-fiction, existing only in hyper-real simulations almost as distant as the agora.

History seems to fix its interests in proportion to temporal distance, reserving little fascination for things close in time. While there is a common respect and even longing for the charms of the architecture and city forms of a hundred or more years ago, more recent developments are evaluated in Darwinian terms, sacrificing earlier models for the newest. This rule applies nowhere more ineluctably than in the highly competitive world of commercial architecture, where the rewards go to the latest and most fashionable. What lies between the historically revered and the novel becomes the detritus of the in-between. Commercial buildings of the last 30 to 40 years often are a lost generation; because appreciation of them is obscured by emerging new forms and conflicting theories, they fall victim to changing technologies and ever newer forms of consumption. But even as they lose their currency and drift into the untended margins, they continue to mark the landscape with what Anthony Vidler describes as evidence of the uncanny, "erupting in empty parking lots around abandoned or run-down shopping malls, in the screened trompe l'oeil of simulated space, in, that is, the wasted margins and surface appearance of post-industrial culture."[1]

There is something of the uncanny in Gulfgate Shopping City, a feeling engendered, in part, by the fact that this 1956-vintage center – Houston's first regional shopping center, located at Houston's first freeway interchange – was designed and built before the ubiquitous mall formula had been fully developed and codified. Gulfgate defies expectation by being lopsidedly organized: its two anchor stores, Sakowitz (emptied out when the Sakowitz chain folded in the early eighties) and Joske's (now Dillard's) were located side by side at one end of the center, whereas the usual plan forms the mall into a dumbbell, with the two high-volume "magnet" stores at either end of an inside street. A Weingarten's grocery store (also gone) anchored the other end, an unusual tenant in shopping centers of the generation to follow. A second axis in the L-shaped plan was anchored by Newberry's, a glorified Woolworth's in the prediscount, pre–Wal-Mart days, then led off to a pedestrian bridge that crossed a highway right-of-way (now Loop 610). The site across the bridge, originally reserved for a health-care facility, was developed first as a nursery and then as twin 1,000-seat theaters joined by a central lobby, the first of that type in the Southwest.

The pedestrian bridge extended the site, taking advantage of the man-made hill on which the mall sits, a cut-and-fill formation required to create the basement that the John Graham Company and Irving R. Klein Associates, architects and planners of the complex, employed as a way of servicing the center. The resulting subterranean section, visible on the south and east ends of the center, gives the mall an unusual presence for a building of its type, especially in Houston, which has few basements and even fewer hills. Customers can still enter the basement of the present Dillard's store through entrances fitted with water-tight, sliding bulkhead doors designed to prevent flooding during Houston's frequent rain squalls.

Part of the sublevel is tamed space: two of the stores had basement levels, and the mall offices and a bowling alley were also located underground. The remainder of the basement was developed into a complex network of truck-serviced delivery tunnels and storage rooms, a neater version of how to service a mall than the more common strategy of alternating public entrances and service entrances along endless blind walls that mask the perimeter storerooms within.

The earth section was made even more complex because of the necessity of accommodating the ill-behaved Plum Creek, a problem the engineers solved by burying the stream 15 feet underground in an enormous box culvert that runs perpendicular to the Gulf Freeway for some 1,000 feet, from Woodridge to a point under the freeway at Reveille Road.

Gulfgate's architect, John Graham of the John Graham Company, was a pioneer in the development of the modern shopping center. His 1950 design for the Northgate Center outside Seattle was closely studied by other early shopping-center planners and developers, among them Victor Gruen, William Wurster, and Welton Becket. The problem, as it was inherited from the early strip center, was to balance the center between pedestrian shoppers and the cars that brought them there. Up until the 1950s, shopping centers were structured by the street; as parking requirements grew, the lots were located behind or, in the case of some department stores, to the side of the stores. Graham's idea was to turn single-destination shoppers into impulse buyers by making a whole precinct of individual stores behave like a single, unified department store. To do this he created a double-loaded interior pedestrian shopping corridor and moved it away from the street, so the entire center was like an island surrounded by parking. This solution was the one that worked best for developers and shop owners, but it offered little in the way of building the urban street. Graham's designs, while not highly regarded by the architectural profession, caught the attention of shopping-center developers, who recognized that his formulas contained the right ingredients for commercial success. Many of Gulfgate's design strategies were first tried out at Northgate, including the underground service tunnels, the relatively narrow mall corridor (which Graham felt encouraged shopping both sides of the "street"), even the designation of the mall not simply as a suburban incident

"Low Sakes Alive! What Are You Doing, Baby?" Oil painting by Charles Markham depicts a 19th-century New York forerunner of the modern shopping mall.

Gulfgate's home-grown food court set up in the mall.

John Graham Associates, architects, rendering of the Gulfgate design, 1953, showing a proposal for a Lautrec store in the location later occupied by Sakowitz.

but rather as a gateway to the city.

Gulfgate began life without a roofed central court, one of several unselected variations in the evolution of the shopping center present in Houston. These include Town and Country Center, a set of detached buildings in an asphalt campus setting, now malled together under a canvas tensile roof structure; Meyerland Plaza, a half-empty strip center married to a paradigmatic open-roof mall that is anchored by a Penney's department store; Palm Center, Houston's first mall-concept center (1955; Irving Klein & Associates), built to serve the Riverside community but now buried under a new white paint job that converted it into a community service center and "small business incubator" (a project presently under investigation for misspending of federal community development funds); and Westbury Square, the almost-emptied-out, Disneyesque version of a thinly replicated European piazza that developer Ira Berne (with architect William F. Wortham, Jr.) devised as a centerpiece for his Westbury subdivision. Gulfgate's roof was added in 1966, coinciding with the center's tenth anniversary. Roofed or not, on opening day Gulfgate attracted more than 150,000 people and sent reporter Louis Blackburn of the *Houston Press* into metaphorical orbit. Emitting the kind of rapturous journalistic excesses that seemed to accompany the opening of anything larger than a cottage in Houston during the period, Blackburn wrote: "It looks like a castle. It makes even places like New York's Rockefeller Center seem a little shabby by comparison. When I stepped into the magnificent mall at Gulfgate, I felt as thrilled as when I stepped out of a gondola and into St. Mark's Square in Venice."

Gathering steam, Blackburn's prose became more convoluted – "Gulfgate Mall is St. Mark's Square with its face lifted. Venice has its canals and Gulfgate has its Plum Creek, and the engineering job of making Plum Creek disappear and flow under the 20 million dollar shopping center is something to make Frank Lloyd Wright heave a sigh for his hotel with shock absorbers in Tokyo" – before he ran out of allegorical gas, concluding, "The landscape architects did a job to soften the heart of Michelangelo."[2]

Gulfgate's location, along Interstate 45 where the proposed Loop 610 would intersect, was a commercial real estate speculator's dream. The same developers, Theodore Berenson and Allied Stores Corp., used identical marketing criteria to select the site for Houston's second major shopping center, Northline, along I-45 where the North Loop would pass. The two points were defined in terms of Houston's growth vectors in the 1950s, but as the freeway system expanded and the Loop and radial connections were completed, the analogy that says a freeway interchange is like an urban crossroads was sorely tested. While the latter is a diagram of convergence and gathering, the former is more like a cyclotron, accelerating vehicles into and out of complex centrifugal spins and hurtling them off to distant points on down the road. While Gulfgate with its big orange sign was clearly visible from the concrete roller coaster, it was also at a point of greatest congestion and complexity, demanding the most of driver concentration. Further, exiting and re-entering the freeway at the point of a major interchange is never easy despite a bewildering abundance of access roads. In addition, as the freeway system pushed further into exurbia, the city's affluent population followed, spawning new, rival malls in the burgeoning suburbs. By the 1980s, Gulfgate and Northline had both become inner-city malls, positioned in a no-man's-land between downtown and ever farther flung aggregations of households with plush incomes. The Gulfgate Sakowitz store made money off and on until about 1984, according to former chairman Robert Sakowitz in an interview in the *Houston Chronicle*, but "the demographics had changed. Instead of being a homogeneous middle-income area, it had become a multi-ethnic mix and a multi-income mix."[3] Construction of Almeda Mall and later Baybrook Mall farther south also cut into Gulfgate's sales. In its last few years of operation, the Gulfgate Sakowitz store was a harbinger of the future, turning its second floor into a dump shop (called the G.I.T.O.F.F. – Give It To Our Faithful Friends – Shop), where the pricey mistakes of the chain's fashion buyers could be had at 70 percent off retail.

Older malls have been forced to confront not only changes in demographics but also changes that redefined the institutions of our culture. When the first malls were erected, people thought they were no more than another way to organize a shopping district. By lifting shopping out of the tangle of downtown traffic and ancient infrastructure, the shopping center created a common-sense compact with the consumer: plenty of free parking, security, and control; the efficiency of having all those shops side by side in a neat row; and the comparatively low overhead and lower costs of suburban land. Shopping-center developer Edward DeBartolo said it this way in the *New York Times* in 1973: "I wouldn't put a penny downtown. It's bad. Face it: why should people come in? They don't want the hassle, they don't want the danger. You would need fantastic government subsidies, amazing subsidies. No individual or corporate set-up can make a dent in these problems. So what do you do? Exactly what I'm doing, stay out in the country. That is the new downtown."[4]

From the beginning, the shopping center was the most successful land-use, development, real estate, and retail business concept of the 20th century. Enclosing them and filling them with conditioned air was like playing a trump card.

To understand the next generation of malls requires a small leap of imagination by which the mall becomes the idiom for a broad range of building programs, from museums (Robert Venturi's proposal for the National Football League's Hall of Fame in Canton, Ohio) to city halls (Robert Stern's appraisal has Stern, the television impresario, pushing a shopping cart through Wright's ground-scraping Marin County Civic Center to illustrate the analogy to a shopping mall). Deyan Sudjic described the Houston Galleria as the original model for the second generation of out-of-town shopping centers: with a public ice-skating rink its center, "the Galleria is the place people want to go, even if only because in Houston there isn't anywhere else to feel the element of the unpredictable that city life is meant to offer. What makes [the Galleria] interesting is the way Gerald Hines tried to give the place more than the bare minimum of amenities."[5] This idea that the mall could become the focus for public life begot the Galleria and after it the giant West Edmonton Mall and Mall of America. A trip to these latter-day ver-

A billboard mural of a store interior now covers the entrance to the empty Sakowitz store.

sions, far from being a routine shopping foray, is reconstituted into something like a minivacation. The complex recoding of things, which is at the essence of the newer malls, builds back a sense of publicness and eventfulness out of the routines of a commercial marketing machine.

In the fifties and sixties the function of things was still being defined with a considerable amount of directness; buildings even 20 years ago retained their allegiance to the tenets of modern functionalism, although they were not so bound by orthodoxy and the inherited patterns of ideal forms portraying ideal functions. Framed in these terms, the shopping mall is a particularly awkward architectural model. Lacking any distinction on the outside, it wants to be interior only, with its figurated insides buried in urban mass. Since the 1960s architecture has been obsessed with the transitory nature of its tenets, evolving building types whose primary characteristics are neutral. The shopping mall, like the speculative office building, has evolved into an architecture of equipotentialities, being essentially a volumetric, air-conditioned building site, piled up or strung out. The designations of the tenants are deliberately ephemeral, paper-thin stage sets hung into the construction frames.

A new attitude emerging in the seventies rejected the modernist preoccupation with integrity and clarity of intentions, folding together simulated settings and thin imagery that all but erased the underlying architectural construction. This meant that the older malls seemed comparatively empty, as though they had come out of the new town-planning policies of European socialism rather than the excesses of hyped-up consumerism. To keep up, the older malls have had to emulate their newer and more elaborate rivals. Almeda Mall installed a replica of Philip Schneider's first double-decker carousel at center court, replacing a lazy fountain and gazebo; the same treatment was used to revivify Westwood Mall in its 1989 transformation. Like the Galleria's skating rink or the hyperversion at West Edmonton Mall – which includes, in addition to the now ubiquitous skating rink, an amusement park, the world's largest indoor water park, an operating submarine ride, the Edmonton zoo, and other mallside attractions – the Almeda Mall version marries the consumer atmosphere with some of the ambiance of a county fair, at the same time allowing the mall to recover some of its costs by selling rides and making people pay for the public life. But not every mall can afford even this modest level of re-theming and retro-fitting. Other, less extravagant (and more direct) ways of recovery are needed. This is the task of Ron Jefferson, regional manager for Wilder Management Associates, Inc., property managers for both Gulfgate and Northline malls. From his offices in the basement of Gulfgate, Jefferson acts as both mayor and chief planner for a mini-urban-renewal program at the two malls. Jefferson, who has 25 years of experience in retail and property management, five of them with O'Connor Management at the San Jacinto Mall in Baytown, sees his role as identifying new markets and assembling a collection of tenants to reach them. During his tenure, Gulfgate has been transformed into a liquidators' row: the Dillard's store has been shorn of all its former decorator pretenses and turned into a giant warehouse for unsold merchandise gleaned from the entire Dillard's chain. The atmosphere is department store realism, with few amenities and endless racks of clothing on its way to oblivion. Even the bags at the supermarket-style checkout counters are sealed with bright yellow tape, much like the kind police use to secure a crime scene, warning what will happen at the door if the tape has been tampered with. National Apparel Liquidators has taken up residence in another corner, vending slashed-price men's clothing, but only on the weekends – to save on overhead, as their radio ads say. And the old Weingarten's grocery has been colonized by the Mac Frugals simu-clan, a discount chain dealing in an ever-changing collection of devalued merchandise winnowed out of the commercial killing fields.

Gulfgate has also beefed up security. The mall has been treated to a new paint job that favors vivid purple, salmon red, and aqua, outfitted with a hanging space-frame of banners. At one end a few cottage-industry food concessions have been gathered together, taking over a corner of the mall space with temporary tables and chairs that are reminiscent of a church bazaar. Along the blank side walls of the Dillard's store is a newly built row of thin shops, similar to street-vendors' stalls in the poorer sections of a Middle Eastern market, creating inexpensive space for very small entrepreneurs and fledging shop owners to get their feet on the commercial ground. But the hefty chunk of Sakowitz space is still empty, its entrance pasted over with a billboard photograph of a busy, upscale department store interior while it waits for new tenants. Jefferson says the mall is healthy; protesting the observation that the center has become a low-rent district, he insists that the change is just a result of new marketing strategies.

T-shirt stand and discount clothing store, Gulfgate.

Religious wares, Gulfgate Mall.

Northline has been pursuing another recovery strategy, converting 73,000 square feet of former commercial space into classrooms and offices for a branch "campus" of the Harris County Community College System, an ad hoc version of the campus mall schemes developed by Canadian architect Arthur Erickson in his 1970s designs for the University of Lethbridge (Alberta) and Simon Fraser University in Vancouver. Approximately 900 students study at the campus in the mall, using the food court as their student center. Alas, among the remaining commercial tenants there is no bookstore.

Places like Gulfgate and Northline bear witness to the fact that growth in the modern city is often really a matter of displacement, and places that once enjoyed healthy periods of amortization and have now moved to the margins, while they may disappear from our cognitive maps, do not simply go away. In the case of the mall, the decline may be measured in steps, from luxury mall to ordinary mall, then to liquidators' row and assorted little commercial operations, finally perhaps being reincarnated as a flea market before being entirely unplugged and becoming what the mall is at its heart: a speculative grid of three-dimensional, climate-controlled building sites, hatched out of the anxieties of future shock. But for every marginalized building, whether it's a mall, a strip center, or a former upscale yuppie apartment complex, there is a marginalized population waiting for space on one of these air-conditioned streets of last resort. ■

1 Anthony Vidler, *The Architectural Uncanny: Essays in the Modern Unhomely* (Cambridge: MIT Press, 1992), p. 3.

2 "Here's a Tour of Gulfgate, One of America's Wonders," *Houston Press*, 14 September 1956.

3 Greg Hassell, "City's Oldest Malls Try to Shed Ragged Image," *Houston Chronicle*," 21 April 1991.

4 Quoted in Deyan Sudjic, *The 100 Mile City*

Ant Farm in the CRS

In the spring of 1968, two recent Yale graduates, Doug Michels and Bob Field, made an appearance at the College of Architecture at the University of Houston as part of a cross-country lecture tour put together to postpone the need for conventional employment. Recalling this initial foray into Texas, Doug Michels said, "We realized that we had met with kindred spirits when we were greeted at the airport by a gang of hoodlums disguised as architecture students." The students, liveried in *Wild One* regalia to form a motorcycle escort for a hearse, told Michels that he (and his coffin) were to be transported to the College of Architecture for an important announcement. With the coffin only slightly ajar, Michels was carried to the front of the lecture hall, where Dean William R. Jenkins announced to the audience of students and faculty that it was about to witness "the rebirth of American architecture." The coffin opened up and Michels emerged.

After the lecture tour, Michels returned to his home in Washington, D.C., to organize a summer workshop, *Crash City*. He was joined there by Chip Lord, whom he had met while lecturing at Tulane University. Following the workshop, Lord left for California to investigate the countercultural climate in San Francisco. Later that summer, Michels, unsettled by events at the Democratic National Convention in Chicago, rented a 1968 Cadillac convertible and drove down to North Carolina to enlist another kindred spirit, Doug Hurr. The two left for San Francisco to move in with Lord, who had set up shop in the Haight-Ashbury district.

In San Francisco, Lord and Michels laid plans to form a collaborative practice that would combine architecture, art, media, graphics, and furniture making. Based upon a nonhierarchical form of organization, it was to be devoted to "underground architecture," pushing and exploring the potentialities of symbiotic group interaction. "You mean like an ant farm?" asked a friend. With influences ranging from Marshall McLuhan to Buckminster Fuller to *The Whole Earth Catalog*, Ant Farm intended to create a new architecture for the emerging culture.

When a temporary teaching position came open at the UH College of Architecture in spring 1969, an informal poll of students showed that the impression Michels had made was still very much alive. Architecture professor Burdette Keeland, with the blessing of Dean Jenkins, invited Michels and Lord, a.k.a. Ant Farm, to return for an extended residence. For the visionaries of Ant Farm there was simply no better place to be than Houston, where images of astronauts floating in space tethered to an Apollo spacecraft cohabited with those of the cowboy on the range, whose life support system of horse and saddle pack suggested a similar tenuousness of existence. Houston inspired the group to mix technology and minimal lifestyles with a certain countercultural flair.

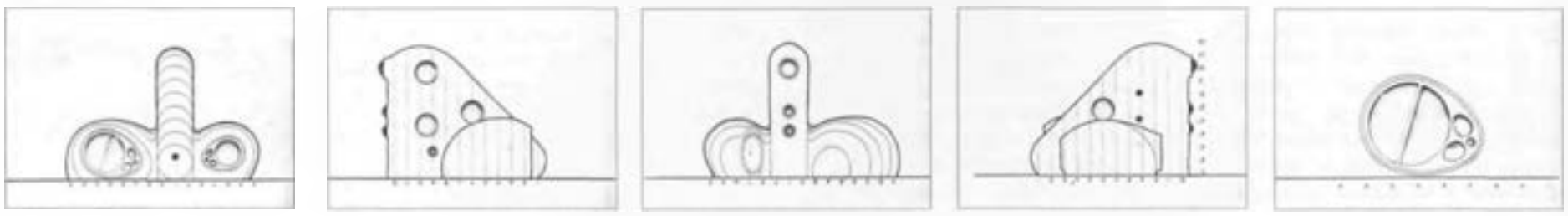
An early and obvious target for Ant Farm's operations was the recently completed Astrodome. Ant Farm received authorization to make it a venue for *Astrodaze*, one event of which involved spending a night in the Astrodome as helium balloons lifted horizontal fabric scrims to define disembodied floating environments. The famous Astrodome scoreboard and lighting systems created electronic special effects.

In addition to teaching at UH, Chip Lord was employed part time by the architectural firm Caudill Rowlett Scott, whose new, self-designed offices and corporate culture "exemplified the dehumanizing environment we were philosophically against," Lord recalled. In response he devised *Plastic Businessmen*, an unrehearsed confrontational performance. Lord, abetted by Ant Farm coconspirators Michels, T. L. Morey, Pepper Mouser, and Steve Jackson, pooled their resources (about $200), convened in the CRS snack bar, and started to give the money away. When fellow office workers refused to accept this largesse, the Ant Farmers emptied the vending machines and attempted to give the contents away. Neither Lord's co-workers nor the management were much amused. The police were summoned later that night, and Dean Jenkins, in a philanthropic gesture of his own, bailed the provocateurs – booked for disturbing the peace – out of the Harris County jail.

A second performance, *Space Cowboys*, was part of "Avenues to Infinity," a fund-raising effort for the Contemporary Arts Museum held at the Alley Theatre in fall 1969. Invited to create a performance piece by future client Marilyn Lubetkin, Ant Farm was told to "be very experimental." *Space Cowboys* was a tribute to technology, exploration, and nomadism, fused with a pharmaceutically enhanced point of view.

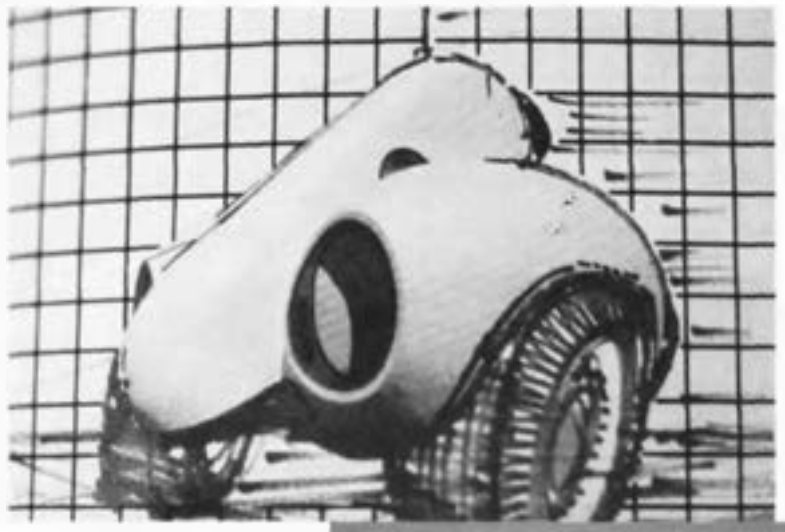
Ant Farm's nomadic impulse was also indulged in *Time Slice*, a series of episodic be-ins along the beach at Padre Island held during summer 1969. Eager to explore the potentialities of a new lifestyle, the participants (students from UH; South Coast, an indigenous Ant Farm clone; and others enticed by the promotional poster) embarked on an environmental media ritual ostensibly designed for experiencing and experimenting with lightweight structures. These included inflatables, geodesic domes, and parachutes that, when anchored to the ground, expanded horizontally, creating fabric environments onto which images were projected. In keeping with the ecological theme of the workshop, the group

Section sequence of construction drawings, House of the Century.



TOM DIEHL

Houston, 1969–1972



Doug Michels, metaphorical drawing for the House of the Century, 1973.

attempted to occupy and depart from the site without leaving a footprint.

Returning to San Francisco in September 1969, Ant Farm rented a warehouse in Sausalito and expanded to 15 members, among them Doug Hurr, Hudson Marquez, and Curtis Schreier, all of whom were to play significant roles in subsequent Houston and Texas Ant Farm projects.

The association with Marilyn Lubetkin that began with "Avenues to Infinity" led to a commission to design what became the House of the Century and a second trip to Houston in November 1971. Intrigued by Ant Farm's earlier activities in Houston, Lubetkin was interested in exploring sculptural qualities in the design of a house, a concept that allowed Ant Farm to refine and combine elements of earlier projects. Likened to an alligator in its earliest form, the house evolved from a biomorphic shape into a sleeker, more futuristic synthesis of organic, phallic, and automotive images.

The house also cemented Ant Farm's fascination with inflatable architectural shapes, first manifested in the *Inflatocookbook*, a primer on building inflatable structures issued in 1971.

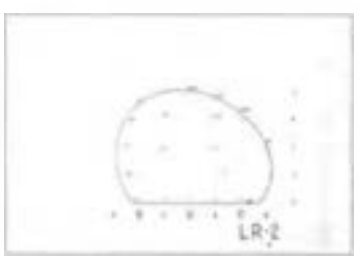
For all its futuristic outlook, the House of the Century was essentially a handmade house that required the on-site presence of the original Ant Farm team plus the collaboration of Richard Jost – a young but experienced designer-builder from Houston whom Michels had met in Washington, D.C., in the summer of 1969 – and assorted other assistants and hired craftsmen for a period of 15 months. It also attracted media attention and a host of curious onlookers. Steve Badane of the Jersey Devils (a similar counterculture-oriented design-build collective that is still in practice today) stopped by, as did Michael Shamberg, later the producer of *The Big Chill*, who was allied with Ant Farm through the underground video group TVTV. The design won a *Progressive Architecture* award in 1973, and upon completion the house was published in *Progressive Architecture*, *Domus*, *Casabella*, and *Architectural Design*.

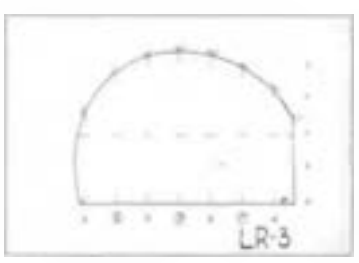
As work on the House of the Century was nearing completion, Peter Papademetriou, then an assistant professor of architecture at Rice University, invited Doug Michels, Chip Lord, and Curtis Schreier to lead a three-week workshop in the architecture school at Rice during the fall semester of 1972. Ant Farm had spent part of the summer of 1972 covering the turbulent national political conventions in Miami and Chicago with Top Value Television (TVTV), an ad hoc collection of young, guerrilla-style cable television reporters armed with lightweight Sony video recorders who had somehow managed to obtain convention press credentials. TVTV's video *verité* snooping and eavesdropping captured a behind-the-scenes view of the convention that was a stark contrast to the networks' glossover coverage. It earned rave reviews in *The New Yorker*, the *Chicago Sun-Times*, *New York* magazine, and other national publications. When the invitation came from Rice, the three Ant Farmers decided to use their convention experiences and state-of-the-art cynicism as the basis for exploring a different format for national political conventions, one that would be custom made for the new potentials of the age of television.

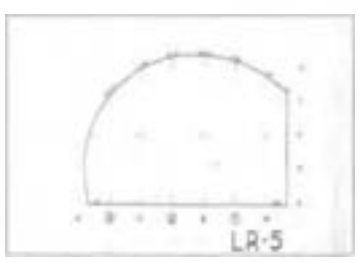
Their workshop produced a proposal for Convention City, a forum in which the parties could hold their four-year nominating spectacles. Intended for a site between Houston and Dallas, Convention City would house a resident population of 20,000 in apartment units looking down on the convention center, which included a football-stadium-size arena, a lake, and communications towers. The site was to be developed as a large-scale version of the House of the Century's free-form plan and covered with a 1,000-foot-wide bubble dome. The floor of the convention arena, shaped like a map of the United States, would become a giant television screen showing one large or several smaller pictures of the convention delegates, who were to be seated in elevated areas in the shape of the states they represented. The political process would itself be reconstituted along the lines of an audience-participation game show, with two-way

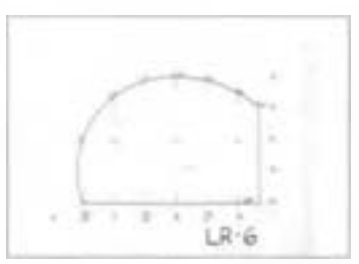
Opening celebration for *Cadillac Ranch*, near Amarillo, Texas, June 1974. Left to right: Chip Lord, Doug Michels, Stanley Marsh 3, Roger Dainton, and (partially obscured) Hudson Marquez.

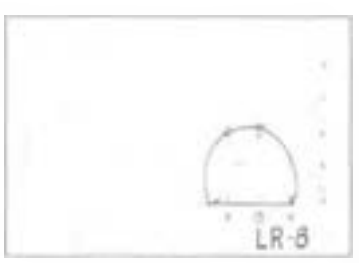
Chip Lord











Time Slice, the 1969 be-in staged by Ant Farm on the beach at Padre Island.

cable television connections that would allow millions of viewers to participate actively without leaving their homes.

The Convention City proposal gained local notoriety via an unauthorized press conference at Rice. Employing a deadpan version of doublespeak, the Ant Farmers, dressed in business suits and describing themselves as "a nonprofit California-based group of architects and engineers," proposed to the representatives of the press that Convention City be built in the Houston area. The media excitement, together with some Barnumesque marketing on the part of Ant Farm, caught the attention of another big-thinking Houstonian, developer Kenneth Schnitzer. Schnitzer was looking for a semi-permanent facility to occupy vacant land on the western edge of his Greenway Plaza development and commissioned Ant Farm to propose a use for the site. Their answer was Freedomland, a shopping mall catering to the spending patterns of teenagers – a "three-acre air-conditioned leisure time zone." The scheme included what may have been the world's first MTV shopping network, by which customers could stop in at the TV studio not only to select the offerings of the various retail establishments, but also to partake of cable-transmitted entertainment and educational offerings presented by local musicians, artists, and educators.

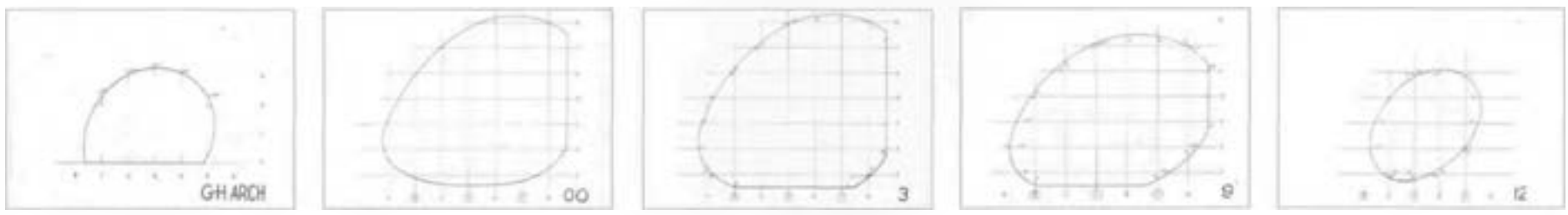
One Hundred Television Sets, a sculpture by Chip Lord and Doug Michels. On the site of the House of the Century, Angleton, Texas, 1972.

Ant Farm produced a video presentation to show Schnitzer and his associates the real-time dynamics of the project, although one small glitch was the lack of video projectors in Houston in 1973. After a citywide search, a projector was located and the presentation made. Although Schnitzer conceded that certain of the project's themes appealed to him, its exotic characteristics made him skeptical of its ability to fit in with the corporate milieu of Greenway Plaza or attract the necessary financing.

Ant Farm took its leave of Houston in 1973 with the production of *2020 Vision*, an exhibition mounted at the Contemporary Arts Museum. Ant Farm's association with the museum had begun a year earlier, when they were commissioned to seal a time capsule for the opening of the museum's new building. The "capsule" – actually an old refrigerator filled with videotapes, images, and artifacts depicting "real life" in Houston during the week of the opening – was to have been suspended from the ceiling of the museum until its scheduled opening in 1984. Instead it was ultimately relegated to storage in the CAM's basement, where it suffered water damage during a flood in the late seventies, after which it was removed and lost, reportedly before it could be ceremoniously opened on the scheduled date. The CAM capsule was the first of two such commissions; the second, *Citizen's Time Capsule*, entombed a 1968 Oldsmobile Vistacruiser packed with 30 suitcases full of cultural artifacts for a 25-year journey into the future at the Artpark in Lewiston, New York, on 7 September 1975.

The *2020 Vision* exhibition, mounted by Lord, Michels, Doug Hurr, Hudson Marquez, and Curtis Schreier, juxtaposed themes of earlier Ant Farm projects with forecasts of the future, allowing the group to assume the roles they most enjoyed, as cultural commentators and garage band visionaries. Looking backward and forward, Ant Farm stocked the show with images that fascinated them, creating a dream of consciousness for a generation that had grown up with concept cars, Sputnik, and the promised wonders of space-age technologies, as a psychic context for their own visionary work. The Ant Farm view of cultural near-history was characteristically tongue in cheek, showing an appreciation for "the humor in past visions of things to come, no matter how real they really were," and dominated by images of mobility fixed to important dates in the evolution of recent American culture: 1939 for the General Motors Autorama exhibition at the New York World's Fair, with Norman Bel Geddes's prescient visions of patterns of mobility for the 1960s; 1951, the year the 100,000,000th passenger car rolled off the assembly lines in Detroit; 1955 for the invention of the wraparound windshield; 1956 for the start of construction of the interstate highway system; and 1964 for GM's Futurama pavilion at the second New York World's Fair, where public fascination with the automobile was overshadowed by neighboring exhibitors IBM and Bell Telephone, a harbinger of the new age of electronic communication and transmission. Also included as benchmarks in the Ant Farm time line were 1984, the temporal setting for George Orwell's dystopic, futuristic novel, and 2020, a modest and imaginable forecasting end point. Fantasies of past automobile designers were represented by a 1936 Cord and a pink 1959 Cadillac convertible; they were coda-fied in the end by Ant Farm's own hybrid techno-media van and a lunar rover on loan from NASA's Manned Spacecraft Center, 20 miles south of Houston. Large photographs of streamlined, high-finned 1950s-era concept cars indulged the American fascination with speed and independence but revealed as well the cars' secret, metaphorical life as ground-based jet fighters.

In the catalogue for the show, a vintage example of sixties psychedelic graphic design, Ant Farm commented on the General Motors Autorama at the 1939 fair: "The vision of the 60's proved true in every detail, yet its awkward modernism betrays its origin, and its entertainment value



increases as its information value wanes." With this aphorism in mind, that today's predictions may become tomorrow's entertainment, Ant Farm's own visions of the future were concocted in the belief that all such speculations should contain as much entertainment value as possible. Focusing on lifestyles to come, their contributions to the show included designs for future wearing apparel and a display of the House of the Century and other projects that explored a new architectural language based on the fusion of biological and technological urges. *Kohoutek*, the "Doll House of the Future," continued that formulation as a social plaything for future generations – a contextless biotech assembly designed to monitor the "evolutionary process for the good of all mankind." *Kohoutek* was envisioned as a reproduction and intelligence center providing "every conscious comfort, both real and imagined"; upon closer inspection, according to a review of the exhibition in the March 1974 *Architecture Forum*, it was revealed to be "a scenario where an all-female colony of Barbie dolls is being raised as a food supply for giant ants, the true evolutionary winners."

An artifact of the future was *Dolphin Embassy*, an "inter-species communication" linking dolphins and humans that was funded in part by the Rockefeller Foundation and the National Endowment for the Arts. Conceived as an ocean-going ferrocement research craft of triangular configuration, it consisted of living quarters for 100 humans in addition to bays for ocean-based experiments and research. Pneumatically operated sails recalled images of the dorsal fin of the sailfish. Work on *Dolphin Embassy* was based in Australia, creating a personnel split in Ant Farm; Doug Michels served as expedition leader.

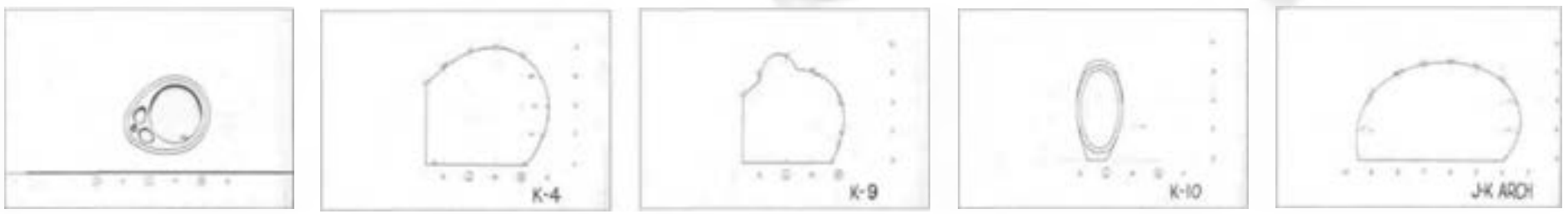
The works for which Ant Farm is most widely known came soon after: *Cadillac Ranch* for Stanley Marsh 3 in Amarillo (1974), consisting of ten of the bi-finned *ne plus ultras* planted nose down a stone's throw from Route 66, and *Media Burn* (1975), a performance piece produced in the parking lot of the Cow Palace in San Francisco, where a 1959 Cadillac was driven through a "wall" of burning televisions.

Houston clients continued to provide occasional sustenance for such projects as *Truckstop Network*, a project described as a "service station for nomads" (1976); a home media center for Rudge and Nancy Allen (Doug Michels, 1983), soon to be reinstalled in the University of Houston College of Architecture; and the *Save the Planet* sculpture (Chip Lord, Hudson Marquez, Doug Michels, 1987) for the Hard Rock Cafe in Houston, which came about as a result of a lawsuit filed by Ant Farm, claiming that the Hard Rock Cafe had plagiarized the *Cadillac Ranch* concept for the marquee of their Los Angeles restaurant. As part of an out-of-court settlement, Hard Rock asked Ant Farm to create a signature sculpture for their Houston restaurant.

In the early years, when they needed it most, Houston provided a temporary home and laboratory for Ant Farm, furnishing stimuli and nourishment for their ideas and the occasional kindred client and patron. But the relationship was always an occasional one, floating on the thin veneer of Houston's avant-garde. Underneath there was a different reality, one based not on the countercultural musings and ideologies Ant Farm was seeking to propagate, but rather on the entrepreneurial spirit of capital accu-

"Cosmorama," report on Ant Farm's Convention City in *AD*, February 1973.

House of the Century, general view, Lake Mo-Jo, Angleton, Texas, 1972.

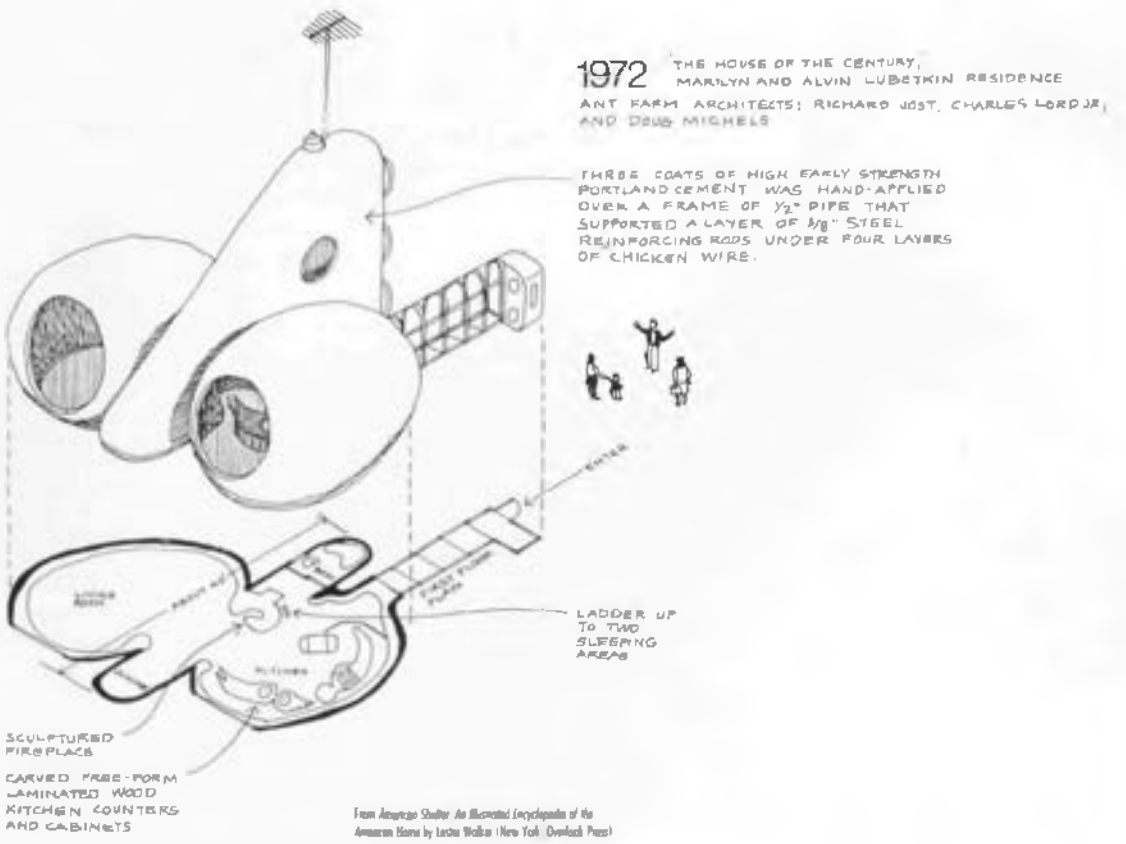


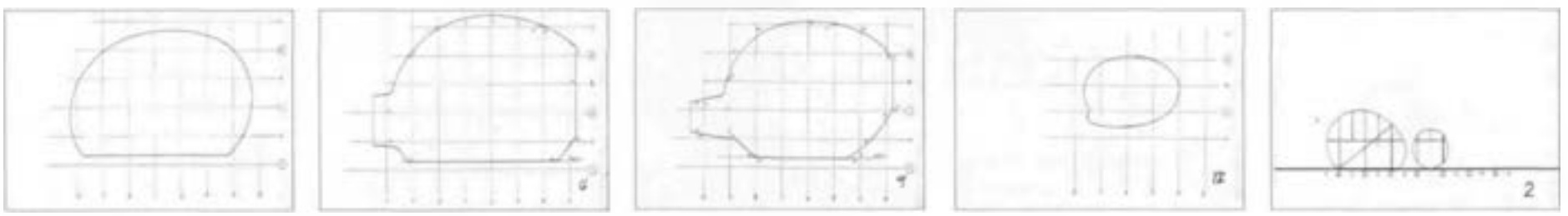
mulation. For a group that reveled in living on the edge (and sometimes on food stamps), that personified the ethos and lifestyle of the sixties counterculture. Houston's boundaries were more often closed than open. The members of Ant Farm knew that in San Francisco the counterculture was more deeply rooted and more enlightened. But from Houston came an appreciation of the contradictions of the modern city and the energy to form the boundaries that Ant Farm most enjoyed crossing.

Today Michels divides his time as an architect between Washington and Tokyo. Lord, who also wrote the book *Automerica: A Trip Down U.S. Highways From World War II to the Future* (1976), an appreciative and anticipatory account of happy motoring from Eisenhower to Buck Rogers, is an independent video artist and teacher living in Santa Cruz. ■

House of the Century, rear view.

Laminated kitchen sink, House of the Century.



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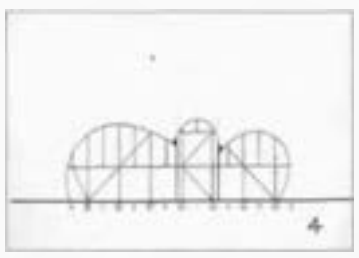
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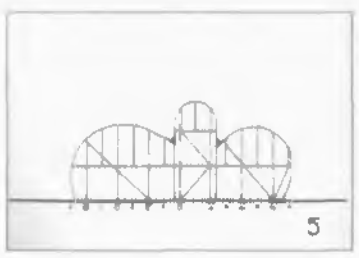
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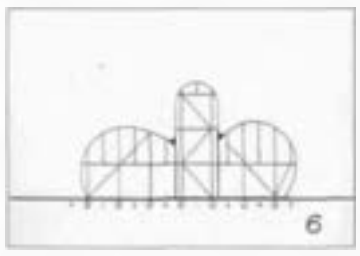
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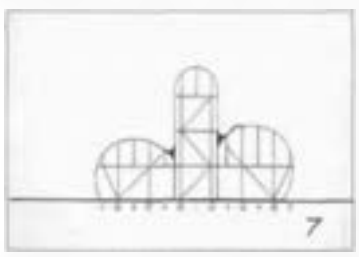
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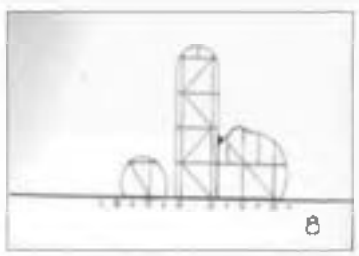
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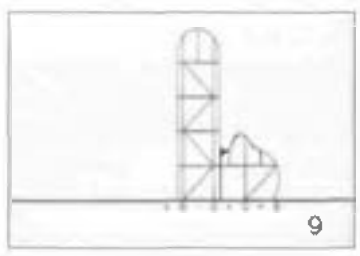
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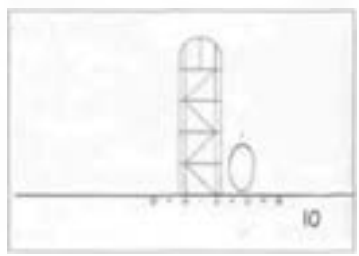
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House of the Century

MARY LE JOHNSON

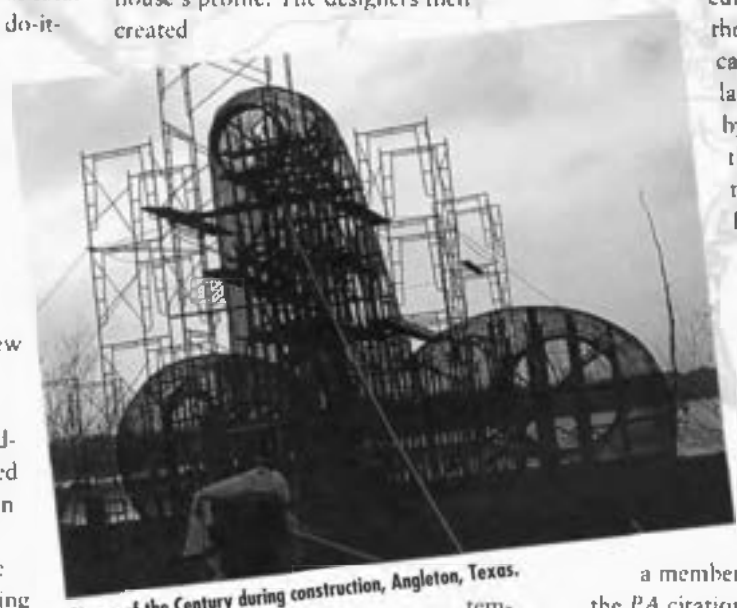
Readers of the January 1973 issue of *Progressive Architecture* were shocked to see that one of *PA*'s annual design awards had been given to a project called "House of the Century 1972–2072," by Ant Farm designers Chip Lord, Richard Jost, and Doug Michels. From the evidence presented, the house, designed for a site on the edge of Lake Mo-Jo in Angleton, Texas, seemed unbuildable. But the jurors were impressed by the documentation of the construction process that was included with Ant Farm's submission. Commenting on the design – which looked more like a landlocked submarine than a house – juror Hugh Hardy wrote: "This is an act of total design, a true form of handicraft, a do-it-yourself architect as artisan tradition. It is admittedly a self-indulgence, a burlesque freaky thing to do, but it honestly admits that."[1]

A few months later, skeptics were probably mollified when they saw the completed house published in *PA* and other art and architecture periodicals. The designers and a crew of craftsmen and artists had constructed it themselves, creating the high-tech voluptuousness with hand-crafting techniques. The house lasted only a decade of its nominal lifespan before major renovations were required because of problems in the vapor-proofing methods used. Having suffered additional damage from flooding over the last few years, the house today stands, as former Ant Farmer Doug Michels says, "like a futuristic ruin or crashed spaceship in the swamp."

The owners of the house, Marilyn and Alvin Lubetkin, were the perfect clients for the Ant Farm designers, whose creation would incorporate the results of visionary experiments that combined art, design, and technology. Marilyn Lubetkin, then president of the board of trustees of Houston's Contemporary Arts Museum, and her husband put their complete trust in the group, commissioning a weekend house with a media studio for experimental art and design.

Ant Farm's interest in curved forms was hatched in early experiments with pneumatics (inflatable structures) conducted in California, which they documented in their 1971 *Inflatocookbook*, a file kit on inflatables. The HOC was a way of going from "bubbles to stone" through the use of high-early-strength concrete combined with boat-building technology. The design evolved from early schemes employing organic, Gaudiesque forms into smooth, sensual curves suggested by automobile design and space technology. In its final form, the house inspired a range of metaphorical interpretations: citing its erotic qualities, *Playboy* magazine published it under the title "A Playboy Pad: Texas Time Machine."[2] In *Casabella*, Germano Celant wrote that the shape was initially like an alligator, later resembled a toad about to jump into the water, and finally evolved into an automobile-inspired form.[3] Michels claims influences that include the 1936 Cord 810, dolphin curves, and various architects, from Victor Horta and Hector Guimard to Erich Mendelsohn and Eero Saarinen; collaborator Richard Jost adds that the design evolved into more Euclidean shapes as the designers pondered how to make it buildable.

A clay model of the design was produced, then sliced into sections at three-foot grid intervals to determine the configuration of the compound curves that make up the house's profile. The designers then created templates to hand bend the pipe by transferring the curves onto graph paper, calculating the required structural components by hand. Once the primary, structural pipe work was in place, it was covered with successive layers of chicken wire, three coats of hand-applied high-early-strength concrete, and a painted vapor barrier. The interior walls were finished with four inches of foam insulation and upholstered to suggest the look of a car headliner.


House of the Century during construction, Angleton, Texas.

The house comprises two bulblike forms linked by a two-story tower containing the kitchen, bathroom, and mechanical services on the ground floor and two bedrooms, reached by a curved ladder, above. The soft, flowing interior space is a sensuous contrast to the hard, high-tech, white exterior. As there were no working drawings of details for the interior, work proceeded on "a mutual understanding of aesthetic values":[4] Jost recalls the group sitting inside the shell structure, "dreaming about what the interior could be" – an ad hoc process that Germano Celant described as "a plan made up of collages and notes put together daily by means of free association of ideas and lifestyles."[5]

The sculpted interior contours were formed of two-by-fours laid up on edge, laminated, and twisted into furnishings. The floor grew up to create a sink in the kitchen and a tub in the bath. A similar strategy was used to create seating in the media studio and the table in the dining room, its base carved out as though it had been eroded by the water pattern that is airbrushed below. Molded fiberglass pieces also grew out of the floor, one incorporating the sink plumbing pipes and shower head in the bathroom, another forming a fiberglass sculpture called a "servoid" in the media room.

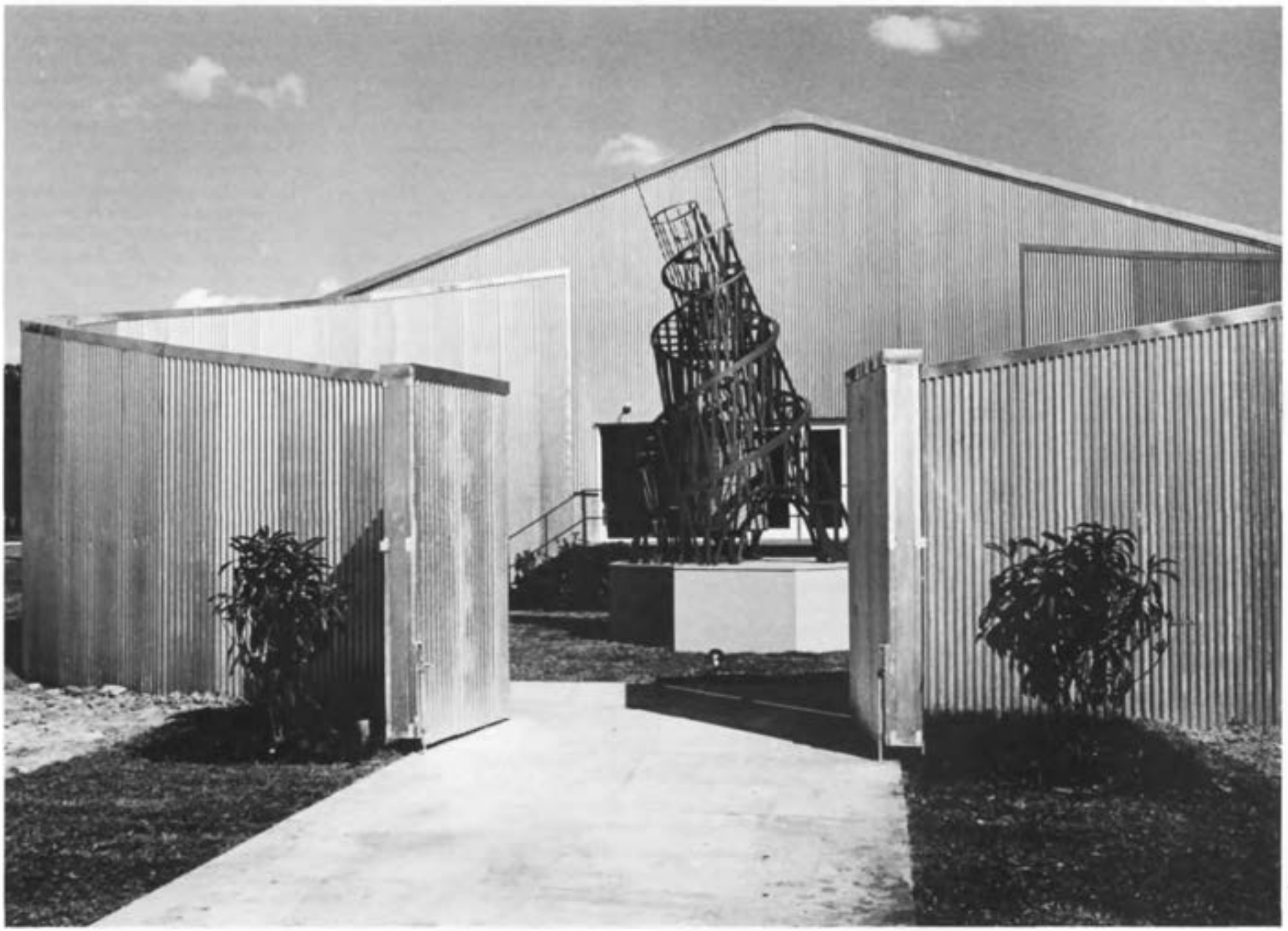
The flowing lines and cavelike qualities of the HOC recall Frederick Kiesler's design for the Endless House (1959), which Doug Michels saw in a show of Kiesler's work in 1967, as well as Jacques Couelle's houses in Maritimes, France (1963). In the Endless House, the walls curve up as an extension of the floor, and pools are carved out for bathing, similar to the treatment employed by Ant Farm. In the spirit of the time, Ant Farm thought the shell construction of the HOC might serve as a prototype for mass-produced housing, a concept also advanced by *Domebook 2*, which espoused building free-form or double-curved shells of ferrocement for hippie communities.

Architect John Johansen, a member of the jury that awarded the *PA* citation to the House of the Century, had used a similar construction method for his own house in New Caanan, Connecticut (1959). His design applied high-early-strength concrete over an armature of steel pipe, rods, and mesh to form shells, creating more organic forms than those in the HOC. Dissenting from the majority opinion of the jury, he argued that the House of the Century should be eliminated from the awards because a more "neoprimitive feeling" could be created with ferrocement.[6]

But the design of the HOC was never intended to evoke a neoprimitive feeling. It combined technology and biology to create a visionary, forward-looking artistic statement – a place to live in that had nothing to do with being a house. ■

1 "Citation," *Progressive Architecture*, January 1973, p. 95.
2 "A Playboy Pad: Texas Time Machine," *Playboy*, December 1973, pp. 221–23.
3 Germano Celant, "Ant Farm," *Casabella*, April 1973, p. 28.
4 "House of the Century," *Progressive Architecture*, January 1973, p. 127.
5 Celant, "Ant Farm," p. 28.
6 "Citation," p. 95.

POWERS



Barnstone and Aubry, architects, Rice Museum, 1968–69, forecourt with model of Vladimir Tatlin's *Monument to the Third International* (1919–20).

In the building trades we have had recourse to these metal fabrics in the cheapest and most insulting fashion, in buildings where the architect has either never been seen, or has been set aside. Sheet metal is prime makeshift to his highness the American jerry-builder.

Frank Lloyd Wright, "Sheet Metal and a Modern Instance," 1928

DREXEL TURNER

Although tin-plated rolled iron was widely used for roofing in 19th-century America, it was not until the more durable zinc-plated or galvanized iron became available in the 1840s that sheet metal came to be used as an all-over cladding, corrugated for better rigidity to save weight and material.[1] The humblest forms of sheet metal, corrugated or flat, were applied mostly to industrial and farm buildings. Fancier sheets stamped to simulate tiles for roofing and hanging in the Queen Anne manner, as well as fish-scale shakes, rough-cut stones, and even entire pilastered-and-corniced building fronts of commercial-Baroque persuasion, appeared along the Main Streets of small-town America. Carl Condit's survey, *American Building: Materials and Techniques From the Beginning of the Colonial Settlements to the Present*, fails to mention the medium at all, but it can be found readily enough – makeshift and forlorn as if to confirm Wright's observation – among the "social rather than artistic monuments" of Walker Evans's Depression-era photographs of Appalachia and the Southeast.[2]

Wright himself conceded that "in sheet metal there is the opportunity to give life to something the Architect seems to

OF TIN

despise, while forced to use it because it is cheap" or in "imitation . . . of every other material." He proposed that it be "used as a fine material for its own sake," taking advantage of

the machinery at work in the sheet-metal trades [which] easily crimps, folds, trims, and stamp sheets of metal as an ingenious child might his sheets of paper. The finished product may have the color brought up in surface treatment or be enameled with other durable substances as in enamel color glazing or plating or by galvanizing the finished work may be dipped or coated entire.[3]

Wright admitted to entertaining such notions as early as his Hull House lecture of 1901, "The Art and Craft of the Machine," but a similar appreciation of sheet metal and prescription for its use appeared in 1876 in the *American Architect and Building News*. In a previous issue, the editors had criticized the use of sheet metal in buildings and displays at the Centennial Exhibition as "most offensive," "pretentious," and "coarse," to which a Philadelphia reader signed "Quaker" had taken exception, arguing that

the use of burl veneers, wall-paper, imitation fresco, graining, tiling, stucco, etc., which all architects use in their practice, and recommend without compunction, is a much greater trick and sham than the use of sheet or cast metals. . . . We get our ideals of solidity, as well as our art lines, from ancient Egypt, Greece, and Rome; and it is but fair to allow us to assume, that, had those people been possessed of the knowledge in the iron-arts as now practised, they would have used the metals. . . . if, in this age of scarcity of timber and great cost of stone-work, iron has become a necessity (and such is undoubtedly the fact), it will be more honorable and becoming in our architects and art critics to lead and elevate the tone of iron and other metal productions, rather than . . . be continually hurling shafts at a material that must come into general use.[4]

The editors' response would have found itself at home in the pages of any similarly constituted publication a century or more later, relieved only of its ascription of social class distinctions to building materials:

We have granted that iron is a "noble" material . . . noble enough to deserve a form of its own; instead of which it is condemned everywhere to appear what it is not and to ape the forms of other materials, as if it were unceasingly conscious of its own inferiority, like an uncultivated person struggling into society who uneasily copies the manner of persons at whom he affects to sneer for their airs of superiority. . . . What the public have a right to expect . . . of those who assume the responsibility of trying to revolutionize their system of building . . . and of giving form to the use of a "noble" and as yet almost untried material, is, that they should at least work faithfully to find the forms that best suit its peculiarly novel qualities; not misrepresenting or disguising it, but standing by it openly and loyally. . . . Our correspondent . . . reminds us of the ductility of metals. The forms to which ductility lends itself, and for which it is above all other qualities, are sheets, bars, and rods. Then let sheets, bars, and rods bear an honorable prominence, when such forms are useful and appropriate; let the sheets be crimped, bent, serrated, or perforated, but not tortured into the semblance of solid blocks; let the rods and bars be honorably displayed, and, when ornament is wanted, be drawn and hammered and twisted into shapes that do credit to their ductility. Then, when these "art materials of the future" have been loyally helped to ordain their own true forms, let us see how far we are in our result from imitation of the forms which the men of antiquity developed in obedience to the different qualities of a very dissimilar material.[5]

"Art material of the future" or not, sheet metal tends to be something of a tinkerer's medium – a characteristic exampled inauspiciously, if well pedigreed, in Thomas Jefferson's sheet-iron "'rooflets' . . . designed as a series of small valleys to give the appearance of a flat roof" for Bremo, the house of General John Hartwell Cocke, built in 1817–20, which produced this entry in Cocke's diary for 19 September 1836:

Commenced taking off Roof of the House to be replaced by a new one to get rid of the evils of flat roofing and spouts and gutters, or in other words to supersede the Jeffersonian by the common sense plan.[6]

As an envelope calculated to rest lightly on the planet, sheet metal also figured in the domestic speculations of Buckminster Fuller. The first of these – a hexagonally planned, rocket-masted, range-hood-roofed, rotating, vine-resistant epiphany of 1927–29 promoted as the Dymaxion House – advanced no further than the "fully-demountable, table-top model" Fuller employed in performances before audiences from Marshall Field's to Harvard. Fuller declined an invitation to build just one for the Century of Progress Exposition in Chicago in 1932, insisting instead on the financing of a full-scale production line, a stratagem that not only preserved but amplified its proto–New Age mystique.[7]

The techno-quixotic charm of Fuller's duraluminum marvel was as multifaceted as its plan. *Vanity Fair* divined in its mechanical core the prospect of a comfortably distant domestic-less "domestic revolution" of here-and-now conversational utility.[8] Vincent Scully saw it as a teepee for 20th-century man ("mobile both, unfixed to the ground"), neonomadic in spirit even as its occupants were hoisted harmless above the good earth.[9] Condit appreciated its visionary, engineered-in-America roots, pointing to James Bogardus's also unexecuted project for the Crystal Palace, New York (1853) – the sheet-iron roof-tent of which, 700 feet in diameter, "was to be suspended from radiating chains anchored to a central tower."[10] But to Siegfried Giedion, whose apostolic suspension of disbelief was reserved mainly for the schemes and dreams of his Swiss compatriot, Le Corbusier, the Dymaxion House appeared offputting, even retrograde: "hanging like a merry-go-round on a central pole" as if to demonstrate "how new materials and constructions – presumably because we have not yet learned to master them – easily lead to grotesque throwbacks."[11]

Giedion was no fonder of the Dymaxion House's less acrobatic sheet-metal successor, the hamburger-domed, twin-finventilator-topped Dymaxion Dwelling Machine of 1945–47 – two prototypes of which were fashioned to Fuller's specifications from airplane plate in the Wichita, Kansas, factory of the Beech Aircraft Company. The dwelling machine derived from a lower-flying example of Fuller's ingenuity, the almost ready-made Dymaxion Deployment Unit of 1940–41, which customized the Butler Company of Kansas City, Missouri's stock-in-trade, conically roofed circular grain bins, with porthole windows and skylights, a door, rooftop ventilator, cylindrical bathroom, and furniture from Montgomery Ward for use as radio shacks and military housing in the Persian Gulf. With its "aeronautical pattern" modeled to resemble a "turnip-shaped gasoline tank on the Kansas prairie," the Dymaxion Dwelling Machine also bore an uncanny resemblance to a circular house engineered in sheets of glass for the giant *Victoria regia* waterlily in Leyden (1870) that culminated in a cast-iron crown, rather than ventilator, at its apex.[12] Production units of the DDM, weighing no more than several automobiles and priced accordingly, were to be shipped dissassembled in a compact steel tube to forward-looking postwar home buyers and fastened together on their lots in 200 hours – "two days' work for a 16-man crew."[13]

Despite "37,000 unsolicited orders, many of them accompanied by checks" issuing as a consequence of enthusiastic accounts in the *Saturday Evening Post*, *Fortune*, and the *Reader's Digest*, and an expectant surge in the value of Beech

R. Buckminster Fuller, Dymaxion House, definitive model, 1928.

R. Buckminster Fuller, Dymaxion Dwelling Machine, prototype assembled Wichita, Kansas, 1945.

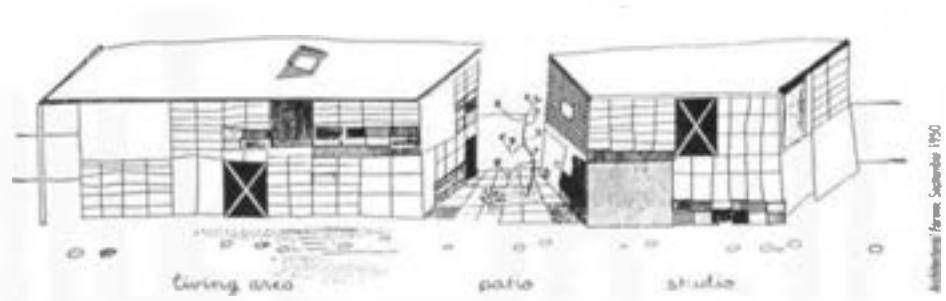
stock, the Dymaxion Dwelling Machine only narrowly escaped the trial by market of mass production.[14] Ostensibly, this last-minute reprieve was prompted by the high cost of hard- (rather than soft-) tooling the manufacturing process, as Fuller required, but the sponsors may also have entertained second thoughts about the firmness of demand for domestic novelty, for, as Russell Lynes noted in retrospect, "conversion from war to peace played some odd tricks on taste, but it did not greatly change it."[15] To Giedion, the possibility, however remote, that the curious, "half-pumpkin shape" units might soon be produced at the intended rate of 50,000 units annually, was reason enough to warn that "as a standard form, multiplied by millions these self-enclosed huts become a city planner's nightmare."[16] Even as Giedion counseled against the serial consequences of Fuller's "attention-compelling fanaticism," mechanization was in fact quietly taking command of the postwar housing crisis under cover of wooden shutters and asbestos siding in the on-site assembly lines of Levittown, Park Forest, and Lakewood, at prices comparable to those projected for Fuller's dwelling machines.

Kocher and Frey's Aluminaire House of 1931 was the first sheet-metal-covered dwelling of conventionally modernist inclination to be built in the United States. Like Fuller's messianic models and prototypes it was also a "clientless" production, commissioned for a trade show that shared the premises of the Grand Central Palace with the uneventful 50th anniversary exhibition of the Architectural League of New York.[17] Albert Frey, the Swiss-born architect responsible for its design, had recently left the atelier of Le Corbusier and emigrated to America, where he formed a partnership with A. Lawrence Kocher, then managing editor of the *Architectural Record*. The Aluminaire was essentially a vertically abridged, metal rather than concrete variation of Le Corbusier's project for a mass-produced house on stilts, a model of which was exhibited at the Salon d'Automne in 1922 and whose virtues the master-mechanic publicized in his own ecstatic, pre-Fullerian patois in *Towards a New Architecture* the following year as "'Citrohan' (not to say Citroën). That is to say, a house like a motor-car, conceived and carried out like an omnibus or a ship's cabin. . . . we must enlist the discoveries made in industry and change our attitude altogether. . . . There is no shame in living in a house without a pointed roof, with walls as smooth as sheet iron, with windows like those of factories."[18]

The Aluminaire was brought up to date not just by its cladding but with trace elements from Le Corbusier's project for the *maisons "minimum"* of 1926 (whence the rear, pass-through placement of the garage and its transverse interior stairs), and the freestanding unit at Weissenhof, Stuttgart, of 1925–27 (also called "Citrohan," and which accounts for the sheer, unimpeded rise of the front and the support of the whole on two files of pipe-shaped piloti). Frey framed the Aluminaire as an unbraced, light steel shelfwork supported vertically by six five-inch aluminum-pipe columns; its outer walls were made up as hollow insulation-board sandwiches, to which corrugated aluminum was attached on the exposed side. Dismantled piece by piece at the close of the exhibition and reassembled as a guest house on Wallace Harrison's Long Island estate, the Aluminaire was one of the few didactically obliging examples of contemporary "American" architecture available to Henry-Russell Hitchcock and Philip Johnson as organizers of the Museum of Modern Art's famously Eurocentric exhibition of 1932 promulgating the "international style" as a way station to "a millennium of good building" they admitted to be "as far away as any other" (though for the time being "it were better that the world build only according to the rigid anti-aesthetic of the extreme European functionalists than that nineteenth-century debauchery of design should continue").[19]

Charles Eames, Eames House, Pacific Palisades, California, 1945–49.

Gehry House, Santa Monica, California, as remodeled by Frank O. Gehry, 1977–78. Detail of kitchen window, north elevation.



Ray Eames, study for exterior panels of the Eames House, c. 1948.

"Artificial plaques and metal plates exposed or painted will doubtless be increasingly used," Hitchcock and Johnson predicted, pairing as examples Alvar Aalto's asbestos-sheathed pavilions for the Stockholm exhibition of 1930 and the corrugated-aluminum sheathing of the Aluminaire, the latter described as reflecting "its surroundings agreeably." As a general prescription for emphasizing "a sense of continuous surface," Hitchcock and Johnson advised that "plate sheathing has the distinct advantage of similarity in texture and scale to the glass panes of the windows . . . reducing the contrast between the transparent and opaque sections of the bounding walls [and allowing] windows to 'be independent in character but not a breach in the general coherence of the surface.'"[20] But as Reyner Banham later noted, although the Aluminaire

might be mistaken for [Le Corbusier's] work in some views, . . . all in all, it represents a telling collision between Corbusian architectural dogma, and the U.S. technology needed to make that dogma come true. Telling because it works so much less well than the undogmatic approaches being made to that same technology by Rudolph Schindler and Richard Neutra over on the Pacific coast in the previous five or ten years.[21]

The Corbusian affiliation of the Aluminaire extends (parent-thetically) to the small masonry house Le Corbusier designed and had built for his mother and father on the shore of Lake Geneva at Vevey (1924–25), and which he was later compelled to re-cover in sheet metal. According to his brief, exculpatory memoir of 1954:

Building costs were extremely low. The contractor did not take architecture of this kind any too seriously. I was in Paris and had to rely on him! The walls were built of hollow blocks of cement concrete and sand (good conductors of heat and cold and hence poor material). For this reason the northern side had one day to be revetted with [vertical] shingles of galvanized iron plate ["en tuiles de tole galvanisée" – the second meaning given for tuiles *in the dictionary is "bad luck"], as are often used on farm-houses in the Jura to protect them against the weather. This useful armor looks very attractive. Just at that time commercial aviation was developing, with its cockpits of corrugated aluminum (Breguet).*

Later still, he writes under the heading "Houses Too Catch the Whooping Cough," it was necessary to apply a horizontal "aluminum facing" to the south, or lakeside, elevation, which had cracked as a result of continually "receiving the upward thrust of which the late lamented Archimedes was so fond. . . . Every year the walls of the old houses on the lakeside get cracks which worry no one. But a concrete house with cracks cuts a poor figure."[22] (Consulting Viollet-le-Duc's *Lectures on Architecture* of 1872, one discovers – if not until halfway through the second volume – that "the inconvenience attaching to thin walls of brick or stone is chiefly that they rapidly communicate the cold or heat of the external temperature to the interior. . . . Experience . . . has shown that external facings having damp-resisting, smooth polished, or even varnished surfaces, prevent heat or cold from being communicated to the material behind.")[23]

Richard Neutra, the Austrian immigrant who was the architect of the only other "American" house in Hitchcock and Johnson's International Style exhibition (the Lovell "Health" House, Los Angeles, 1930), resorted to the use of "silver-grey" painted wooden bands to give the Mosk House (Los Angeles, 1933) an aluminum, "machine-like" identity. Soon after, Neutra produced two real metal houses that he even so gilded with aluminum paint: the compact "pre-fabricated" Beard House (Altadena, 1935), with "hollow walls [made] out of corrugated sheet metal flooring," and the spacious, slickly wrapped Josef von Sternberg House (Northridge, 1936) – both examples of what Esther McCoy was to remember wistfully as the "direct solutions that grew out of technology in the thirties [which] are today called puritanism . . . [but whose] high seriousness and dedication . . . doomed wonder houses and sheet metal gargoyles and Petit Trianons."[24] In 1934, Frey moved out west to Palm Springs, where he practiced into the 1960s, producing corrugated sheet-metal houses for himself and others, including one for Raymond Lowey (1947). Rudolf Schindler – like Neutra a transplanted Viennese – proposed corrugated sheet metal as a cladding for several unbuilt commercial projects in Los Angeles in the mid-1920s, but declined to use it domestically except for roofing (although his roofs, like those of Wright, for whom he had worked in the late 1910s, were occasionally almost

all encompassing). After the end of the Second World War, sheet metal found its way into the work of two remarkably dissimilar homegrown architects, Charles Eames and Bruce Goff, whom Reyner Banham has paired as representing, "better than most," a "'Mr. Fixit . . . grassroots . . . down-home, do-it-yourself . . . sort of hot-rodder attitude to the elements of building, ingeniously mating off-the peg components, specials, and offcuts from other technologies," – a modus operandi that Giedion also favored in principle, advocating in opposition to Fuller's housing schemes that "the task of mechanization is not to deliver ready-made, stamped-out houses or mechanical cores, but flexible, standardized elements admitting of various constellations, so as to create better and more comfortable dwellings."[25]

Not only was the "constellation" of standardized elements for the Eames House (Pacific Palisades, 1945–49) ordered almost exclusively from catalogues, but once the steel framing materials were delivered to the site in fall 1948, the design was drastically revised from a comparatively spread-out, single-story

Air-handling unit, General Warehouse and Maintenance Building (now Arts Annex), University of Houston, c. 1946.

"bridge" structure to a two-story, box-like envelope to achieve greater volumes using only the framing pieces at hand. (Craig Ellwood, then practicing as an engineer, estimated the structural steel along with the building costs.) With its unconcealed 4-inch H-column supports and 12-inch Truscon open-web joists (the same framing elements used but covered over, as Esther McCoy has noted, by Neutra in the Lovell House),[26] Ferroboard steel roof-deck ceiling, X-terior tie rods, and ostensibly Mondrianic array of infill panels of asbestos concrete and vertically scored sheet metal (and cemesto and stucco and plywood), commingled with translucent and clear (and wired) glazing units, the Eames House achieved an uncommon "spareness" and "richness," of the kind that, in the words of Charles Moore, distinguished Eames as "the first to pull back in the wonderful things from everywhere which made the spartan framework acceptable."[27]

Schematically and proportionally, the Eames House corresponds almost directly to the model advanced by Le Corbusier in the first, stiltless Citrohan house project of 1920, omitting only the roof/terrace penthouse and exterior stairs. In both residential units, a window-wall that includes a door occupies the entire front "end" elevation, behind which is placed a double-height, almost-square but slightly longer-than-it-is-wide "living room." The rest of the house is divided into two levels, with dining and kitchen areas below, and bedrooms above which are reached by a compact, circular stairway. The overall length of each unit is approximately two and a half times its width; the transverse section is essentially square, with breadth slightly greater than height. (The inspiration for the first Citrohan type emanated, depending on whom you believe, either from the commercial vernacular of the Cafe Legendre, as Le Corbusier – an habitué in good standing – himself maintained, or the "standard Paris atelier unit, as his interests and lifestyle powerfully suggest" to Banham, who notes that in either case, "the type belongs to a tradition of close-packed continuous street-frontage construction and a pattern of urban land occupation that goes back to the middle ages.")[28]

As modified by Eames, the envelope acquires a cellular articulation (or "box-kite" aspect, in his words) that recalls Le Corbusier's combinatory diagrams for the *maison standardisée* of 1924 and the two-story exhibition "platform" inside the "tent" of the Pavilion des Temps Nouveaux, thin-framed with undisguised H-beams and tie rods, and filled in with colored (sometimes graphically enhanced) panels. (The mid-19th-century designs of Edward Bellhouse and others for sheet-iron-clad cottages, markets, and other building types employ thin, outwardly revealed iron columns in much the same spirit that Viollet-le-Duc had proposed exposing iron structural members – including bracing – in his design for a townhouse of iron and enamelled terra-cotta.)[29] By exchanging concrete for ultra-thin, almost weightless panels, the Eames (not to say Citrohan) House makes good Le Corbusier's pronouncement that in future "a house will no longer be this solidly-built thing which sets out to defy time and decay," a precept illustrated in *L'Art Décoratif d'Aujourd'hui* with a cutaway model of a Farman-Goliath tram fuselage subcaptioned "enormous strength, astonishing lightness, slenderness and breadth."[30] As enriched by both the elemental yield of Charles Eames's catalogue connoisseurship and the infill collage programmed in Ray Eames's Klee-ful aperspectival drawing, the Eames house also embraces the Corbusian precept that the "house-machine" should be "beautiful in the same way that the working tools and instruments which accompany our existence are beautiful [and] beautiful also with all the animation that the artist's sensibility can add to severe and pure functioning elements."[31] Moreover, as Banham points out, the Eameses' house, no less than their furniture design, demonstrated that it was possible to produce work "that clearly subscribed to the moral imperatives and material mythologies of the modern movement, yet looked nothing like the International Style," so raising the further possibility that the "culture might produce a dual, or even plural, aesthetic without being false to itself."[32]

In the Eames House sheet metal is used discreetly: it appears in continuous expanses only on the back of the house, on the studio, and in the ceiling. (It is used also as a nearly all purpose wrapping for the pavilionlike Entenza House.) Where it appears in considerable exterior expanses, the application is analogous to a sort of outdoor curtain, just as, inside, the exposed Ferroboard steel decking of the ceiling, with its well-defined ridges spread wide apart, approximates the pleated fabrics employed by Josef Hoffmann as ceiling (and sometimes wall) treatments for festivities and temporary displays of the products of the Wiener Werkstatte. Charles Eames viewed light steel construction as a practicable successor to the balloon frame – an elegant, affordable means of achieving more generous volumes and, by virtue of its very lightness, enhanced "space sensation." In its account of Eames's "brave first step in a good direction," the *Architectural Forum* marveled that in light steel, unlike

its familiar, heavy parent, a delicate tracery of thin rods 12 inches deep can span more than 20 feet; a cleverly bent sheet can bridge more than 7 feet and still carry all the usual roof loads; a 4 inch column can rise 17 feet without wavering; a few crossed wires and turnbuckles can pull together an entire bolted frame.[33]

Among the other lessons Eames was reported to have learned was that the "skeleton frame could be filled with an endless variety of interchangeable sheet materials."[34]

Rather than simply order from catalogues, Bruce Goff, who had served in the Seabees during the Second World War, scavenged the oilfields of Oklahoma to find materials for the Hopewell Baptist Church (Edmond, 1948–50), self-built for the most part by its congregation of roughnecks.[35] The church's tepee-shaped sanctuary is tied to an exoskeleton of trusses made of 4-inch drill stem pipe infilled with 2½-inch line pipe. Outside, the sanctuary was clad in corrugated steel at its base, above which red shingles were attached to roof decking. Inside, in the best church-social tradition, the light fixtures were conjured from ruffled aluminum cake pans, some of which dangled from long strands of electrical cord suspended from the glazed (hydraulically operable) oculus/flue to form a chandelier of incandescent metallic sunflowers. In 1989, the congregation had a conventional, light-industrial metallic building erected close by to provide a more ample, low-maintenance sanctuary–parish hall–gym. Although the church's Goffic ingenuity has proved a matter of curiosity and admiration in literary circles from *Popular Mechanics* to *Architectural Forum*, it narrowly escaped demolition after completion of the new facility (*Cite*, Spring 1990).

John Milkovisch, Beer Can House, Houston, Texas, 1974– .

Frank Zeni, Zeni House and Studio, Houston, Texas, 1990.

Ian Glennie and Hossein Oskouie, Double House, Houston, Texas 1973–74.

Something akin to Goff's improvisatory, scavenging procedure can also be seen at work in the perpetual remodeling of Frank Gehry's gambrel-roofed tract house in Santa Monica as a wrap-around, civic-club-provoking, poor man's Merzbau of corrugated metal, chain-link, two-by-fours, and plywood, "roughly and nakedly used" in Ruskin's formulation.[36] The unfinished, camping-out-at-home ambience of Gehry's jerry-mannered redo spilled over into the driveway in the form of a kitchen/dining suite that featured, as its focal point, what may well be the most photographed

Esther Bubley, *Feed Store, Tomball, Texas*, 1945.

Marsh-Bintliff Darkroom, Houston, Texas, 1989.

window over a kitchen sink of all time – actually a "drop-in" clerestory/skylight that folds in a fragmentary if inadvertent vignette of Wright's way of roughing it at Ocatillo with Gehry's everything-plus-the-kitchen-sink take on Banham's Mr. Fixit. The house has recently undergone an upwardly mobile re-remodeling to smooth out some of its rough edges, which covered over the exposed studwork and plywood of the rear elevation with a satin-finish sheet-metal ashlar and built up the driveway-asphalt kitchen floor (which Gehry's wife had professed to like) with asphalt tiles.[37] Nostalgic tremors of quasi-proprietary magnitude were felt as far away as the Living Arts section of the *New York Times*.[38]

Gehry's experimentation with corrugated metal predates the liberties taken with his own house by nearly a decade, beginning with the construction of an open-air hay barn on the O'Neill Ranch in San Juan Capistrano (1968). The barn was a simple rectangular shed supported by telephone poles, its flat roof tilted skyward between diagonally opposing corners in an attitude Gehry says grew out of his "fascination with Frank Lloyd Wright, actually – the way he played with roof structures was a very important part of his architecture."[39] The character of this small shed carried over into a combination house and studio in Malibu for Ron Davis (1970–72), an artist who had seen and liked the hay barn. After initially developing the idea of two separate buildings, as in the Eames House and studio, it was decided to combine the two into one more sizable barn – a broad, irregular, trapezoidal wedge in plan, closed in by corrugated walls, framed in wood as a single volume with deep laminated trusses, and ceiled by a tilted roof. The interior of the Davis house-studio was then filled incrementally, over the course of the next few years, with an odd-angled assortment of enclosures and loft platforms reached by ladder, aspects of which referred to the geometric landscapes of Davis's paintings at the time. The unbuilt project for the Wagner House (1978), which marks the beginning of Gehry's antigravity phase, was also planned for Malibu as a corrugated-metal-clad, hill-slide residence and psychiatrist's office. Pinioned visually to its inclined lot by a large box skylight monitor/surrogate chimney, it suggests Wright's also unbuilt tilt-roof studio-house project, "Windswept," for Franklin Watkins (Barnegat City, New Jersey, 1940), trying to climb (or not slip down) the hill. The Wagner House's parallelogram-shaped plan was divided on the bias into a Mondrianically gridded warren of rooms and partitions separated by a large, open central living- dining-kitchen space.

In 1969, corrugated sheet metal acquired an unexpected currency in Houston with the opening of Howard Barnstone and Eugene Aubry's "temporary" Rice (University) Museum, commissioned by John and Dominique de Menil to house the exhibition program of the newly formed Institute for the Arts.[40] The 12,000-square-foot museum was constructed as five 40-foot-deep-by-60-foot-wide gable-roofed modules, clear spanned by wood trusses and raised on blocks. The modules were each served by their own electrical and (externally expressed) air-conditioning systems so they could be moved about or otherwise reconfigured to house exhibitions, studios, and offices.

The Rice art barn was rushed from design to completion in six months to receive Pontus Hulten's exhibition *The Machine as Seen at the End of the Mechanical Age*. Its long south side was "buttressed" by air-conditioning ducts – an outrigging known to Barnstone and Aubry from the also corrugated, but much larger, post–World War II warehouse/maintenance shed at the University of Houston. Both long sides were anchored to the ground by high-strung steel guy cables in the manner of Le Corbusier's tentlike Pavillon des Temps Nouveaux for the 1937 Paris International Exposition. In a processional arrangement schematically allied with the antechamber of Philip Johnson's Knesses Tifereth Israel Synagogue (Port Chester, New York, 1956), an elliptically walled forecourt prefaced the entrance to the museum as a setting for a model of Tatlin's *Monument to the Third International*.

Unlike its much-maligned first machine-age ancestor – C. D. Young and Company's iron-covered temporary exhibition hall for the Victoria and Albert Museum[41] – the Rice Museum was appreciated in the professional press for its unassuming thematic aptitude as a "machine shop for art."[42] Hulten found it much to his liking as "a new concept in the presentation of art pieces: you're not in a palace, but in a workshop; . . . you can drill holes anywhere."[43] In 1970–71, a companion corrugated-steel barn was constructed next to the Rice Museum as a media center to accommodate a film and photography program and uniplex cinema, its clear-span interior divided into an angular "landscape" of lofts and rooms looking onto a central double-height space. A wooden deck was constructed between the two buildings, which, to forestall rust as the shine wore off, were both painted a drab verdigris. Sited at the edge of a vast football stadium parking lot to the rear of the campus, the art barns were, despite their modesty, the most remarkable buildings to be built at Rice in the more than half a century following Cram, Goodhue and Ferguson's sui generis originals. (Similarly, the two most interesting buildings realized on the campus of the University of Houston during that period were the temporary quarters for the architecture and psychology departments by Edmund Furley (1948–49), which employed the H. H. Robertson Company of Pittsburgh's corrugated-steel roof decking as siding for the first time – an application that then passed into general use in Houston and elsewhere – and mis-sized windows rejected for a downtown construction project.)[44]

Houston's experiment with sheet-metal-clad domesticity is concentrated in the Brunner Addition, which occupies part of the semi-rural inskirts of the city's west end, just east of Memorial Park and south of the Southern Pacific railroad tracks. In 1973–74 a side-by-side, corrugated-steel double house designed by Aubry and Hossein Oskouie (both then of S. I. Morris Architects) was built at the corner of Roy and Blossom streets. Leaving the metal unpainted and forsaking external ducting and anchoring cables, the sparsely fenestrated double house took the outward form of a gabled shed split longitudinally down the middle, with the half closer to the corner slipped forward. The corner unit was laid out by Ian Glennie, a designer and art dealer who then occupied it, as a double-height central living space flanked at either end by a division of the house into two levels – an arrangement that approximates the barn-like long houses of late-medieval English yeomanry, except that in this case it was entered Pullman style, on end. The only near relation to the Roy Street double house in the neighborhood at the time was a houselike two-story detached

Scogin, Elam and Bray, Clayton County Library, Jonesboro, Georgia, 1988.

"office" at the entrance to what had originally been the Holmes Drilling Company complex on Feagan Street. Built just after the Second World War, and occupied since 1989 as a residence, it still advertises its pre-air-conditioning provenance with a side screened porch and a wall-mounted, awning-shielded propeller fan that protrudes from a second-story opening in front.[45]

What came after did so at first by fits and starts. In 1974, John Milkovisch, a retired upholsterer and former employee of the Southern Pacific Railroad, working in a six-pack surrealist mode, began to deck the outside of his house at 222 Malone with icicle-like strands of beer cans, approximating the decoration of Picabia's set for *Relâche* (1924). Ten years later, Glennie designed a three-story double house in collaboration with Oskouie that was built at 5001 Blossom (*Cite*, Summer 1986). This tall, lot-filling dwelling anticipated the scale of much that followed, except that the double-house format was abandoned (while retaining its envelope) in favor of a more conspicuous consumption of space. The compound effect, bolstered by a handful of single units and a five-, soon to be ten-, unit complex of "studio" row houses, may yet coalesce as a thin-built, dual-income Bedford Park of the Central Time Zone, dressed down in galvo-tech to beguile the nineties.

The most arresting offspring of this still tentative aesthetic movement is the artist and architect Frank Zeni's two-and-one-half-columned, Ionic, poly-crimped, hubristically un-air-conditioned temple-studio-house (5420 Floyd, 1990).[46] Natalye Appel's only slightly less spacious temple-penthoused, 5,000-square-foot studio-house for Victoria and Marshall Lightman (417 Reinerman, 1993–94) rises above the treetops from a pumped-up shoe-profile base, with its penthouse/porch "levitated" above the second story on three sides by a thin, wrap-around clerestory *en longueur*. Val Glitsch's also-5,000-square-foot studio-house for Robert and Bobby Bennett (802 Knox, 1992) uses a New England attached-barn arrangement, placing the double-height studio arrears; stucco-faced, jettied bays project on both long elevations of the domestic component. At the opposite end of the space race is Nena Marsh and John Bintliff's freestanding darkroom (5411 Blossom, 1989) – an East Texas shanty trucked on site and retro-vernacularly upholstered in galvanized pressed "stone." (This last skin treatment precurs outside Brunner in Clovis Heimsath's octagonal roadhouse [Fuddrucker's, ne Cou Cou's, 1980] on the improbably named Chimney Rock Road, a longneck's throw from the Richmond strip and the Galleria. Fuddrucker's appropriates a late-19th-century-Texas, never-before-tinned type [still doing business in Fredericksburg as the Volkskirch and in Waxahachie as the Chautauqua Pavilion] and covers it with a galvanized base course of pressed "stone," superseded by a second course of fish-scaled shingles – an enrichment that, despite its nativistic sentiment, was lost among the Ninja castles, beached shrimping fleets, cabana clubs, and Studebaker-trimmed discos of Houston's neighborhood of make-believe.)

Sheet-metal continues to show signs of life outside Houston as well. The gonzo-trailerama of Joe Mashburn's corrugated "long skinny house with a kink in it," an urban cowboy's dream that Banham commended for making a lot of a "good gimmick," zig-zags through the woods outside Bryan–College Station (1985; *Cite*, Fall 1988) with a swagger not unlike that of Wright's stables for Auldbrass Plantation (Yemassee, South Carolina, 1939).[47] Mashburn's second, also corrugated, house for himself (Blacksburg, Virginia, 1989) adopts a skinny but unkinked, in-line layout covered by a tilted roof of Wrightian provenance; it perches sideways on a hill, turning generous expanses of glass, which can be stopped down by "barn-hung" sliding-door–shutters, to the view. But to see just where Ruskin's appreciation of iron as "parchment" can lead, it is necessary to check out the notebook/file-box-patterned, in-your-face-at-50-miles-an-hour, corrugated cladding of the Clayton County Library by Merrill Elam (with Max Scogin) of Scogin Elam and Bray (1988), which turns (or keeps) up the noise on a transitional rural-to-suburban strip in Jonesboro just beyond the runways of the Atlanta airport, where Z. Z. Top rules and hand-painted, commercial funk abounds.[48]

Apart from its patterning, the principal reading-hangar component of the Clayton County Library draws attention to itself with a cascading fan-section of clerestory windows, like that of Aalto's Riola parish church (Bologna, 1965–78), which, as Malcolm Quantrill observes, also "has its origin in the forms of industrial sheds," although in the context of Clayton County, the gull-wing profile of the library's successive clerestories and roofs might also be cross-referenced as a declension of the rear elevation of a 1959 Chevrolet.[49] Despite the expressionistic bristle of its runway's-end skyline, the library's plan is mostly all business, with a rationalism that comes naturally to a budget-conscious civic accessory its authors characterize as a "K-Mart" or "filling station" for information.[50] Although the mottled library-front engages the "information" highway on pretty much its own terms, the architects' biblio-tech inclinations take command at points along the sides, where it is possible to observe a parquetry of corrugated sheetings diagonally, vertically, and horizontally applied, decorated and not, converging in the presence of turnbuckled tie rods, curved roof sections, and an out-placed beam or two.

It is well to remember that sheet metal is a temporally ambiguous material – that Le Corbusier's remedial emblem of 1930s airplane modernity was also the vernacular fixit of the farmers of the Swiss Jura from the 19th century forward. The "myth" of the material as presently received favors "pure" and demonstrative, architecturally individuated uses that more often than not confirm Summerson's cautionary view of "the vanity of trying to make positives out of things intrinsically negative."[51] In practice, now as then, the most pervasive applications of sheet metal are those the architect chooses to despise rather than improve: the factory-painted aluminum cladding of houses in lieu of (but still in emulation of) clapboard to avoid the periodic expense of maintaining wood (which is also becoming a much scarcer and dearer material, as "Quaker" had forecast) and the pre-engineering of economical if often inelegant light-metal building packages, like the one the second-generation congregation of Goff's Hopewell Baptist Church purchased as a successor to their elders' outgrown, ill-maintained, hand-made pipe dream. (Houston does not lack for such churches, some of which, like the Iglesia Fuente de la Vida (1561 Telephone Road), combine off-the-bottom-shelf envelopes with an evident laying on of hands, though none achieve the adaptive finesse Venturi and Scott Brown managed, with congenial and cost-effective results, in the pre-engineered sections of the Houston Children's Museum [*Cite*, Spring-Summer 1993].)

In 1946, a slim book published by the Museum of Modern Art under the title *If You Want to Build a House* asked: "Why should our houses have to look like ancestral portraits? . . . Some of the reluctance to accept new techniques comes from an instinctive dislike of slick surfaces. Their machine-like coldness seems unsympathetic in houses. That is a valid criticism which must be met; nevertheless, there are more suitable ways to avoid

smooth shininess in aluminum walls than by covering them with cedar shingles."[52] No doubt the museum would have regarded Scogin, Elam and Bray's compelling decoration of the Clayton County Library (accomplished with enamel spray paint and steel "stencils," since silkscreen-compatible paints were found to lack staying power) to be the moral equivalent of cedar shingles, no less than Venturi, Rauch & Scott Brown's Warholian chintz applied to the flat, porcelainized sheet-metal casing of the Best Products store in Oxford Valley, Pennsylvania (1977). It seems unlikely that any question of material fidelity troubled the proprietor of the checkerboarded corrugated-metal feed-store recorded by Esther Bubley's camera in Tomball, just north of Houston, in 1945. (Andrew Jackson Downing – whose advocacy of "frankness in avowing material" is well recorded – allows that "there are certain architectural fictions with regard to apparent truthfulness of material, which are so well understood as not to deceive, and are not, therefore, reprehensible.")[53]

The environmental peculiarities of sheet metal are rarely compensated for or, better still, turned to advantage. Neutra contrived a shallow roof-pool from which artificial "rain" descended into the patio to cool the west end of the living quarters in the Von Sternberg House. In Houston, for his own ingeniously mechanicked, low-tech house, clad in cemesto panels, John Zemanek has recently installed a corrugated-metal heat foil on the west side, held out from a one-inch Styrofoam panel to allow the unreflected heat to drift upward, with salutary consequences for his electrical bill in summer. Mashburn's house in Blacksburg comes equipped with a horizontal equivalent – a "heat foil" double roof.

Asked by *Architectural Forum* soon after the completion of his own house what he might change if given the chance, Charles Eames, described as "an avid reader of catalogues on marine and aviation equipment," admitted to being "sorry he had stuck so close to the building industry."[54] But the eclectic, catalogue-thumbing archaeology of the here-and-now that sheet-metal building would seem made to order for has yet to venture as far afield as the galvanized appurtenances of our highways and electrical distribution yards. For all its virtues, latent and apparent, sheet metal – particularly in its shiny corrugated form – has become something of an architectural comfort food, no longer shocking enough to antagonize the bourgeoisie but still vestigially progressive enough to signal intention and perhaps even deflect closer scrutiny. The plastic and textural possibilities of sheet metal have scarcely been explored, as if the medium were awaiting the crimping and folding motions of Wright's "ingenious child."■

1 David Chase and Carolyn Laray, *Sheet Metal Craftsmanship: Progress in Building* (Washington, D.C.: National Building Museum, 1988), pp. 24–25. The process for zinc-coating iron was rediscovered and patented in 1837 in France by Ernest Sorel.

2 Condit's one-volume treatment, *American Building: Materials and Techniques From the Beginning of the Colonial Settlements to the Present* (University of Chicago Press, 1968), which updates and condenses his *American Building Art: The Nineteenth Century* and *American Building Art: The Twentieth Century* (New York: Oxford University Press, 1960, 1961), does, however, briefly refer to metal shell (i.e., unframed plate) construction and, in the cases of Buckminster Fuller's Dymaxion Dwelling Unit of 1945–47 and Eero Saarinen's Gateway Arch, St. Louis (erected 1962–66), "stretched" or "stressed" metal membranes. Cecil D. Elliott, *Technics and Architecture* (Cambridge: MIT Press, 1992), devotes several paragraphs to sheet metal, principally as roofing. Lincoln Kirstein, "Photographs of America: Walker Evans" in *Walker Evans: American Photographs* (1938; reprint ed., New York: Museum of Modern Art, 1988), p. 195.

3 Frank Lloyd Wright, "In the Cause of Architecture VIII: Sheet Metal and a Modern Instance," *Architectural Record*, October 1928, pp. 334–35.

4 "An Argument for Sheet-Metal in Architecture," *American Architect and Building News*, 22 July 1876, pp. 239–40.

5 "Sheet-Metal Architecture," *American Architect and Building News*, 22 July 1876, pp. 234–35.

6 Quoted by Frederick D. Nichols in William Howard Adams, ed., *The Eye of Thomas Jefferson* (Washington, D.C.: National Gallery of Art, 1976), p. 282.

7 Robert W. Marks, *The Dymaxion World of Buckminster Fuller* (Carbondale: Southern Illinois University Press, 1960), p. 25. An illustrated description of the Dymaxion House and its variations appears on pp. 80–87; alongside reproductions of the patent drawings, Marks notes that "though Fuller's preferred use of his invention was in the hexagonal plan, following his attorney's advice his patent [application as drawn] indicates that the system could also be used to provide a conventional box-like structure," p. 81. The prefabricated sheet-metal houses of the 1850s, such as those by Edward T. Bellhouse illustrated in *Gilbert Herbert: Pioneers of Prefabrication: The British Contribution* (Baltimore: Johns Hopkins Press, 1978), pp. 53–55, attempted to appear as conventional as possible. Another account of the Dymaxion House is provided by Michael J. Auer in H. Ward Jandl, *Yesterday's Houses of Tomorrow: Innovative American Homes, 1850 to 1950* (Washington, D.C.: The Preservation Press of The National Trust for Historic Preservation, 1991), pp. 83–100.

8 "We Nominate for the Hall of Fame," *Vanity Fair*, December 1932, p. 42.

9 Vincent Scully, *American Architecture and Urbanism* (New York: Praeger, 1969), p. 14.

10 Condit, *American Building*, p. 208.

11 Siegfried Giedion, *Mechanization Takes Command* (New York: Oxford University Press, 1948), p. 710.

12 The Dymaxion Deployment Unit is described in Marks, pp. 110–19; the "turnip shaped gasoline storage tank," also in Marks, p. 122; the lily-house in Leyden is illustrated in John Hix, *The Glass House* (Cambridge: MIT Press, 1974), p. 52.

13 Auer, in Jandl, *Yesterday's Houses*, p. 95.

14 Ibid., p. 96.

15 Russell Lynes, *The Tastemakers: The Shaping of American Popular Taste* (New York: Harper, 1955), p. 250.

16 Giedion, *Mechanization*, p. 710.

17 The Aluminaire House is discussed in Jandl, *Yesterday's Houses*, pp. 100–15, and in Joseph Rosa, *Albert Frey, Architect* (New York: Rizzoli, 1990), pp. 27–30, 40–42. Frey's employment in the atelier of Le Corbusier and Pierre Jeanneret is described in Rosa, pp. 15–17.

18 Le Corbusier, *Towards a New Architecture*, (1923; trans. Frederick Etchells 1927; reprint ed., New York: Praeger, 1960), pp. 222–23.

19 Henry-Russell Hitchcock and Philip Johnson, *The International Style: Architecture Since 1922* (New York: Norton, 1932), pp. 81, 68.

20 Ibid., pp. 51–53, 162. Le Corbusier's unrealized design for sheet-metal-and-glass-covered mass-production houses of 1929 (Maisons Loucheur) as rendered give the impression of very little difference between metal and glass panels.

21 Reyner Banham, *The Architecture of the Well-Tempered Environment* (University of Chicago Press, 1969), pp. 168, 170.

22 Le Corbusier, *Une Petite Maison 1923* (Zurich: Editions d'Architecture, Artemis Verlag, 1954), English translation appended, pp. 3–4, 7.

23 Eugene-Emmanuel Viollet-le-Duc, *Lectures on Architecture* (1877, 1881; reprint ed., New York: Dover, 1987), II, p. 327.

24 Esther McCoy, *Richard Neutra* (New York: Braziller, 1960), pp. 15–16.

25 Reyner Banham, *Age of the Masters: A Personal View of Modern Architecture* (New York: Harper, 1974), p. 77; Giedion, *Mechanization*, p. 711.

26 Esther McCoy, "On Attaining a Certain Age: Eames House, Santa Monica, California," *Progressive Architecture*, October 1977, p. 82.

27 Esther McCoy, "The Rationalist Period," in *High Styles: Twentieth-Century American Design* (New York: Whitney Museum of American Art, 1985), pp. 134–35. From the author's interview with Moore, July 1973: "After World War Two only Italy had any kind of spareness – thin limbedness. American design was fat and bulbous like those Buicks. Eames was the first American after the war who was taut and neat. Singlehanded, he brought back richness – he was the first to pull back in the wonderful things from everywhere which made the spartan framework acceptable to us."

28 Reyner Banham, "La Maison des Hommes and La Misère des Villes: Le Corbusier and the Architecture of Mass Housing," in H. Allen Brooks, ed., *Le Corbusier* (Princeton University Press, 1987), p. 109. The Citrohan type of 1920 was refined in the principal and bedroom floors of Le Corbusier's project of 1922 for a speculative villa in Auteuil to provide extensive fenestration along one of the longitudinal elevations and to rely on a single circular stairway, as is also the case with the Eames House.

29 Viollet-le-Duc, *Lectures*. He bases his appeal for expressed iron framing on a comparison to half-timbering: "If front walls were formerly made of wooden framing which served the purpose very well, except that it entailed the great inconvenience of propagating fires from one side of the street to the other, by falling in burning masses on the thoroughfares, and if on this account it was justly prohibited, whereas iron framing cannot burn, there would be no reason for forbidding its use for outer walls, and therefore its use should be allowed. Besides, as iron framing is stronger than timber framing, feats of construction might be achieved with iron which would be impossible with wood" (pp. 316–17).

30 Le Corbusier, *Towards a New Architecture*, p. 219; Le Corbusier, *The Decorative Art of Today*, trans. James Dunnett (1925; reprint ed., Cambridge: MIT Press, 1987), p. 43.

31 Le Corbusier, *Towards a New Architecture*, p. 210.

32 Reyner Banham, "Klarheit, Ehrlichkeit, Einfachkeit . . . and Wit Too!: The Case Study Houses in the World's Eyes," in Elizabeth A. T. Smith, ed., *Blueprints for Modern Living: History and Legacy of the Case Study Houses* (Cambridge: MIT Press, 1989), pp. 183–84.

33 "Life in a Chinese Kite: Standard Industrial Products Assembled in a Spacious Wonderland," *Architectural Forum*, September 1950, p. 96.

34 Ibid., p. 96.

35 "Drill Pipe, Faith, and Hard Work," *Architectural Forum*, December 1954, pp. 122–23.

36 John Ruskin, *The Seven Lamps of Architecture* (London, 1849), p. 45.

37 Charles Moore writes in *The City Observed: Los Angeles* (New York: Vintage, 1984): "I would have thought the [asphalt floor] would be asking too much of one's wife, but I have had dinner there, and Mrs. Gehry seemed to walk across the asphalt floor with elegance and grace. (The floor, it turns out, was her idea.)" (p. 162).

38 Herbert Muschamp, "The Frank Gehry House: A Brash Landmark Grows Up," *New York Times*, 7 October 1993, pp. B1, B5.

39 Barbaralee Diamonstein, *American Architecture Now* (New York: Rizzoli, 1980), pp. 35–36.

40 Eleanor Freed, "Machine Show in Machine Shop," *Houston Post*, 29 December 1968.

41 John Physick, *The Victoria and Albert Museum: The History of Its Building* (Oxford: Phaidon, 1982), pp. 23–26. In the eyes and words of *The Builder*, Young and Company's temporary accommodation for the V & A (then South Kensington Museum) was a "chamber of horrors" of "unmitigated ugliness" and a "loud-speaking disgrace to the country."

42 "Machine Shop for Art," *Architectural Forum*, July-August 1969, p. 96.

43 Ibid., p. 96; Helaine Wayne, "Fantastic: Rice Gets an 'A' for Its Art Home," *Houston Post*, 27 March 1969.

44 Interview with Edmund Furley, February 1994.

45 Anabella Torres provided the particulars on the Holmes Drilling Company office as part of a survey she made of Brunner in 1993.

46 Gerald Moorhead, "Tempietto Zeni," *Architectural Record*, February 1991, pp. 84–85.

47 Reyner Banham, "Toward a Modestly Galvo Architecture?" *Design Book Review*, Spring 1988, p. 51.

48 John Ruskin, *The Crown of Wild Olive* (1866; reprint ed., New York: Dutton, Everyman's Library, 1908), p. 55; "Scogin, Elam, Bray: Clayton County Library, Jonesboro, Georgia, 1988," in *9H on Rigor* (Cambridge: MIT Press, 1989), p. 95.

49 Malcolm Quantrill, *Alvar Aalto: A Critical Study* (New York: New Amsterdam, 1983), p. 203.

50 Jim Murphy, "K-Mart for Information," *Progressive Architecture*, November 1988, pp. 82–89; *9H on Rigor*, p. 95.

51 Sir John Summerson, "Vitruvius Ludens," *Architectural Review*, March 1983, p. 19.

52 Elizabeth B. Mock, *If You Want to Build a House* (New York: Museum of Modern Art, 1946), p. 53.

53 Andrew Jackson Downing, *The Architecture of Country Houses* (1850; reprint ed., New York: Dover, 1969) p. 36.

54 "Life in a Chinese Kite," *Architectural Forum*, September 1950, p. 96.

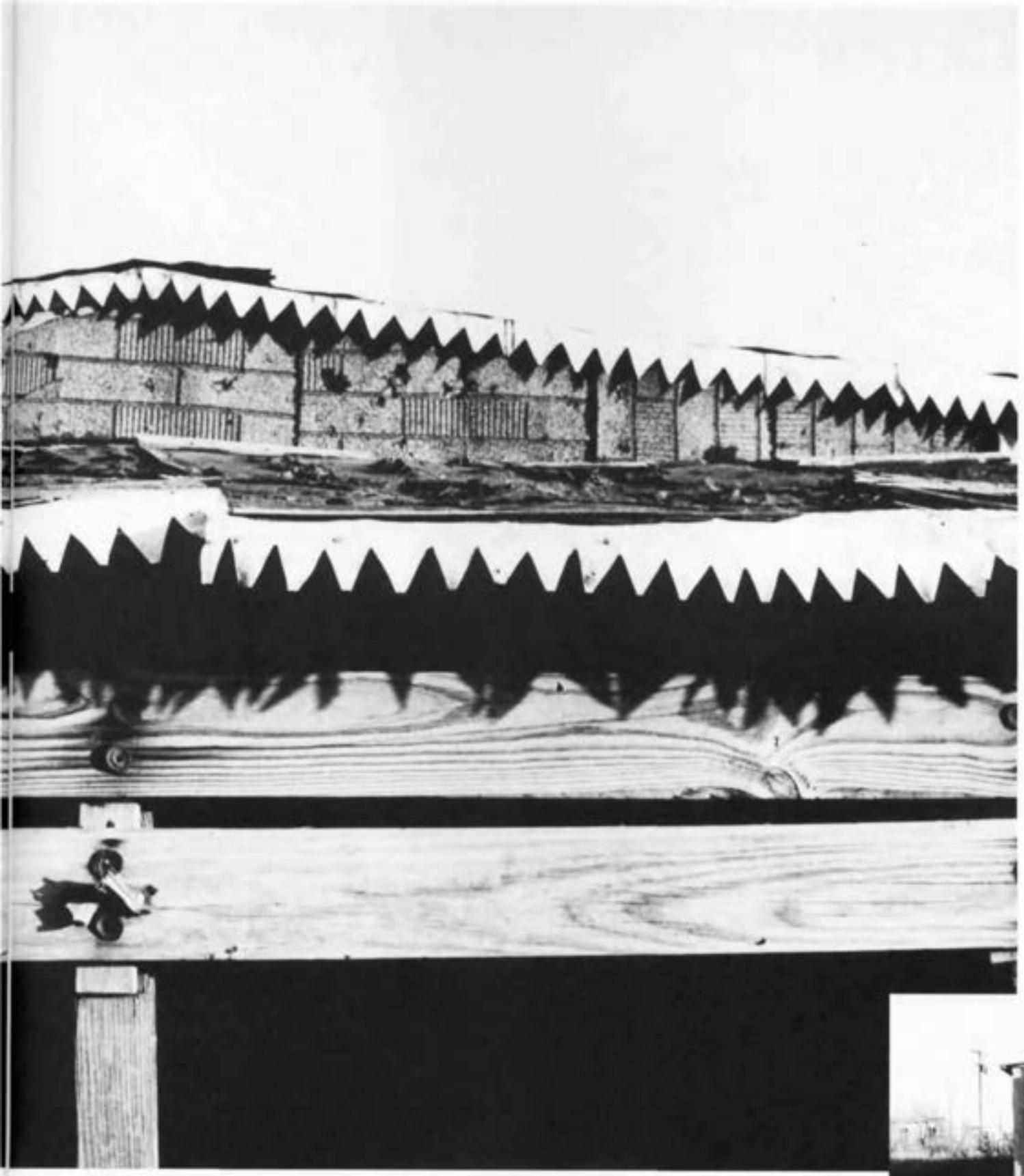
McCamey, Texas

P h o t o g r a p h s b y J o h n L e e S i m o n s

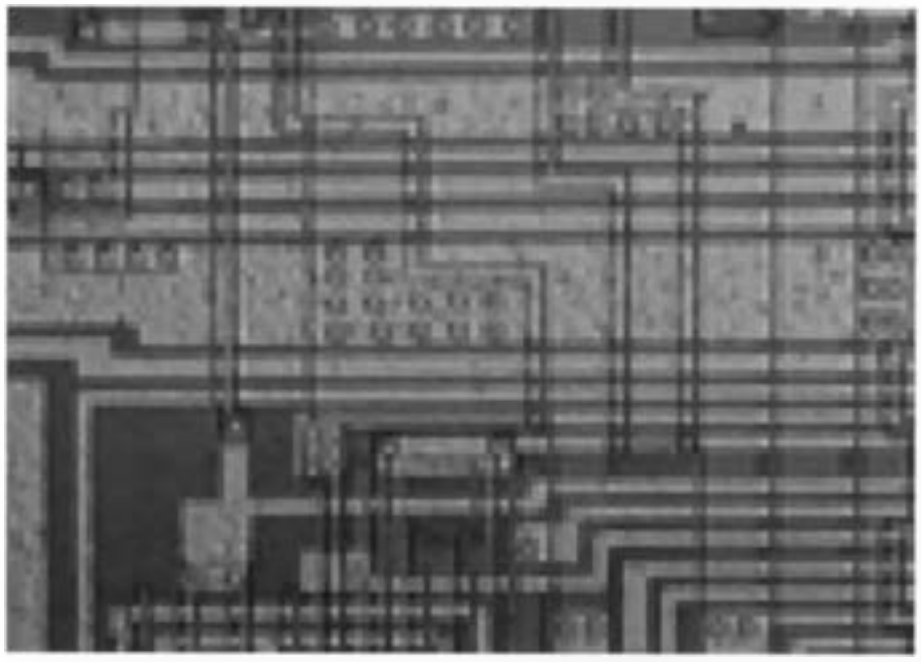
McCamey, Texas, is 52 miles south of Odessa and 47 miles northeast of Fort Stockton. There are no trees in any direction for hundreds of miles. The closest towns, Iraan (named after the two people – Ira and Ann – who owned the land where oil was discovered) and Crane, are about 25 miles in opposite directions from McCamey, and like McCamey came to exist only when oil was discovered in the area in the twenties and thirties. Overnight McCamey became a town with no housing or materials within a 50-mile radius. In similar situations, tent cities usually formed quickly. In McCamey's case, along came Pansy Carpenter, an out-of-work tightrope walker.

Pansy got a kid's wagon and went all over the area collecting everything she could find – pieces of wood, tin, boxes, bottle caps, cans, parts of cars or trucks or rigs. It didn't matter what size. She put it all together to make houses and rooms that she rented out to oil workers. She made one-rooms out of stripped cars with wooden doors. She made porches on her houses, and trellises. Sometimes she would nail every nail through a bottle cap. She cut tin so it was decorative for the outside and put curtains and floors in the inside. Some houses were multi-roomed. They had single or communal outhouses. She eventually bought an old Ford and tied her wagons on the back and continued to go around town collecting. Toward the end of her life she always wore three dresses, one coat, three pairs of socks, and a hat when she went out. When she died, her car, with the wagons tied to the back, and everything she owned was put in the Mendoza Trail Museum in McCamey. Over the years, all of the houses have been condemned or torn down. But in 1972, when these photographs were taken, at least 12 were still standing.

Helen Fosdick



Network News



The 100 Mile City *by Deyan Sudjic. San Diego, New York, and London: Harcourt Brace, 1992. 313 pp., illus., $18.95 paper*

The Virtual Community: Homesteading on the Electronic Frontier *by Howard Rheingold. Addison-Wesley Publishing, 1993. 325 pp., $22.95*

Reviewed by Danny Samuels

The modern city, in the United States and elsewhere, has changed drastically and fundamentally. It has become discontinuous, diffuse, extended, without center or edge. Air travel, automobility, telecommunications, and computers have spun new networks in which people, goods, capital, energy, and information flow freely from place to place. The coming convergence of data and telecommunications channels assures even more fundamental realignments. In the future (according to an MCI commercial), there will be no *there*, because everywhere will be *here*.

Few architects or other observers of the urban scene seem to have absorbed the significance of these changes. Given half a chance, they revert to traditional models. Two new books, *The 100 Mile City* by Deyan Sudjic and *The Virtual Community* by Howard Rheingold, together offer an alternative view.

Deyan Sudjic, trained as an architect, now editor of the British review *Blueprint*, takes an unsentimental and synoptic view of the contemporary world city and the forces that form it. He describes increasing concentrations of wealth, power, and population in fewer and larger cities, such as London, Paris, New York, Los Angeles, Tokyo. These cities have become more closely linked to each other, but also more competitive. The focus within them has shifted from the historic centers to new outlying developments of a scale so vast as to overwhelm architectural and urban space. These have become, in essence, multiple cities within the city, held together by complex webs of transportation and supply. Where most writers have noted these events with heavy criticism, Sudjic lays them out objectively, as history.

In the center third of the book, Sudjic deals in turn with the changing meanings of workplaces, museums, airports, housing, theme parks and world fairs, department stores and shopping centers, freeways and festival marketplaces, using examples to develop a brief history of each and to show its effect on the city. For example, in his discussion of the airport Sudjic goes beyond the idea of airport as city gateway to talk about Heathrow and DFW as cities in themselves, self-contained and with all necessary services, completely dedicated to the facilitation of movement. In several instances he finds his examples in Houston, discussing (nor always glowingly) the Loop as the new Main Street from which one orients oneself to the many nuclei spread over the city, or the Galleria as the original model of the displaced downtown.

In a chapter titled "The Myth of Community," Sudjic directs criticism at those numerous observers of the urban scene who bemoan the loss of a "sense of community," which, he contends, never existed, at least as now construed. The city that the Victorians denounced is now the ideal. The fact is, he writes, "that the idyll of community fostered for commercial and political ends does not accord with the increasingly private world sought for a variety of reasons by an ever-increasing proportion of the population. . . . cities are in reality constantly fluctuating places, with people moving in and out, forming, breaking, and reforming households." Here and elsewhere, Sudjic echoes observations made by Herbert Gans in his 1967 sociological study *The Levittowners*. Gans noted that only planners and tourists look for a physical center to a community; for residents, the community is based not on propinquity but on social groups whose members congregate by means of the car. This is the antithesis to Jane Jacobs, who, in *The Life and Death of Great American Cities*, made an argument for street life that still sways many planners.

Sudjic's central image of the 100-mile city is a force field, pulsating with energy, always moving, ever changing, dangerous and compelling at the same time. The architect and planner "cannot act against the direction of these events. The only plausible strategy is to attempt to harness the strategy of development to move things in the direction you want."

In *The Virtual Community: Homesteading on the Electronic Frontier*, Howard Rheingold looks through a different lens at the modern condition. For him, the online linkup of millions of computer users into networks based on common interests creates a new form of community, an electronic agora. These "virtual communities" Rheingold defines as "social aggregations that emerge from the Net when enough people carry on public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace."

Rheingold is the editor of *Whole Earth Review* and the author of the earlier *Virtual Reality*. His formative networking experience was with *Whole Earth*'s WELL, a "whole community of helpful electronic next-door neighbors." Rheingold is obviously a proponent of what he writes about, and to those of us not completely attuned, his acronym-laden histories and anecdotes can seem fairly prolix. But underlying the enthusiast's prose is an emergent description of new community that connects right back to Sudjic's.

In the electronic community, participants may share scientific research, child-rearing tips, business strategies, political opinions, sexual fantasies, or access to the Library of Congress. The esssence of the electronic agora is the ongoing discussion groups in which everybody can find somebody somewhere in the world to talk with about anything, no matter how particular or peculiar. Curiously, the common language of the Net depends principally on verbal skills – the lost art of letter writing. So far at least, communication on the Net is linear and verbal rather than simultaneous and imagistic.

The networks originated as government- and university-sponsored computer link-ups for conferencing and information access. When the hackers got hold of them (in those days, hackers were the guys operating the mainframes for the government and universities), they used them late at night for around-the-world personal communications and other games. Later, when various networks were consolidated into Internet ("the Net"), that early anything-goes aspect was incorporated and became part of its basic personality. As personal computers have become more widespread and access to the Net cheaper and easier (still not that easy; you need the skills of a junior hacker to get on board), more and more people around the world have joined up. Internet links 15 million, and grows now by 20 percent each month.

Inevitably, such a bustling marketplace attracts the attention of commercial interests. Corporate entities are duking it out over the form and the control of networks of communication (information highways). Questions arise: Can the Net's free-wheeling nature survive? Will the virtual community remain democratic, if a bit messy, or will it be homogenized into another medium for mass advertising? There are questions as well as to whether large segments of the population will be denied access to these potent media, either by the lack of computer literacy or because the cost of admission becomes too steep. And there are other possible threats, in the form of censorship and invasion of privacy.

Taking the two ideas together, the 100-mile city and the virtual community, a new description of the modern city begins to form: it is a complex, fluid, self-organizing system with unanticipated emergent qualities. It exists at the edge of chaos, but the edge is where everything happens. Even while old institutions have dissolved and geography has been rendered irrelevant, new forms of connection have arisen. Movement and communication have become in themselves constituent urban forces. With a slight change of focus, we can foresee a new definition of urban life with vast new opportunities for human interchange and community. The modern city, vital, magnetic, pulsating, will still be an exciting and challenging place to be. ■

King's Ex
States of Graceland

Max Furbringer and Merrill Ehrman, architects, Graceland, Memphis, Tennessee, 1938-40.

Graceland: The Living Legacy of Elvis Presley. *San Francisco: Collins Publishers, 1993. 150 pp., illus., $45*

Reviewed by Karal Ann Marling

Elvis loved Christmas – and almost everything else (cars, food, flashy clothes) – excessively. During the holidays, his driveway was lit up with so many colored lights that his father feared it would be mistaken for one of the runways at the nearby Memphis airport. The crèche on the front lawn was the size of a luxury suite at the Las Vegas Hilton. Given his King-size zest for the season (his own birthday fell on January 8), it is fitting that this Christmas's lushest, plushest, shiniest gift book was *Graceland: The Living Legacy of Elvis Presley.*

The book is a tribute to Elvis, presented in the form of an art-gallery-style catalogue of his house on the shopping-mall-and-fast-food outskirts of Memphis. There are handsome color photographs of the dwelling, inside and out, and of all the added sections that have effectively made a home into a museum: the car and airplane displays across the street, the permanent exhibitions of his gold records and stage costumes. The photos are accompanied by a series of pertinent factoids, many of which, judging from his previous remarks about the site, seem to have been contributed by Todd Morgan, director of communications for Graceland, Inc., the corporate entity that manages the complex on behalf of the singer's daughter and sole heir. The long introductory essay – another Presley biography, really, in which the house figures as a minor family member – is the work of *Rolling Stone* senior editor Chet Flippo, who almost 17 years ago wrote one of the two best accounts of Elvis's funeral.

The other memorable story filed on that occasion was by Caroline Kennedy, and what set the Flippo and Kennedy articles apart from the rest was their concern with the physical and stylistic characteristics of the event. While Kennedy registered a kind of polite horror at the garish interior of Graceland, Flippo just took it all in and reported in detail on what he saw. His remains one of the most riveting descriptions of the bleeding-heart-red-with-rhinestones decor that Priscilla Presley quietly banished before opening the house to paying visitors five years later.

The tasteful blue-satin-and-white-wall-to-wall house we tour today is not the house Elvis died in. There were reports just before Christmas that Priscilla, on behalf of the estate, might try to have *Graceland: The Living Legacy* suppressed because the Flippo text was too critical of her late husband, or too forthcoming about personal excesses chronicled elsewhere by detractors like sleaze biographer Albert Goldman. It was surely in the interests of protecting the legacy of Elvis Presley from charges of tackiness or worse that the interior was prettified for popular consumption. But Priscilla Presley had nothing to worry about. Flippo, alas, is not interested in what the house has to say about its most famous owner and about the problem of Southernness in general. Nor does he credit Elvis with making a conscious and complicated aesthetic decision when he chose to buy a genuine Memphis mansion, one sufficiently refined to have been admitted to the architecturally fastidious National Register of Historic Places.

The chronicle of Graceland begins with an item in the *Memphis Commercial Appeal.* Tucked in among the week's society news in late October 1940, Ida Clemens's article on the year-old "manor" house of Dr. and Mrs. T. D. Moore in suburban Whitehaven was not her usual Sunday real estate feature, although she described the Georgian Colonial structure in the kind of lush detail calculated to ensnare potential buyers. It was, she told readers of the *Commercial Appeal,* positively palatial: a huge, green-shuttered home built of white Tishomingo stone, specially shipped in for the Moores. Outside, four two-story columns supported a pediment over the front door. Inside there were decorative walls of glass brick and several "picture" windows – very modern – as well as a more traditional white marble fireplace. Downstairs, across the front, ran a sequence of oyster-white formal rooms – reception hall, dining room, parlor, solarium – large enough to seat fully 500 people when the daughter of the family, a promising music student, played her harp for company. And play Ruth Marie most surely would, for the Moores enjoyed a high social standing in the community that Miss Clemens divined in the architectural character and setting of "Graceland," their new country abode.

"As you roll up the drive, you sense its fine heritage of the past in its general feeling of aristocratic kindliness and tranquility," she confided. A subtle, burnished elegance matched the bloodlines of Mrs. Moore, née Brown, a Toof on her mother's side. The Toofs had owned the rise overlooking Highway 51, with its grove of towering oaks, for almost a century. That land had been named Graceland after Grace Toof, Mrs. Moore's aunt, a previous owner of the estate. The furnishings of the new house (also called Graceland) were Toof heirlooms, for the most part imported from the ancestral manse at Linden and Lauderdale in the heart of Memphis: a six-foot Chinese vase purchased at the 1893 World's Columbian Exposition in Chicago, a gilt-bronze chandelier with crystal prisms, and lots of pier mirrors framed in antique gold leaf. "Colonial courtliness." "Majestic columns." "Subtle luxury." Wow! A house fit for demigods, antebellum planters, or kings.

Furbringer and Ehrman, architects, had drawn up the preliminary plans for Graceland in 1938. Theirs was a relatively new firm, established three years before. But Max H. Furbringer, the senior partner, had been in Memphis since 1901, when he completed his architectural apprenticeship at the Pan-American Exposition in Buffalo, New York. Young Furbringer left the exposition, bound for Texas and a great Western adventure, only to be diverted South by lurid reports of a yellow-fever epidemic raging in Memphis. Perhaps all the architects had perished, he thought. And so he stopped and stayed – and in 1904 formed a 30-year partnership with Walk C. Jones that produced some of the most impressive architecture in the region. Jones & Furbringer built churches, courthouses, and schools. They were best known, however, for homes in the grand, neo-Georgian mode, awash in classical ornament. For the first major Colonial Revival residence in Memphis, the sumptuous C. Hunter Raine House of 1904–1906, Jones & Furbringer served as associates to the upriver architect W. J. Dodd, of Louisville. Thereafter, the grammar of giant porticoes, dentilation, and dark shutters set against brick or stone became their own. An early picture portfolio of recent work by the pair emphasized the residential side of their practice, and in fact Furbringer's only published discourse on architectural theory came in a 1916 treatise titled *Domestic Architecture.*

In that little book, Furbringer presented the rudiments of what Emily Post and others would later call "personality," or the imperative to reflect the character of the owner in the arrangement and, more particularly, the decoration of the house. A revivalist by conviction, Furbringer aimed to express "the tastes and refinement" of his clients in the period details of his residential projects. "People are no longer content with a house," he wrote. "They demand that environment which creates the atmosphere of 'home'" – or houses, like Graceland, imbued with built-in sentiment, meaning, and status.[1] Eugene Johnson and Robert Russell, Jr., in their recent guide to Memphis architecture, note that a full-blown Colonial Revival swept the city in the 1940s and 1950s. According to their chronology, Graceland stands at the beginning of a new wave of architecture premised on the postwar triumph of American values.[2] But Graceland can also be seen as the last of the great antebellum mansions of the planter aristocracy of Memphis, or a splendid example of the Tara fever of the 1930s.

Margaret Mitchell's epic Civil War novel, *Gone With the Wind* (1936), helped to create a positive image of the New South in the thirties, when national opinion regarding the region was overwhelmingly negative. Whereas the Southern stereotype ran to pellagra, sharecroppers, poverty, racism, and the conservative congressmen Franklin Roosevelt tried unsuccessfully to purge in 1938, Mitchell's best seller featured a beautiful, plucky heroine whose adventures cen-

tered on her efforts to save her family home – Tara – and the gracious way of life tramped underfoot by the advancing Yankees. Nonetheless, Mitchell had nothing but scorn for the moonlight-and-magnolias sentiment that would idealize a make-believe, bygone South as a retreat from unpleasant realities in the Depression era. And she waged a running battle with producer David O. Selznick to prevent the movie version of her book from prettifying the raw, red-clay Georgia where Rhett and Scarlett played out their tempestuous romance.

In the end, the struggle resolved itself into a contest of wills over architecture. The American public had already decided that Clark Gable was the dashing Rhett Butler. The technical side of filmmaking was clearly Hollywood's business. But Mitchell saw the great plantation houses of her story – Scarlett's "clumsy, sprawling" Tara, which survives the war, and the lovely Twelve Oaks, which does not – as the symbolic essence of *Gone With the Wind* and rightly feared that moviedom would give the settings the grandeur and scale of "the Grand Central Station," if that's what it took to sell tickets. It all came down to columns. Selznick, whose production company was headquartered in the colonnaded majesty of a white antebellum mansion, circa 1924, originally built as a movie set, liked 'em. Columns were classy, tasteful. He used his office building, in fact, as the on-screen trademark for Selznick Pictures, along with the slogan "In the Tradition of Quality." Columns suggested tradition and quality, the wealth and elegance swept away by the Civil War. Mitchell, through surrogates planted among his technical advisers, waged a successful rear-guard action to limit the Greek Revival columns on Twelve Oaks to the façade only and to keep them off Tara altogether (although it would sport tall brick pilasters).

Beginning in 1936, auto tourists descended on Atlanta, expecting to see the fictional Tara in the flesh, and were sorely disappointed when they were shown real but columnless houses of the 1840s and 1850s. Magazines ran features on historic houses in Mississippi and Louisiana that looked more satisfactory, thanks to a plethora of flutes and capitals. *House and Garden* in November 1939 published a sneak preview of the movie in the form of Kodachrome views of the backlot Tara. "To most of us," confessed the editors, "the South in all its romantic splendor and unfading charm is summed up forever in the stately plantation house with tall columns . . . set in the midst of rolling green fields."[3]

Graceland was a timely and evocative copy of the historic architecture of the Middle South. The doorway, with its sidelights and miniature order of engaged columns, could have come straight from publicity stills for *Gone With the Wind*. More likely, however, it came from Clanlo, a surviving Memphis plantation house of the 1850s fronted by a four-column portico of exceedingly slender proportions and Corinthian capitals bearing flattened acanthus leaves. These details, also found on the 1852 Pillow-McIntyre House, constitute a kind of antebellum Memphis style. It may well be that this peculiar handling of the acanthus ornament alludes to the lotus plant and to the city's exotic Egyptian name. In any case, the Memphian columns and capitals of Graceland give the generic plantation tradition a strong regional flavor: if the good doctor, with his hobby herd of purebred Herefords, was playing Ol' Massah or Rhett Butler in his imposing white manse on the hill, Mrs. Moore's sterling local lineage (she belonged to the Colonial Dames of the 17th Century) was also subtly acknowledged in the decorative program. There was a little pergola in the back, too, built of columns rescued from an old Memphis manor house. "The pergola may be simply a decorative adjunct or it may serve a useful purpose as an outdoor retreat,"[4] Furbringer wrote. Graceland was big, showy, see-it-from-the-road, old-lace-and-honeysuckle, pseudo-plantation Southern – a thoroughly modern house, in other words – but it was also a genteel retreat from the hucksterism of a culture in which *Gone With the Wind* premiered all across the Cotton Belt in 1939 and 1940 in movies houses adorned with cardboard columns.

The front stairs display Elvis's guitar collection for this 1993 photograph.

The Memphis of Max Furbringer and Merrill Ehrman caught Scarlett fever in 1938, when the fashionable Peabody Hotel downtown added a roof garden with a to-die-for Tara motif. But, while he continued to accept commissions from the Peabody crowd for Taras of their very own, Furbringer's interests came increasingly to center on the social effects of public housing for the poor. In 1935, he was named chairman of the newly created Memphis Municipal Housing Administration, and he eventually supervised construction of two major black housing complexes. He dragged prominent citizens to bleak inner-city slums and made movies illustrating the alternative – two-story brick projects with attenuated Georgian details in which tidy apartments rented for as little as $4 a month. In 1956, a year before Furbringer succumbed to a heart attack at the age of 77, the housing authority's annual report cited its properties as clean, healthful, and elevating of taste. They were temporary accommodations, way stations on the road to middle-class respectability. Why, in the past five years alone, one in seven resident families had purchased houses of their own. "A typical example of this rapid turnover," the document concluded, "is the case of Mr. and Mrs. Vernon Presley and their now-famous son, Elvis," formerly of Lauderdale Courts.[5] By the time the report appeared, 22-year-old rock 'n' roll star Elvis Presley had bought Graceland for $100,000. It was a classic case of upward mobility, a textbook illustration of the American dream in action: a poor boy, born in 1935 in a tiny, two-room shotgun house on the wrong side of the tracks in Tupelo, Mississippi, and raised in the Memphis projects, now owned the classiest house in town – a house that signified good taste, good breeding, and the distilled, mythical essence of the South. The *Memphis Press-Scimitar* said as much, in a headline story on the purchase. Rumor had it that Vernon Presley wanted to move to Hollywood, which he had recently visited to watch his boy make a movie. All the Presleys had enjoyed their bus tour of the stars' gorgeous homes. But "the traditional Southern beauty of Graceland" convinced Elvis and his mother, Gladys, to come back to Memphis, Tennessee.[6] There white columns and green lawns could never be confused with producers' offices and backlot real estate.

The stories in the Memphis papers all drew the inevitable rags-to-riches moral from Elvis's ascent to Graceland but, with the exception of one caption that called the house a "castle" for literary effect, the local press treated it as a normal house, albeit somewhat larger than the new, suburban ranch-style dwelling (mobbed by fans) the Presleys were vacating for the welcome privacy of 13.8 acres. By April 1957, however, when the family finally moved in, Graceland had become a mansion, and finally the Mansion.

For the national media, which treated the wiggly young Presley as a prime example of what was wrong with that portion of the country below the Mason-Dixon Line, the term signified Southernism – a Southern mansion, a squalid whited sepulcher without the sweetness and light of MGM's Tara. After the death of an overweight, middle-aged Elvis in 1977, his detractors called his home a "Peckerwood Palace," a "Hillbilly Hilton," to signify much the same distaste. But for the extended Presley family, to whom Graceland was also the Mansion, the phrase echoed the Bible and the lyrics of the old hymns Elvis loved to play on the piano in what had once been Mrs. Moore's solarium. His first gospel album, *His Hand in Mine*, released in 1961, just after Elvis returned to Memphis from two long, difficult years of military service, contained several songs that directly addressed the issue of home as heaven, or the mansion as a mark of God's benevolent grace. "I've got a mansion just over the hilltop," he sang with a quaver of real emotion in his voice: "In my Father's house there are many mansions." Surely one of them was

Bernie Grenadier, contractor, Meditation Garden, 1965. Mrs. Moore's classical pergola gave way to Elvis's take on Eastern religions, then became the final resting place for the King (second grave from left) and dan.

Bill Eubanks, interior designer, the TV Room, 1974. Sixties chrome, glass, and bright yellow accents.

Graceland, down in Memphis, Tennessee. It was heaven on earth.

Between the Moores and the Presleys yawned a chasm of class, nowhere better expressed than on the interior of Graceland, where Ruth Brown Moore's dynastic treasures were replaced with new, modern pieces in theatrical blacks and whites, some of them – like the vast, 15-foot living room couch – custom-made. Elvis's people had been poor for as long as anybody could remember. There were no Smith or Presley heirlooms. Nor was the past reflexively cherished. The shotgun house back in Mississippi was a benchmark against which to measure a new-found prosperity to be celebrated with brand new things, in all the latest styles. "When I was growing up in Tupelo," Elvis said, "I lived with enough . . . antiques to do one for a lifetime."[7] The oyster-white walls were painted a deep decorator blue, the hardwood floors were covered with thick, wall-to-wall carpeting in a deep red, and the marble mantelpiece was cast adrift in a sea of mirrors. That first Christmas at Graceland, there was a white tree in the dining room, trimmed with red ornaments. It revolved and played Christmas carols, and Elvis's mother would sit out in the kitchen by the hour, looking through the service door at the electrified tree and the plush carpeting and the new blond, saber-legged chairs from Goldsmith's Department Store as if none of it were really hers.

Over the next 20 years, the inside of Graceland changed continually with the tides of fad and fashion: various white and gold phases, the infamous Polynesian-moderne episode commemorated in the Jungle Room den, and a hideous crimson-regal interlude, during which Elvis had the misfortune to die. There is even a posthumous period, coinciding with the start of escorted Graceland tours, when ex-wife Priscilla redid the public rooms in a tasteful teal and crystal mode that had probably never actually existed before 1982. But through it all – through the vicissitudes of crystal and fake fur and ceramic monkeys – the exterior remained virtually unchanged. It still spoke of a mythic South, a holy, American myth, a movie myth that Elvis Presley had come to represent. No matter that, in 1962 and 1963, suburbia finally caught up with Graceland and stranded it in a neon strip that stretches along U.S. 51 from Memphis to the Mississippi line. Elvis liked fast food and fast cars and deep-pile carpet and all the rest of the shiny stuff they sold in the stores that lined the highway soon to be known as Elvis Presley Boulevard. The bright lights and the easy money were part of the myth, too – and part of the modern South.

By 1965, Mrs. Moore's old pergola had fallen into ruin. A member of the Presley retinue, whose brother-in-law had been hired to reconstruct the rose garden and build an electrified waterfall in the den, remembers a crumbling birdbath and four tottering columns "which looked as though they were about to fall."[8] Originally rescued from a fine old Memphis house, the columns were now worked into the design for what Elvis called his Meditation Garden. Like Mrs. Moore, the current occupant of Graceland needed a place of private refuge that could not be seen from the road, a place to think, to read his Bible, and dream. But nobody thought of hiring an architect. Instead, contractor Bernie Grenadier reset the columns in a curved peristyle, backed by a rough brick wall framing stained-glass windows. The structure enclosed an automated fountain with 14 separate sprays illuminated by a spectrum of colored lights. For a Christmas present in 1966, "the guys," his so-called Memphis Mafia, gave the boss a big stone statue of a welcoming Jesus, his arms outstretched over the old columns, the new fountain, and the stately Southern mansion. It became Elvis Presley's tombstone little more than a decade later, in 1977. He was buried in the modernized wreckage of Mrs. Moore's pergola and so became part of Graceland forever.

Like Tara, Graceland was to rise again through the stewardship of another determined if more heavily mascaraed woman, one with the sort of pluck that Scarlett would have admired. Elvis's widow invested $500,000 of his estate's liquid assets, together with $60,000 in advance ticket sales, to reopen the house as a tourist attraction in 1982. Since then, with an inevitability one seldom finds in matters of popular taste, it has become the nation's second most visited home, surpassed only by the White House, which does not want for columns either. ■

1 Max H. Furbringer, *Domestic Architecture* (Memphis, privately printed, 1916), p. 7.

2 Eugene J. Johnson and Robert D. Russell, Jr., *Memphis: An Architectural Guide* (Knoxville: University of Tennessee Press, 1940), p. 352 and passim.

3 "Scarlett O'Hara's Family Home," *House and Garden*, November 1939, p. 29.

4 Furbringer, *Domestic Architecture*, p. 31.

5 Quoted in David M. Tucker, *Memphis Since Crump* (Knoxville: University of Tennessee Press, 1980), p. 93.

6 "Mansion Fit for a (Rock 'n Roll) King," *Memphis Press-Scimitar*, 28 March 1957.

7 This oft-quoted remark appears in Albert Goldman, *Elvis* (New York: McGraw-Hill, 1981), p. 10.

8 See Alan Fortas, *Elvis, From Memphis to Hollywood* (Ann Arbor: Popular Culture Ink, 1992), p. 212.

THE LAWN GOODBYE
Alternatives to the Traditional Front Lawn

MARGARET CULBERTSON

Drawing by D. Reilly © 1993, The New Yorker Magazine, Inc.

How could grass be threatening? We play on grass, picnic on grass, and enjoy its fresh green color next to tree trunks and bright flowers. William Wordsworth wrote of "splendor in the grass," and Emily Dickinson described grass that would "hold the Sunshine in its lap . . . and thread the Dews, all night, like pearls." How can so enchanting a thing be dangerous? Actually, grass itself is not bad, but the extent of the suburban landscape of grass lawns in this country and the methods used to maintain these lawns combine to form a serious threat to the environment. While lawns of grass are still preferable to slabs of concrete, the following figures should give us pause:

Lawns occupy more land in the United States than any single crop, and homeowners use 10 times more chemical pesticides per acre than farmers do.[1]

As much as 60 per cent of the water used in Western cities is used on lawns, and a still serious 30 per cent is used in Eastern cities.[2]

Lawn maintenance impacts the environment in other ways as well. Restricting the lawn to a single variety of grass and keeping it clipped short limits the variety of wildlife that can exist within it. Large quantities of petrochemicals are wasted in running lawn maintenance equipment and in manufacturing fertilizers, and gasoline-powered lawn equipment produces significant amounts of air pollution. The removal of grass clippings and leaves deprives lawns of a natural source of nitrogen and needlessly uses up space in garbage landfills. Those of us who are lazy gardeners manage to avoid some of the worst transgressions against the environment through sloth rather than good intentions, but benign neglect seldom pleases the neighbors.

What is the conscientious lawn steward to do? It is impossible to return plots of land to their pristine condition before human intervention. However, the complexities involved in finding a good, balanced alternative for the space between the house and the street border on the vexatious; it can be tempting to give up and return to the simplicity of the turfed lawn. Several writers, including Sarah Stein and Michael Pollan, have recently published helpful works dealing with that confusing, complex, and magical natural world that surrounds our homes, and they tend to suggest that the cutting edge today is anything but.

These slender but estimable volumes might best be consulted while sitting in the midst of your lawn. There, with the lawnmower safely stowed in the garage, you can weigh alternatives while watching weeds, clover, and additional species of grasses sprout naturally in your lawn. To make up for the loss of exercise previously occasioned by mowing, you might ride your bicycle or walk through the surrounding neighborhoods looking for interesting lawn alternatives.

The suburban front lawn, typically a single variety of grass kept uniformly green for as much of the year as human intervention can manage, is a relatively recent and still primarily American phenomenon. Technologically, lawns were not feasible for the middle classes until lawnmowers were developed in the mid-19th century, making lawn maintenance possible without a crew of workmen or flock of sheep. Planned spaces for lawns became commonplace only with the change in housing patterns embodied in the creation and growth of suburbs during the same period. Landscape designers Andrew Jackson Downing and Frederick Law Olmsted were early proponents of lawns of closely mown turf. Downing's popular books on landscape architecture and domestic architecture always included idyllic illustrations of houses placed on "smiling" lawns, neatly kept and framed by trees.

Open front lawns were seen as an embodiment of the democratic spirit in the 19th century. The author of *The Art of Beautifying Suburban Home Grounds* (1870) strongly advocated the contiguous, open front lawns that typify so much of the suburban landscape today, declaring that it was "unchristian to hedge from the sight of others the beauties of nature, which it has been our good fortune to create or secure."[3] Today, when we encounter blank cedar fences or brick walls, eight feet tall, right next to the sidewalk, we are all the more likely to appreciate the 19th-century desire to create open, uninterrupted spaces that please the passing public as well as the proud owners.

It is unfortunate and ironic that, through the desire to be surrounded by nature as represented in the idyllic front lawn, we are now endangering the larger natural world. In the 20th century, scientists, marketing experts, and compliant consumers have created a landscape of lawns that require herbicides, insecticides, fertilizers, and frequent mowing. This human desire to force nature into an orderly, "perfect" appearance attained a new level of artifice when California home owners spray-painted their lawns green after six years of drought and strict water

Rolling out a new lawn in southern California.

rationing turned the turf brown. When such commitment to an ideal green lawn combines with the inherent suburban tendency toward order and neatness, it is not surprising that homeowners who prefer meadows in front of their houses or who simply hate to mow have been ostracized by their neighbors.

Legal measures have also been used to ensure conformity in lawn care where peer pressure has proven insufficient. Most communities still have regulations outlawing high grass, ostensibly for public safety. High grass is a fire hazard in times of drought, and some of the wildlife that lives in tall grass may carry disease. However, in the interests of a broader public good, the time is at hand for ecologists to work with public health officials to develop new regulations that will allow variety and biodiversity in our yards while still protecting us from genuine dangers. A few communities have already incorporated environmental principles into codes and ordinances that could significantly change the ubiquitous front lawn. Several of the zoning codes created by town-planners Andres Duany and Elizabeth Plater-Zyberk restrict planting on private lots to species selected for drought tolerance and suitability as habitats for local fauna.[4] The Texas Legislature even passed an act that mandates phasing in water-efficient landscaping of all state buildings, facilities, roadside parks, and highway plantings over the next five years.

If you are interested in phasing in your own lawn alternative, the sources we present here can provide inspiration and down-to-earth recommendations. As a general rule, increasing variety in your plantings will increase variety in the resultant animal and insect life and decrease overall vulnerability to disease and insect infestation. The use of hardy native species significantly reduces the need for watering and pesticides.

In Houston, Lynn Lowrey and Katie Ferguson devised several outstanding lawn alternatives utilizing native plants. The narrow patch of ground in front of the Southline Equipment Company on Cavalcade Street provided enough space for Lowrey in the early 1970s to plant a jungle of native plants that now almost completely hides the sizable industrial building. In 1980, Charles Tapley and Don Peacock created a small pine forest around the Tanglewood home of Mr. and Mrs. Paul G. Bell, Jr. Its pine trees and native undergrowth provide a dramatic contrast to the neighbors' manicured carpets of green.

If you are not yet ready to start a major native plant showplace, you can still decrease your ecological guilt with almost no effort by growing a Freedom Lawn. The Freedom Lawn is what happens naturally in humid regions when frequent fertilization, applications of pesticides, frequent watering, and rigorous mowing are abandoned.[5] Maverick varieties of grasses and other plants find places within the lawn, and biodiversity increases. You may need to educate your neighbors on the virtues of this alternative, and in Houston you will still need to edge to keep the Saint Augustine grass from taking over sidewalks and driveways.

Painting lawns with a biodegradable paint was a solution to the six-year California drought that ended in 1993.

An herbal lawn is a delightful alternative that unfortunately will not flourish in Houston. In more northern climates, perennial or self-seeding herbs can be mixed with cold-season turf grasses to produce fragrant and useful lawns that tolerate regular mowing and foot traffic. The warm-season grasses used for lawns in the South and Texas tend to spread vigorously and overpower herbs.

Lawns of Asiatic jasmine, liriope, monkey grass, and ivy are not uncommon in heavily shaded areas, where traditional turf does not grow well. When several types of groundcover are used, the variety of textures and colors in the different plantings can provide welcome visual relief from traditional turf, and higher growth can provide a habitat for birds and a few more species of wildlife.

If you have sufficient time and money, consider turning your front lawn into a formal garden or a vegetable garden. Even though these appear to be at opposite ends of the gardening spectrum, they are actually very similar when viewed as alternatives to lawns. Both require considerable cultivation, and plants must be changed with the seasons to keep the space continually productive or blooming. However, the visual or edible rewards can be substantial.

Sarah Stein recommends a more radical change in *Noah's Garden*. One of her overriding concerns is the loss of balanced animal and insect life in a suburban landscape dominated by closely mown lawns, so she suggests facilitating the return of wildlife by accommodating the animals' fear of exposure. Instead of having a "blank" lawn with inserted beds and shrubs, she suggests the opposite, a tall growth of grass, shrubs, and groves of trees with paths and clearings inserted. If the tall grass and thickets could connect individual properties, the resulting mosaic ecosystem could reinstate hospitable wildlife habitats.

Environmental concerns are not what usually motivates folk artists to create their own alternatives to front lawns, such as the Orange Show and the Flower House in Houston and Sam Mirelez's miniature architectural wonderland in San Antonio. However, the aesthetic or spiritual benefits of such environments more than compensate for the lack of plant life, particularly since, by their very nature, folk art environments will always be the exception rather than the rule in any neighborhood. These spaces remind us of the importance of variety and creativity in our environment. They also suggest that the uniformity and monotony of the traditional lawn is perhaps worse than the excess of insecticides and petrochemicals used to maintain it.

Interesting alternatives to the traditional front lawn abound, and almost all of them can be maintained in environmentally beneficial ways. Whether it's a simple Freedom Lawn or a jungle of native plants, the kindest cut of all may be to let the grass grow greener on the other side of the plot line.■

1 F. Herbert Bormann, Diana Balmori, and Gordon T. Geballe, *Redesigning the American Lawn* (New Haven: Yale University Press, 1993), pp. 68, 97.

2 Ibid., pp. 107–108.

3 Frank J. Scott, *The Art of Beautifying Suburban Home Grounds* (1870; reprint ed., Watkins Glen, New York: American Life Foundation, [1977]), p. 61.

4 Andres Duany and Elizabeth Plater-Zyberk, *Towns and Townmaking Principles* (New York: Rizzoli, 1991), p. 96.

5 Bormann et al., *Redesigning the Lawn*, p. 97.

6 Sarah Stein, *Noah's Garden: Restoring the*

Lawnchair Reading

Redesigning the American Lawn *by F. Herbert Bormann, Diana Balmori, and Gordon T. Geballe. New Haven: Yale University Press, 1993.* A well-organized, straightforward presentation of the traditional lawn's history and environmental impact that also recommends alternatives within the reach of the general reader. Written by a committee and consequently lacking a certain inspirational spark, it provides an excellent overview of our problematic landscape.

Second Nature: A Gardener's Inspiration *by Michael Pollan. New York: Atlantic Monthly Press, 1991 (hardcover); New York: Dell, 1992 (paper).* A delightful account of Pollan's experiences with his garden and meditations on the implications of different gardening practices for the world beyond his property.

Noah's Garden: Restoring the Ecology of Our Own Back Yards *by Sara Stein. Boston: Houghton Mifflin, 1993.* A beautifully written, careful consideration of the multilayered complexity of trying to restore a traditional lawn and garden to a "natural" state. Stein is particularly interested in wildlife and its relationship to the lawn and landscaping alternatives.

Xeriscape Gardening: Water Conservation for the American Landscape *by Connie Ellefson, Tom Stephens, and Doug Welsh. New York: Macmillan, 1992.* Provides guidelines on creating lush, green landscapes without excessive use of water.

Information packets from the National Wildflower Research Center. A variety of pamphlets and information sheets are available from the National Wildflower Research Center on subjects including gardening and landscaping with native plants, wildflower-meadow gardening, and recommended species and sources for specific geographic areas. Call (512) 929-3600 for information.

Native Plant Society of Texas News, P.O. Box 891, Georgetown, TX 78627. (512) 863-9685. Six issues annually.

"Herbal Lawns" by Rita Buchanan. *The Herb Companion,* June/July 1993, pp. 22–28.

High and Mighty

Measure of Emptiness: Grain Elevators in the American Landscape *by Frank Gohlke. Baltimore: Johns Hopkins University Press, 1992. 112 pp., illus., $59.95 hardcover, $29.95 paper*

Grain Elevators *by Lisa Mahar-Keplinger. New York: Princeton Architectural Press, 1993. 112 pp., illus., $19.95 paper*

Reviewed by Nonya Grenader

Mrs. Schuyler (Marianne Griswold) Van Rensselaer in her biography of H. H. Richardson records her puzzlement that "no architect so endowed as to be very strongly attracted by ecclesiastical work would have been likely to say what I once heard Richardson say: 'The things I want most to design are a grain-elevator and the interior of a great river-steamboat.'" A hundred years later, it seems almost a matter of course that both of these books would introduce the grain elevator by comparing it to a cathedral. In *Measure of Emptiness*, Frank Gohlke remembers what a woman from Plainview, Texas, told him: "Out here churches don't need to have tall steeples – we have the grain elevator." In his foreword to Lisa Mahar-Keplinger's *Grain Elevators*, Aldo Rossi observes, "The silos appear like cathedrals, and in fact they are the cathedrals of our time."

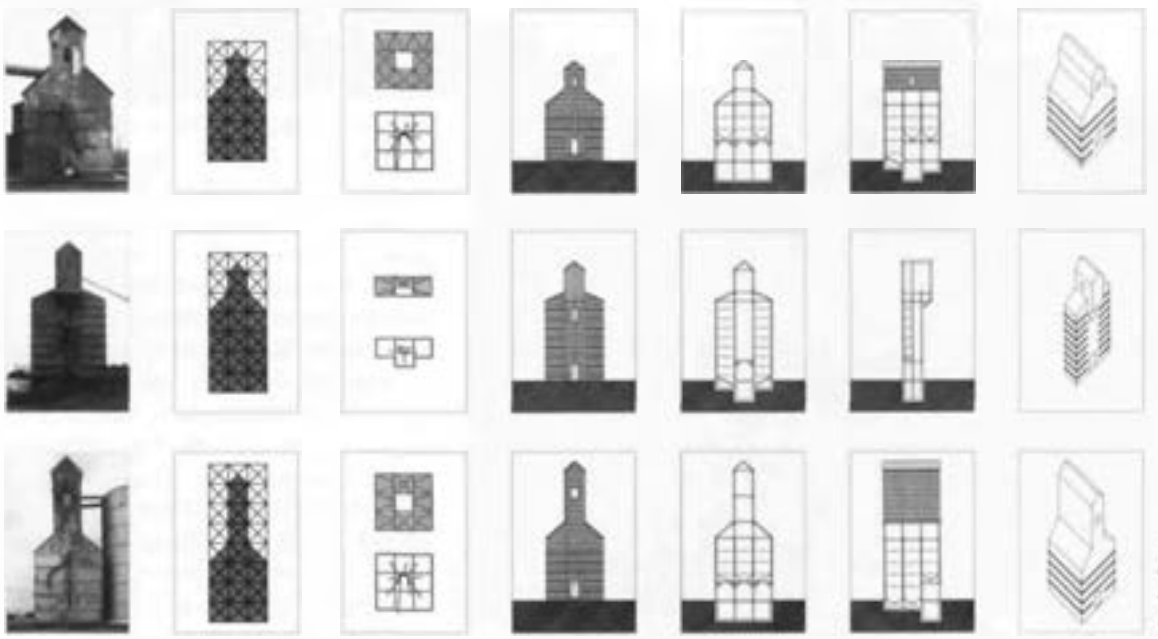
Gohlke offers large-format photographs that connect the forms not only to their immediate surroundings, but also to the landscape beyond. He makes clear the relationship between the elevator and its geography and, acknowledging the influence of J. B. Jackson, affirms that "every element of a landscape participates in many levels of meaning." His preferred view of the elevator is from a car or truck windshield:

It is not a static view, but one that begins just as the elevator becomes visible above the centerline, about five miles out of town, and continues until it disappears in the vibration in the rearview mirror. In the minutes that pass as the speck grows to colossal size and then shrinks to rejoin the horizon, many contradictory messages are created: we are powerful, we build for centuries; our monuments rival those of other heroic ages; we are insignificant, our hold on this landscape is tenuous, nature and time erode our greatest creations as if they were dust. What lingers in the memory, though, is the image of a solitary upright form in the middle distance of an endless plain.

Frank Gohlke, grain elevator, Tulia, Texas, 1975.

Gohlke takes a wide view of the elevator and its engagement with the land. Focusing on the vast emptiness of the prairie, he sees the elevator as "the presence against which that emptiness can be measured." A concluding essay by John C. Hudson, professor of geography at Northwestern University, places the elevator geographically and economically in American life.

Mahar-Keplinger begins by tracking the grain elevator as an American icon in the work of numerous architects, painters, and photographers, from Le Corbusier and Mendelsohn to Demuth and Sheeler to Wright Morris and Gohlke. She then turns her attention with typological precision to elevators from urban Brooklyn and Minneapolis to rural Kansas and Nebraska. Small photographs provide initial readings of silhouette, material, and texture, arrayed alongside analytical drawings that expose various configurations and structural layouts in diagram, plan, section, and axonometric projection. She also investigates the role of the elevator – often the first structure, along with the railroad station, to be put in place – as a generator of town plans. Mahar-Keplinger notes the frailties of materials: the short life span of the wood elevator; the need to compensate for the relatively low tensile strength of the brick elevator with steel and, reciprocally, the need to wrap massive steel elevators, with their circular bins, in a brick enclosure as protection from extreme weather conditions. It is this juxtaposition of information, beautifully presented in photos and drawings, that provides a valuable index to the variety and unexpected complexity of the type.



Lisa Mahar-Keplinger. Analysis of studded elevator construction.

Both books are well-conceived additions to the scant literature on grain elevators as fixtures of the American landscape. Reyner Banham was the first historian to study these structures anew. His account of the outer and inner workings of the heroic complex of late-19th- and early-20th-century elevators that make up the Buffalo River District – published in 1986 as part of *A Concrete Atlantis: U.S. Industrial Building and European Modern Architecture* – is itself a landmark in the writing of anonymous history. Mahar-Keplinger's worm's-eye drawing of the Great Northern elevator in Buffalo even takes its cue from Banham's marveling, elegiac description of that colossus:

The conical bin bottoms, lofting legs, oblique chutes, and legs of the chassis, seen together, seem like a gigantic surrealist architecture turned upside down or like the abandoned cathedral of some sect of iron men.

Nor are such ruins common only to Buffalo. Today a drive across Texas, where Gohlke did much of his photographing in the mid-1970s, reveals as much. Passing along the highway in Corsicana recently, with the town on one side and the decaying elevator on the other, it was hard not to be impressed and a little saddened by the elevator, which was once a destination point but lingers now as an imposing but forlorn edge, no longer part of the grid but standing deserted beside it. By considering the contexts as well as the forms, structures, and inner workings of these affecting upright granaries, Gohlke and Mahar-Keplinger help us see them in fuller measure. ■

Roomies Taking a page from Tod Williams and Ricardo Scofidio's exhibition *Window, Room, Furniture,* mounted at Cooper Union in 1981, Joyce Rosner, Joe Self, and Greg Snyder invited architects and artists last summer to submit three small, thematically interactive panels on the subjects *City, Room, Garden.* The results were shown at the University of Houston College of Architecture in fall 1993, then traveled to Texas A&M, the University of Texas at Arlington, and CalArts, Pasadena. Billie Tsien's triptych message, homespun with colored tissue paper, typescript, pipecleaner, Elmer's glue, and other kitchen- (or needs be, dining-) table ingredients, slices through the subjects with the aptitude of Der Scutt's cliff-dwelling breakdown from the original show and catalogue (Rizzoli, 1981), this time adding a touch of unstill life and even poesy. The catalogue for *City, Room, Garden* will be published next year.

No Place Like Home

Back of the Big House: The Architecture of Plantation Slavery *by John Michael Vlach. Chapel Hill: University of North Carolina Press, 1993. 258 pp., illus., $37.50 hardcover, $18.95 paper*

Reviewed by Stephen Fox

John Michael Vlach, one of the foremost historians of African-American material culture, has compiled drawings and photographs from the Historic American Buildings Survey into a catalogue of 19th-century buildings associated with slave-worked plantations in the American South. Vlach's purpose is to document the architectural accommodation of forced labor in the cash-crop agricultural economy of the South and to shift the reader's conception of the plantation away from the planter's house (the "big house" of the title), with the perspective of racial, economic, and class privilege it represented, to the "outhouses" and the perspectives of those who, because they lacked privileges, were compelled to live and work in them.

Vlach's presentation of documentary material reproduces the spatial division of labor on the rice, indigo, sugar, and cotton plantations that stretched from Maryland south to Florida and west to Texas (Vlach illustrates the buildings of the E. Sterling C. Robertson cattle ranch near Salado). Chapters are devoted to buildings generally associated with the planter's house: the kitchen, smokehouse, and such outbuildings as the ice house, chicken house, and dovecote. Barns, stables, and cribs are examined, as are buildings associated with processing (cotton press, cotton gin, rice mill, sugar mill). So also are residential buildings: the quarters of house slaves and field slaves, as well as overseers' houses. Vlach intersperses descriptions of buildings with excerpts from interviews conducted by the Federal Writers Project with ex-slaves in the late 1930s and early 1940s. In this way he seeks to re-present the outbuildings of plantations as the center of a particular world of experience rather than its vague periphery.

Despite their wide variety of uses, the buildings illustrated tend to share some architectural attributes. Most are devoid of conventional architectural ornament. Many are one room deep. They are covered either by low-pitched hipped roofs or expand laterally beneath high-pitched gabled roofs. Vlach includes log buildings, framed buildings faced with milled lumber, and buildings of brick and stone, as well as such exceptional structures as the classically detailed stone barn and experimental rammed-earth slave cabins built by the progressive Virginia planter John Cocke in the 1810s and 1820s. Because many of these simply massed, geometrically precise buildings were in a state of picturesque decay when they were first documented in the 1930s, the photographs are tinged with a nostalgic allure that is somewhat at cross-purposes with Vlach's desire to examine these buildings critically. They look pretty rather than sinister. In the most provocative portions of his text – the preface and the introductory and concluding chapters – Vlach describes ways in which slaves symbolically appropriated the territory in which they lived and worked and how they sought to subvert the coercion, regimentation, and anonymity imposed upon them by slavery. However, the analysis of examples presented in the intervening chapters tends to emphasize the formative power of white planters over their domains, rather than slaves' strategies of spatial resistance. In this respect, *Back of the Big House* appears more like a preliminary disclosure of basic evidence that Vlach has made easily available to scholars. As such, it should stimulate analysis of artifacts and texts that will yield new, synthesizing insights into the culture of American slavery. ■

Zoning Houston — Not

DONNA H. KRISTAPONIS

The 2 November 1993 public referendum on zoning was expected to elicit widespread support from citizens who were tired of Houston's haphazard development and who sought land-use controls as a way to help the city's threatened neighborhoods. But the multiyear zoning effort, thought to be a grassroots movement spearheaded by community leaders and citizens alike, lost steam at the polls and was defeated in the 11th hour by avowed antizoning advocates.

What happened to the widespread support for zoning? Was it ever there? According to a late 1992 survey by Dr. Steven L. Klineberg, done well before the mapping debates and the concentrated, obviously effective antizoning campaign, zoning had the support of 70 percent of the population. Although there was not a hotly contested mayoral race on the November ballot, many political pundits predicted that the zoning issue would produce a heavy voter response. But the turnout was dismal, with only 23 percent of the voters showing an interest, despite extensive news coverage of the issue in the waning weeks of the campaign. In a city with 777,000 registered voters, only 168,009 voted on the zoning issue, defeating the ordinance by a margin of only 6,000 votes.

The advertising assault by the antizoners was well financed and focused on the issues identified by their survey as most apt to sway voters away from zoning. As reported in the *Houston Chronicle* on 24 July 1993, minorities were key to the antizoning campaign. "Our arguments are most effective with minorities (especially blacks), low incomes, females and Democrats," an executive summary prepared by antizoning consultants Calabrese & Associates stated. The antizoners' strategy was twofold: raise doubts about the effectiveness of zoning and get the message to "low-income minority voters and make sure they turn out on election day," the *Chronicle* reported. The antizoners focused on minority neighborhoods and hit on pocketbook issues, warning that zoning would cost jobs and raise rents and taxes. They drafted and pushed a plan of action to stop what many thought was a key to Houston's future and certainly a major public policy initiative.

For all the discussions, debates, seminars, and summits on zoning, however, there was not an effective coalition to finance the passage of the new ordinance. As the debates concluded in the final days before the vote, prozoning endorsements emerged, but that did not slow down the momentum of the antizoning campaign. Perhaps the prozoning camp was overconfident that the well-publicized, consensus document would be overwhelmingly approved by voters. Their overconfidence may have created apathy among the citizens in favor of zoning, who stayed home on election day while the antizoning forces turned out the opposition vote.

Did the city succeed in educating the public and making information available? While there never seems to be enough time or energy to educate citizens about a proposed public policy, the effort to give citizens information was pervasive. In the 11 months preceding the election, 450 news stories appeared in local publications, not including radio and television stories. Planning and Development Department employees conducted or attended about 500 meetings during the last several years. In addition, other groups held countless meetings on the issue. But educating is different from creating a compelling need to take an action – a role that belonged to the neighborhoods and zoning proponents, who obviously did not deliver.

Many analysts maintained that zoning was a middle-class homeowner issue, and in fact middle-income homeowning neighborhoods voted strongly for zoning. Upper-income homeowning neighborhoods did not, and neither did homeowners in low-income areas. Race and ethnicity did not seem to matter much; income was the determinant. Clearly the renter community did not perceive a stake in the outcome and did not vote.

What has happened since the November 2 election? Several key zoning advocates were not elected to city council or could not run because of term limitations. Several new council members, however, have already stated their support for zoning and some land-use controls. Will this support be enough to carry another call for zoning in light of the recent vote by the people? Some neighborhood groups were stunned by the recent vote but have not given up. In fact, they were back before city council just weeks later protesting the establishment of a new bar in the Montrose area (one that zoning would not have prevented anyway). But

can anyone argue that there has been a real hue and cry for a redress of grievances? The Houston Homeowners Association is reassessing how it can help protect neighborhoods, and downtown business groups remain actively interested in establishing some form of protection for neighborhoods. Former council member Jim Greenwood, who led the fight to bring zoning to Houston, vowed to bring zoning back for another vote within one to three years.

But is that realistic? The middle-class homeowner is a diminishing constituency in Houston. Since 1980, the percentage of home ownership in Houston has fallen to 45 percent from 48 percent. Houston ranks eighth from the bottom of all major cities in its percentage of home ownership. Think about this: judging from their zoning position, upper-income homeowners seem comfortable with the protection afforded them by deed restrictions. White, middle-income homeowners have been moving to the suburbs in a steady stream; and poor folks worry most about jobs and making ends meet. Is there a long-term constituency for zoning, or any other form of land regulation?

What does the near future offer? The Residential Protection Ordinance, which was a temporary measure to curtail commercial intrusion into residential areas, expired on 31 December 1993. The moratorium on the demolition of historic buildings will be continued until 31 March 1994, by which time the planning department must submit to city council a proposed historical preservation ordinance that does not rely on zoning. (Three Texas cities have similar legislation: Goliad, Bryan, and Wichita Falls.)

Also in December, city council unanimously adopted the Comprehensive Urban Rehabilitation and Buildings Ordinance (CURB), which will support historical preservation efforts through its requirement that property owners maintain their buildings to a minimum code standard, thereby preventing demolition by neglect.

Does all this paint a picture of doom and gloom for the future of Houston neighborhoods? Not necessarily. Mayor Bob Lanier's priorities for the next two years clearly include protecting and preserving neighborhoods, with special emphasis inside Loop 610. At his urging, city council has moved forward on a "visioning" process, a public involvement program to consider our future and set a comprehensive plan for achieving it. Community meetings and hearings are expected to begin in early 1994. It is as important to participate in these proceedings as it was in the zoning process. Through comprehensive planning, the community will again try to balance competing interests in policy areas ranging from infrastructure and the environment to education and economic development. The mayor's goal is to secure a strong, vital region, one that is not saddled with a weak central city. The issues, however, can be quite sweeping, and achieving a consensus will not be easy. Setting goals for the future, and then following through with policy and legislative decisions that seek to achieve those goals, means making choices on how to use scarce resources. Do we wish to grow here or grow there? What will it take to make the inner city competitive with the suburbs? Like it or not, the issues of land use and urban form are quite likely to be resurrected. They will make the debate over zoning seem rather tame.

On another track, the Planning and Development Department is working to come up with alternatives for neighborhood protection without zoning. A vast amount of new information was generated by the zoning process. Detailed land-use maps that did not exist three years ago are now available for all 590 square miles of the city. Communication and new working relationships between citizen groups and city officials grew out of the zoning public participation process. A new pool of planning professionals who are intimately familiar with the city's neighborhoods is available to assist with individual neighborhood plans and enhance efforts to enforce and implement deed restrictions.

Clearly, the department's mission to protect and enhance neighborhoods remains unchanged, even though zoning is not an available tool. Alternative policy options range from doing nothing to neighborhood planning and limited relief through performance standards – the planning but no zoning concept – with variations in between. The mayor currently is evaluating the options. Because this journal has been in the forefront in expanding Houston's dialogue in urban planning and design issues, *Cite*'s readers may have ideas. I would like to hear from you. ■

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