LANDSCAPE ARCHITECTURE

VOLUME 84/NUMBER 04

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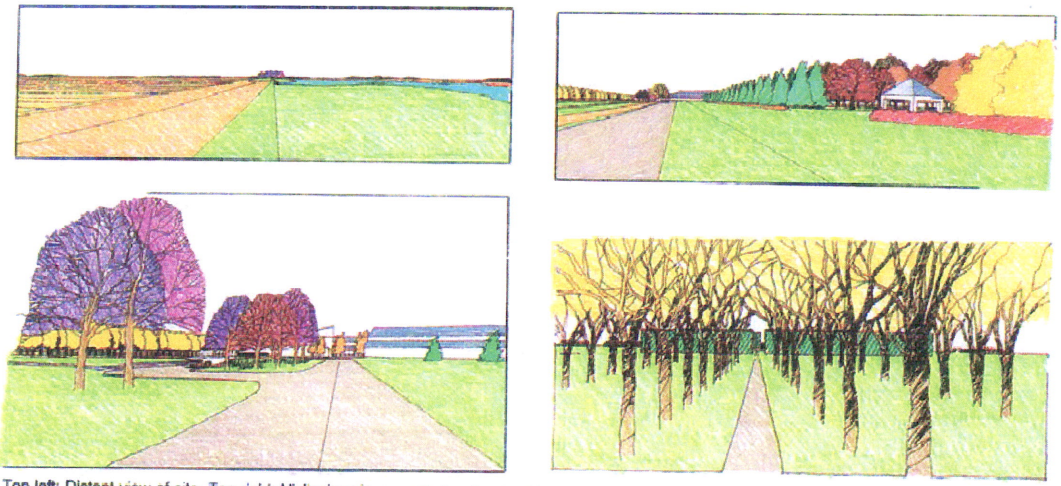
Cover: Dramatic view of GDU's Parque Xochimilco restoration. Photo by Gabriel Figueroa.

This symbol at the end of an article indicates more information is available on DesigNetwork.

BY TERRY HARKNESS

DISTILLING NORTH DAKOTA

My recent work explores cultural and physical landscapes as sources for landscape design. In sifting local and regional cultural history and physical process, a vocabulary—a wellspring of design elements and patterns—might emerge to create places of strong visual presence, shared experience and perhaps even meaning. Doug Burgum, president of Great Plains Software in Fargo, North Dakota, believes that his employees' local place experience is a powerful value in their work and personal lives. The landscape design by Harkness/Torgerson and architectural design by Wheeler/Kearns and McClier Corporation is the abstraction of several powerful landscape types that are transformed as work settings of heightened and concentrated experience.



Top left: Distant view of site. Top right: Visitor/employee arrival and entry. Above left: Formal front yard/dropoff. Above right: South grove/walkways.

Eastern North Dakota is a landscape of sky, light, expanse and variability. The sunset fire on the sky and flat horizon establishes the power of the northern plains. Modulating the clear, crisp northern air and light is the vertical definition of repeating bands of densely planted shelterbelts, a response to the devastating drought and dust-bowl conditions of the 1930s. In summer foliage, the shelterbelts define spacious, comfortable rooms; in the winter, the dormant trees define a screen silhouetted against the sky or snow-covered fields, as Robert Irwin's temporary scrim installations revealed presence and light. Marking the ground plane of this flat lakebed landscape is a network of shallow drainways and deep ditch lines. The quicksilver pattern of water threads and strands appears at spring melt or following summer's more intense thunderstorms. Punctuating this horizontal scene are precisely constructed cubes, rectangles and cylinders of homes, machine sheds, storage bins and farm buildings.

The Great Plains Software project is about our ability as designers to tell stories of the landscape and the culture in an abstracted, distilled way. This is design speculation about our ability as owners, employees, designers to splice, sew and bring together elements in carefully crafted places that reveal our shared histories and aspirations.

Terry Harkness is professor of landscape architecture at the University of Illinois.

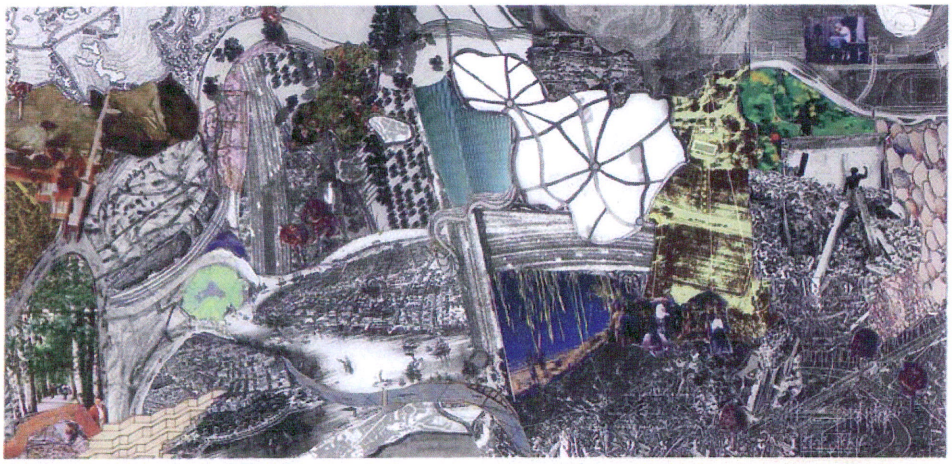
FRONT YARD
PLAYFIELDS
PAVILION
REMOVE
EAST WING
WEST WING
FUTURE WING
BURR OAK GROVE
LAWN PAVILIONS
CROPLAND
WETLAND / PRAIRIE HABITAT
PRAIRIE
TERRACE
PARKING

LANDSCAPE JOURNAL

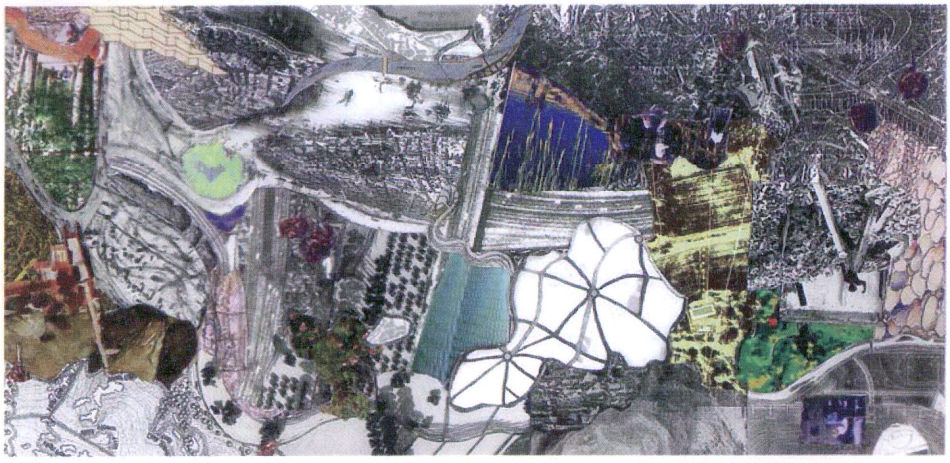
SPECIAL ISSUE: EXHIBIT CATALOG

Design, planning and management of the land

Special Issue 1998



Eco-Revelatory Design: Nature Constructed/Nature Revealed



SPECIAL ISSUE

ECO-REVELATORY DESIGN: NATURE CONSTRUCTED/ NATURE REVEALED

This issue of *Landscape Journal* is the catalog for ***Eco-Revelatory Design: Nature Constructed/Nature Revealed.*** It documents the fifteen works in that exhibit and presents eight essays, each concerned with the exhibit and its works.

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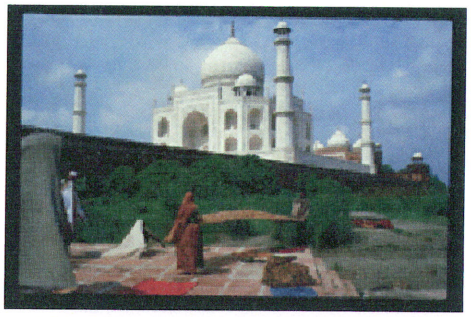
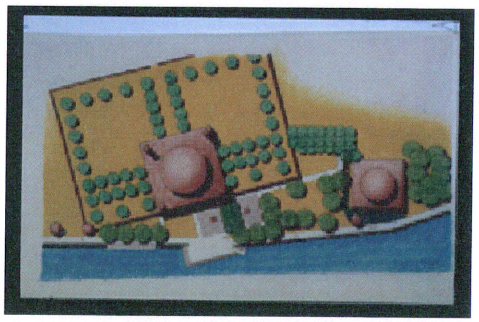
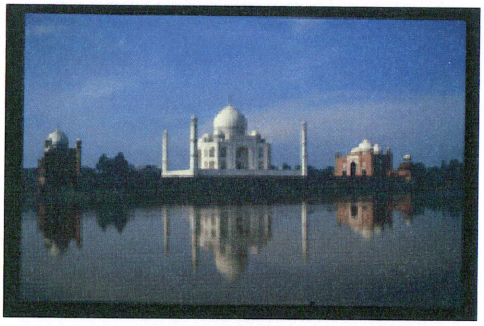
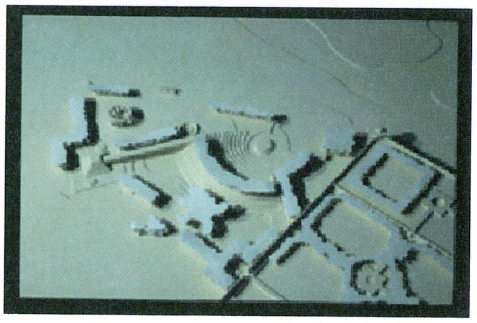
Treasurers	Douglas Johnston and Terry Harkness

The project, *Eco-Revelatory Design: Nature Constructed/Nature Revealed* originated at the Department of Landscape Architecture at the University of Illinois at Urbana-Champaign. Its focus is landscape architecture that reveals and interprets ecological phenomena, processes, and relationships. This catalog, exhibit, and attendant programs and events are its culmination. A grant from the Graham Foundation for Advanced Studies in the Fine Arts provided partial funding for this publication. Additional financial support came from the College of Fine and Applied Arts, the Department of Landscape Architecture, the Research Board, the Geographic InformationModeling Systems Laboratory—all at the University of Illinois—and from private donors. Committee for Eco-Revelatory Design: Brenda Brown (chair), Terry Harkness, Douglas Johnston; Beth Randall (assistant), Robert B. Riley (special advisor).









ANALYSIS AND PLANNING
ASLA Merit Award -- Analysis & Planning
Taj Mahal Cultural Heritage District
Development Plan
Agra, India
Brian Orland, FASLA; Amita Sinha; Terry Harkness, FASLA;
Vincent J. Bellafiore, FASLA

Statement of Purpose: The project involves analysis, planning, and design of an area of the Yamuna riverfront in Agra that includes two-world heritage monuments- Taj Mahal and Agra Fort. The site suggested initially by the client {based upon an US National Park Service recommendation) was 340 acres of farmland across the river from the Taj Mahal. It was envisaged as Taj National Park to be used primarily for local recreational purposes and for tourists viewing the Taj.

The scope of the project expanded as a result of two intense site visits by the entrant team in 1999 and 2000. It is imperative that the park be located within the context of a larger designed landscape that weaved together a number of heritage sites protecting their view-sheds, and allowing public access to and along the river. The Taj Mahal Cultural Heritage District Development Plan, consequently, integrates the conservation of heritage sites with cultural resources in a productive landscape. The project aims to create private-public partnerships to develop and maintain the riverfront. It accommodates current patterns of landscape use, incorporates productive working landscapes, and is based upon cultural landscape prototypes.

The objectives are: physical and visual linkage of heritage monuments through a new riverfront circulation system--promenade for visitors to increase their visitation {beyond the Taj Mahal), restoration of the recently excavated Mahtab Bagh and designing gardens and parks on its either sides to increase viewing opportunities of the Taj, facilitating the 'reading' of the story of heritage sites and historical events through framed views, informational and directional signage, audio-visual displays of recreated historic architecture

and gardens in visitor centers, and reduction of environmental pollution.

Community Context: The project advocates planning for urban and rural development by promoting local arts and crafts-carpet weaving, stone inlay work, and leather goods. It promotes environmental sanitation by providing public baths and toilets, community spaces in maidans {large public squares) and shaded courtyards around public institutions such as primary schools, health centers, and craft workshops. It suggests leasing the land back to the villagers for farming but retaining development rights and involving them in tourist economy.

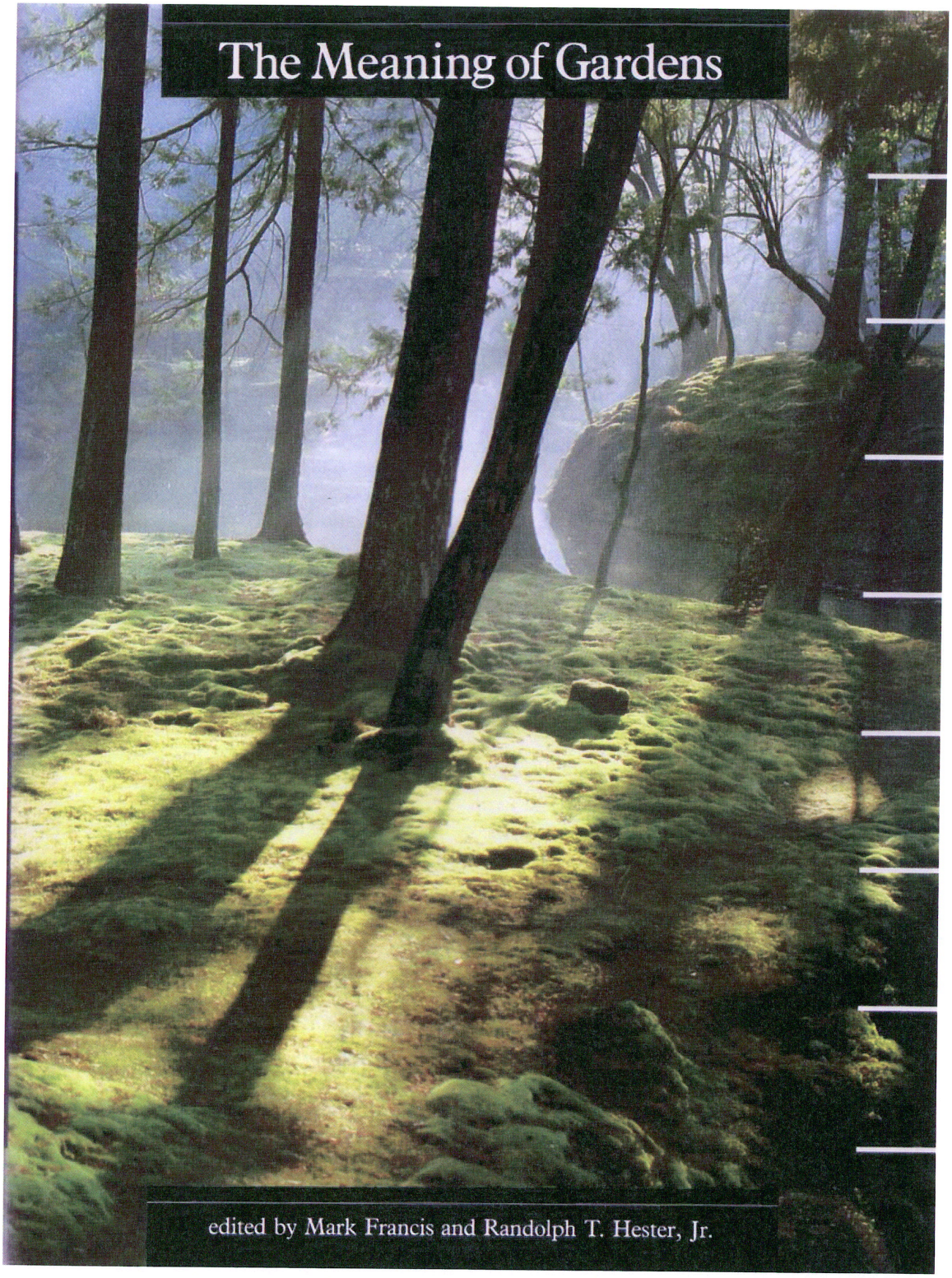
Special Factors: The project is unique because it is involves redesigning the landscape for visitor access between and beyond the two world heritage monuments. Taj Mahal, India's best known building, is the supreme symbol of romantic love Cand aesthetic excellence. Equally significant is the legacy of Yamuna riverfront gardens, including the newly excavated, Mahtab Bagh. Three types of Mughal gardens-tomb {Taj, Itmad-ud-daulah's tomb, Chini ka Rauza), palace (Agra Fort), and pleasure {Ram Bagh, Mahtab Bagh)-are found at the site. These are all that remains of the forty-four Mughal gardens that lined the riverbank in the sixteenth century-a unique historic landscape whose complete restoration presents insurmountable problems. New kinds of land uses have emerged over time-the east bank a mix of rural and urban, while the west bank is totally urban. The proposed site of Taj National Park has three villages with 12,000 inhabitants. Living heritage sites, such as these, present complex problems in drawing up a landscape management plan -environmental pollution, traffic congestion and lack of accessibility, absence of water in the river, lack of public sanitation, difficulties in doing archaeological research in farmland and settlements making it impossible to reconstruct historic gardens.

Significance: Taj Mahal Cultural Heritage District project, because of its high profile, focuses the spotlight of attention on landscape architecture profession, especially on aspects of historic preservation of cultural landscapes, which is an increasingly significant activity. The project was planned based upon environmental analysis by Civil Engineering Department, University of Roorkee, horticultural studies by Center for Advanced Development Research, Lucknow, ethnographic study of the three villages in Taj National Park site by the Anthropology Department of University of Delhi, India. These studies and the Supreme Court of India directive in 1994 to plant a green belt around the Taj Mahal enabled the entrant to formulate design guidelines and draw up an illustrative plan. The design seeks to accommodate current patterns of landscape use by the citizens of Agra and directs visitor movement through this dense and dynamic landscape. It is sensitive to the larger landscape-old city, mixed-use area around the heritage monuments, and farmland on the east bank. The Cultural Heritage District is not a bounded entity-the existing street network approximates its boundaries, while the core is comprised of the riverfront monuments. An environmentally responsible approach is chosen in recommending a combination of farmland, forestry, plant nurseries, and gardens in the vegetative belt as recommended by the Supreme Court and outlined in the illustrative plan. Thus the project goes beyond conservation of historic landscapes to environmental planning necessary for pollution reduction and rehabilitation of the river Yamuna and its adjacent historic sites and current uses.

Communication to the larger public is sought through a printed document, CD-ROM, and a website. Presentations were made to the Government of India in New Delhi, Uttar Pradesh Tourism, the state government, and non-governmental organizations in Agra. Television and newspapers carried reports of the project. The study shows the remarkable breadth of the profession and its powerful potential in tackling complex problems.
Client Statement: The results of previous studies by the entrant encouraged us to invite them to prepare a planning study for the Taj Mahal and its environs.

Major goals included:
The preparation of project documents that illustrate the planning and design intent and may be used for securing financial support for the construction of the project.
The creation of an environment that does not displace local residents but incorporates their current and potential skills and patterns of livelihood in the development of the site and in the day to day operation of the facilities once they are constructed.
The enhancement and linking together of other historic sites, which will encourage tourists to extend their stay in Agra.

The study resulted in handsome publication and CD-ROM that generated an offer of a $200,000 no interest loan from the Asian Development Bank that is yet to approved by the government of India. No people were displaced because the land across the river from the Taj will remain in agricultural use maintaining the green view-shed. The recreational and tourism activities will be concentrated along the rivers edge. The edge will serve as a link to the other historical sites and as a window to the daily life of Agra.


The Meaning of Gardens
edited by Mark Francis and Randolph T. Hester, Jr.

10.

Garden from Region

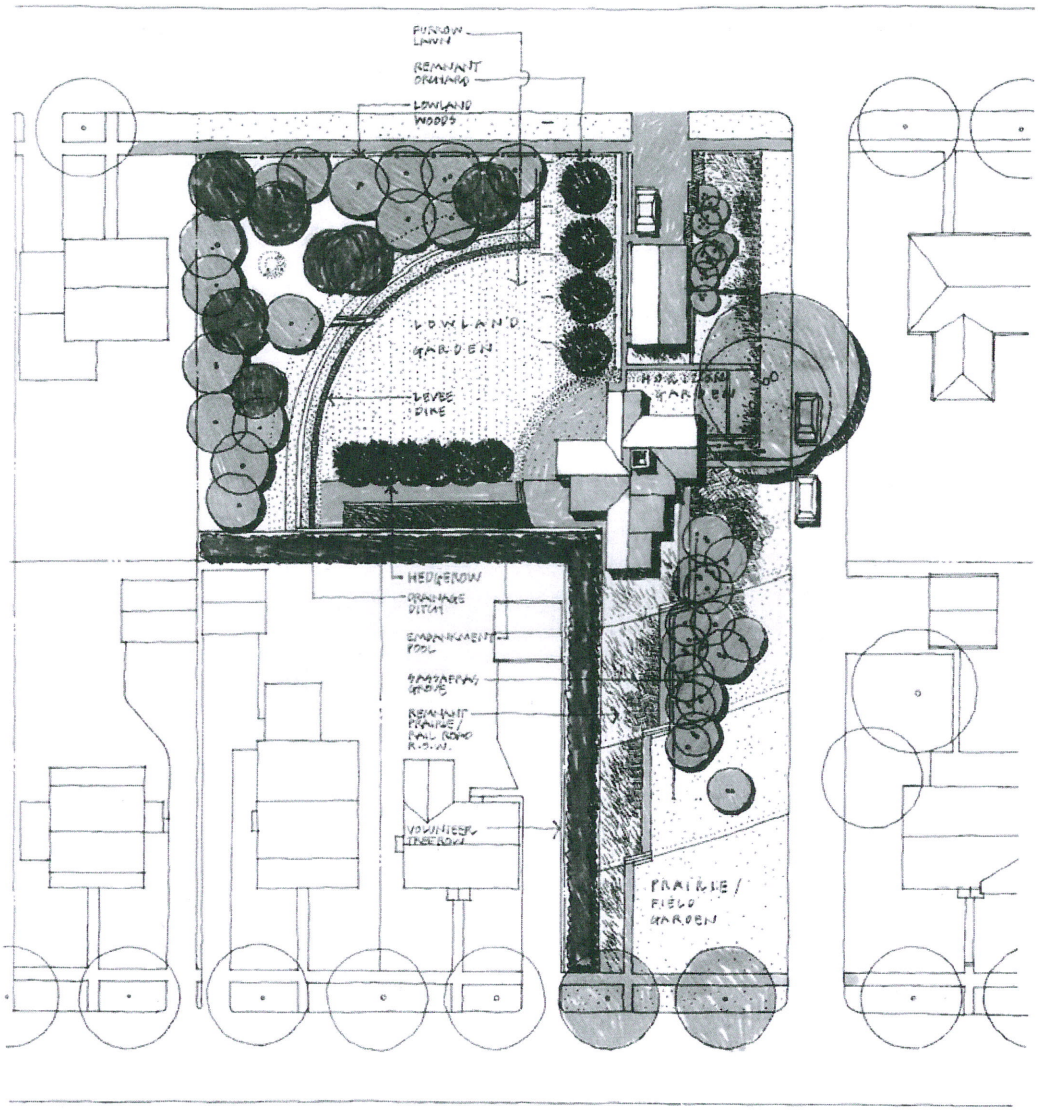
Terry Harkness

By sifting through and selecting from regional cultural history and physical landscape, a vocabulary of design—a wellspring of familiar physical elements—might be found to create places of strong visual presence and shared experience. Cultural and physical landscapes might inspire the creation of places that are rooted in the common American landscape, a distillation of the world as experienced every day. Design based on the culture and land patterns can express social as well as physical elements intrinsic to the region. Today, much of our experience of environments is often casual, fragmented, aspatial, and generic. Place-making that grows out of a region's culture and man-made setting might restructure our perception of and response to our contemporary landscape. This design approach explores and reveals the meaning, memory, and power of yesterday's and today's landscape. It is based on the idea that the common cultural-physical landscape is a container and reflector of diverse, diffuse, and often ambiguous cultural meanings.

Focus on the common, everyday American landscape of the Midwest, and central Illinois specifically, is the starting point of my work. The design elements of this garden have been derived from the prominent or enduring characteristics of particular scenes in the midwestern landscape. These form the basic design vocabulary that is used to evoke a sense of the region and its many intrinsic and vivid qualities. These elements are often organized on traditional or recurring patterns that speak of either persistent or remnant relations of the land and its occupants.

Landscape Themes

The gardens that I have created from this regional vocabulary present several landscape themes within their boundaries. The horizon garden focuses on the experience of the open, flat, treeless landscape dominated by the horizon and the changing sky. Two others, the lowland garden and the remnant prairie, relate to two historic but changing landscape types—the river bottomland and the railroad corridor. Both of these settings were important to regional settlement, growth, and consolidation.



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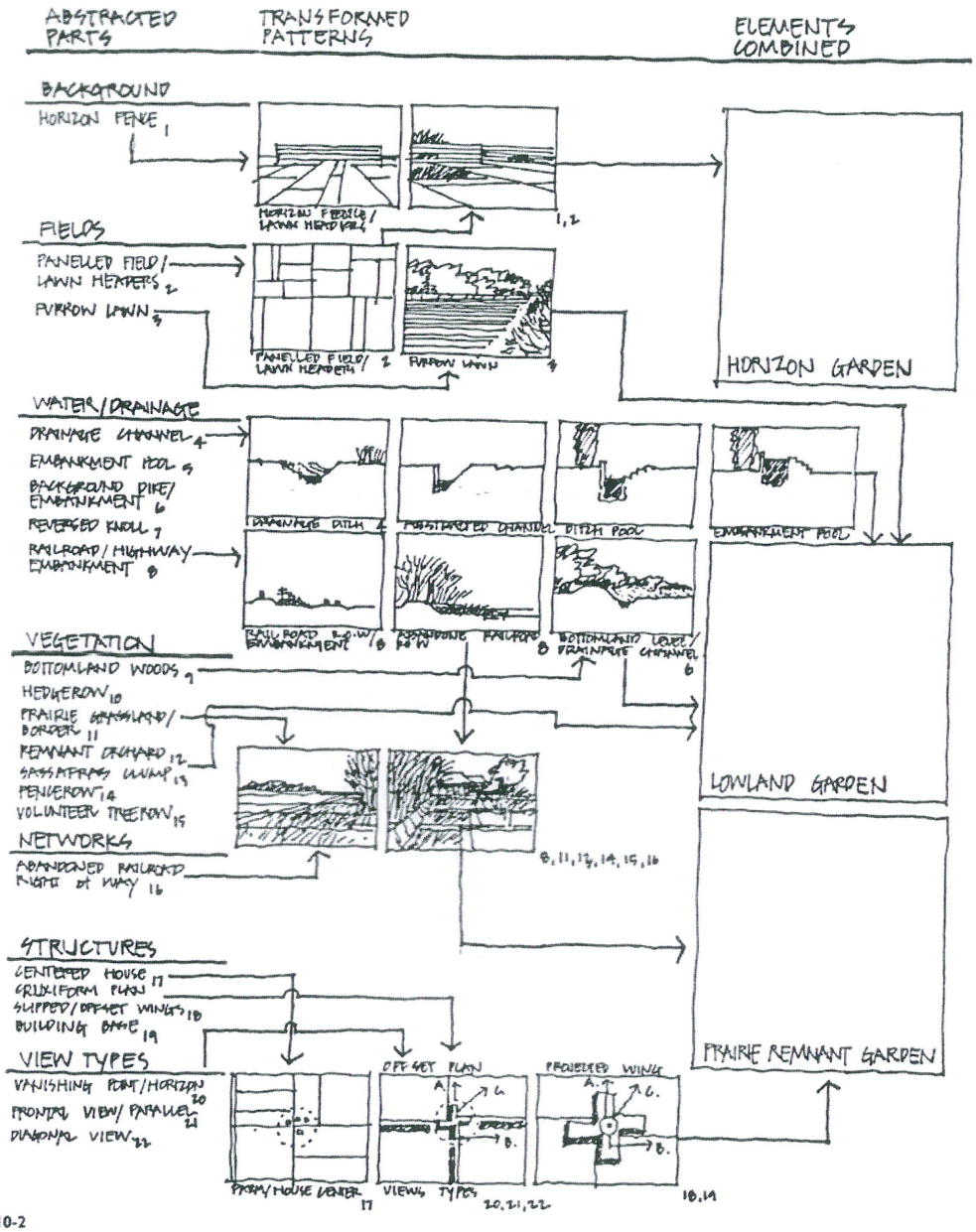
The distillation of regional patterns: plan of the garden. Terry Harkness



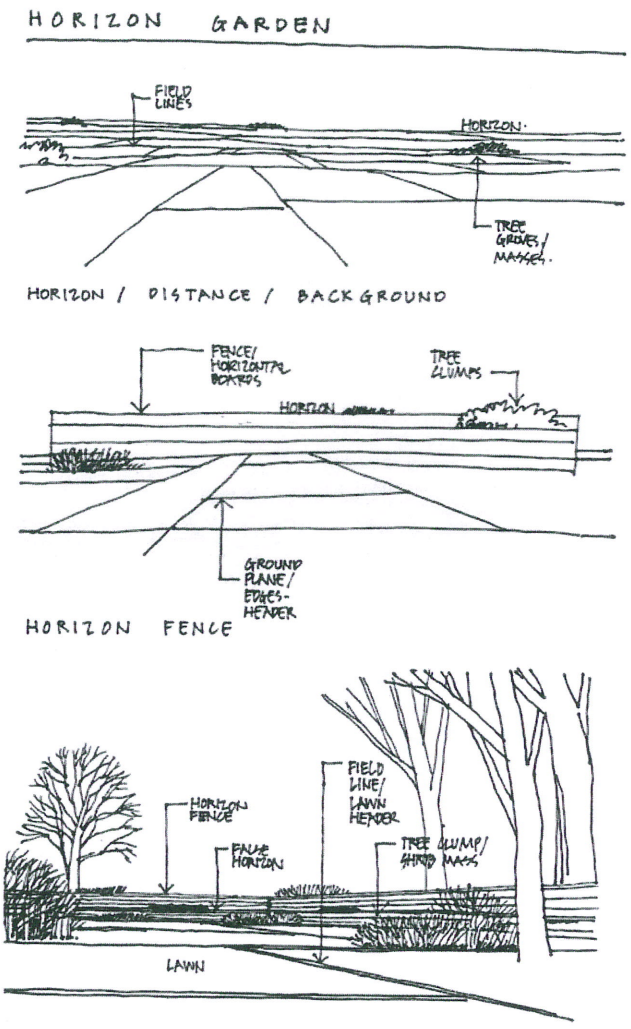
10-2

10-2
Abstracted parts into transformed patterns into gardens. Terry Harkness

The Horizon Garden

Through the horizon garden I have recreated the extreme flatness of the Illinois landscape—the strong horizon, the essentially open and treeless scene, the tension between the crispness of edge and the warping of the land plane. The sky is the backdrop for changing light and for objects seen in front of it. Across this regular/irregular pattern, the eye continually tracks the field, road, and ditch. The eye follows the field line to the horizon or it jumps from one field line to another field line to the horizon. Although the eye seeks man-made structures for scale, orientation, and distance, the cumulative visual sense is of profound openness. This visual experience requires movement or shifting of viewpoint and direction to reveal the changing variety of patterns.

The horizon garden is a small bounded space distilled and compressed to the essential expression of the open fields beyond the city. One device for revealing the horizon and sky as background is the mimetic fence of incised *horizontal* lines and neutral hue, used as a foil for light, climate, and vegetation. The other device is the flat or tipped ground plane with incised lines (headers) and patterns of grass and ground cover that mime the fields, fence lines, and roadways beyond. These elements are combined with a false horizon line to provide a scaleless plain with a background/horizon that merges into the sky overhead.

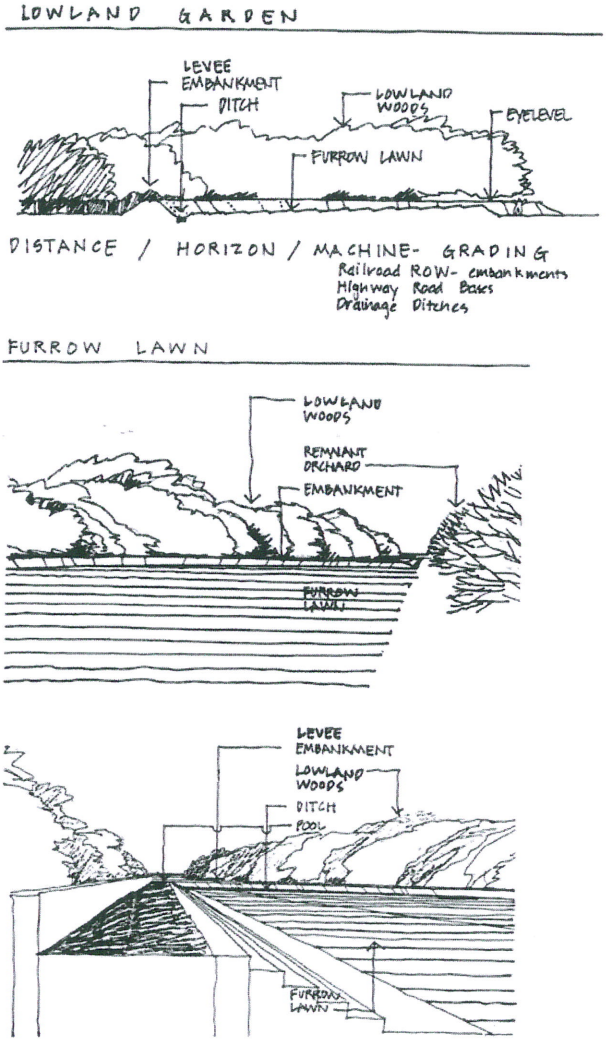


10-3

10-3
Southwest garden: sky, horizon, and seasonal field pattern. Terry Harkness

The Lowland Garden

The lowland garden quadrant addresses rain, rivers, and valleys and the bottomlands they have created. Their historic claiming through drainage control is the motif of this garden. The strong artificial geometry of dikes and levees has contained those river bottomlands for use as fields. Their precise boundaries and sloping sides attempt to manage the river and its periodic flooding. The river and the bottomland woods shift and encroach on the man-made structures. The inscribed fields of corn and soybeans are foreground to the long extended dikes, lowland woods, channeled streams, distant bluffs, and riverside. The lowland garden distills and contains these elements in a small quadrangle of land.

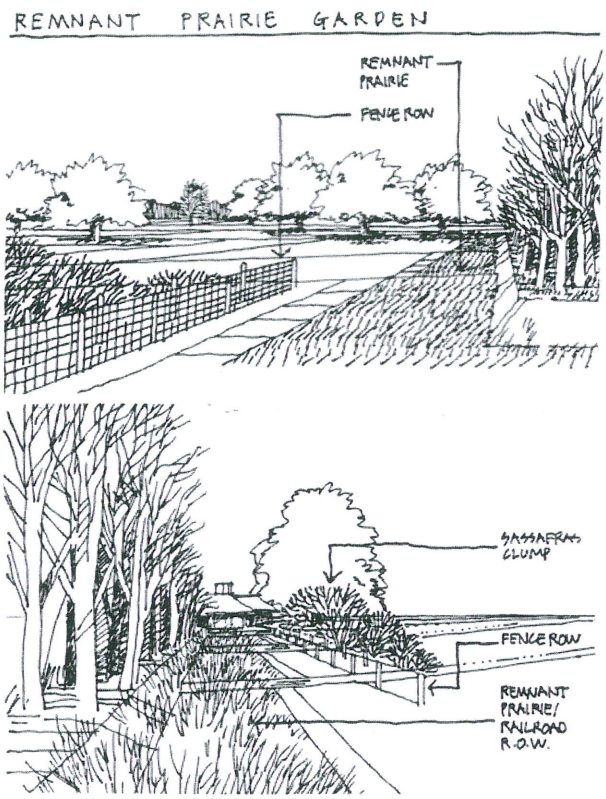


10-4

10-4
South garden: bottomland, wood and fields, drainage channel and levee embankment. Terry Harkness

The Prairie Remnant Garden

The last garden speaks to the economic connection of farm and market—the early transport ties of railroad and later highway. These linear ribbons provided the essential connections for individual farms out on the square-mile section. The highway system later followed directly adjacent to the rail rights of way. Their patterns were distinctive diagonals crossing the original survey grid. The abandonment of many of these rail lines has allowed the reflourishing of native plant communities almost entirely lost by the intensive farming of the dominant cash grain economy—the tall grass prairie. The prairie is reestablishing itself in the narrow margins bordering the rights of way of railroads and adjacent highways. These remnant prairies present a startling seasonal contrast to the cultivated fields adjacent. Each plant community has its own distinctive structure and seasonal sequence highlighted by the changing climate and light. As one travels the roadways, the fields and prairie edges unroll and recede to the horizon.



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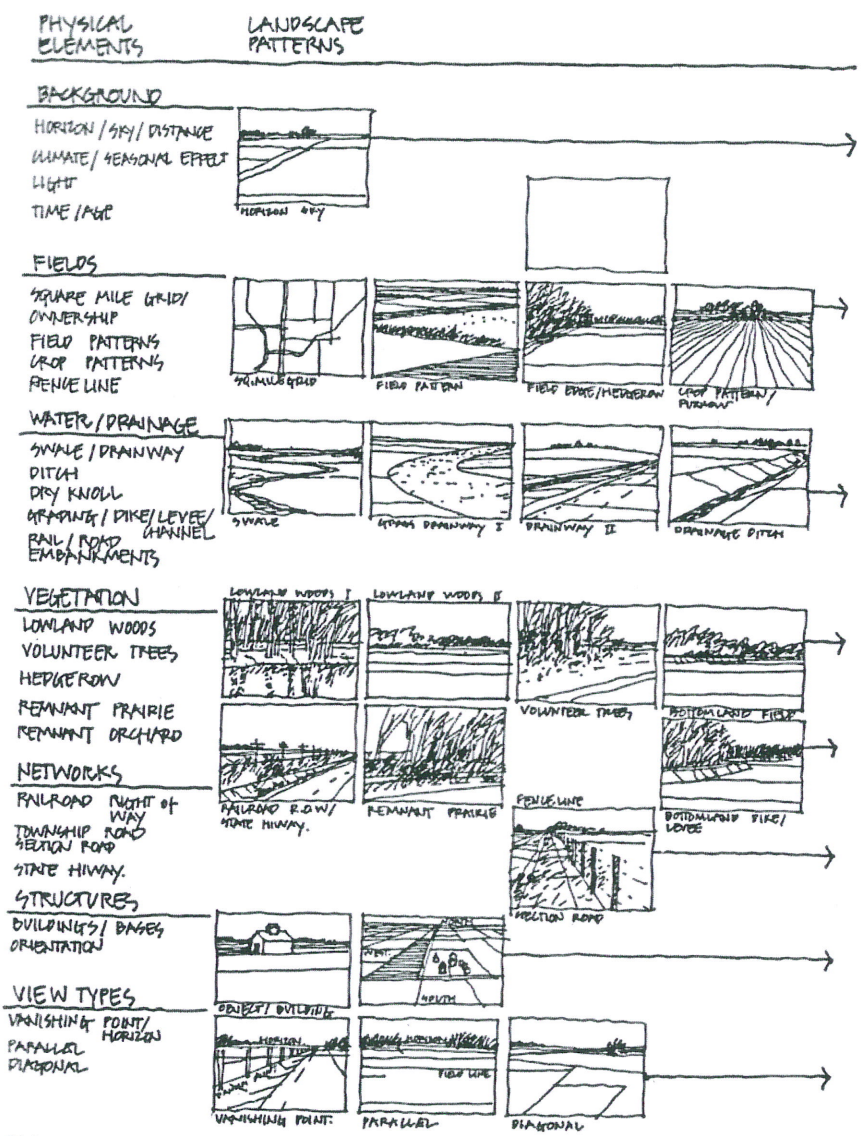
North garden: abandoned railroad, state highway adjacent, fields, and prairie remnant. Terry Harkness



10-6

10-6
The physical elements and their landscape patterns. Terry Harkness.

Landscape and Built Design Order

The house and garden in this design express essential relationships that have determined the landscape at large. Physical garden and house elements relate to the four cardinal directions and the square-mile grid. The house and farmstead in this landscape are inside the square-mile section. The house is one of the centers of the farm economy. The placement and orientation of the house should be symbolically at the intersection point of the quarter sections of the square-mile grid to emphasize the centrality of the house and farm in the organizing sense of the place.

The outward orientation of house and garden is anchored along the lines and edges of the fields and the hedgerows. The house as center is further elaborated in the offset from the quarter-section lines to dramatize the house in the gridded landscape. As one moves through the house, the interior rooms and windows frame and focus the offset and the intersection of the house and the larger landscape.

Visual Experience and Landscape

Another essential issue in the house and garden is the way the larger, everyday landscape is perceived. There are three characteristic visual modes that epitomize the daily landscape in the rural Midwest. Over and over the linear patterns of fence, road, and field line draw one's eye to the horizon. A powerful point of perspective is framed and repeated by the square-mile grid, volunteer tree rows, roadway, fence property line. One's visual sense is focused outward to the horizon.

The second recurring visual experience is related to movement arrested, a view across fields, lines, and ridges parallel to one's position at the moment. This view, which also ends at the horizon, is quieter, almost a momentary equilibrium of long horizontal lines receding into far distance. This experience emphasizes the flatness of the land and the immense expanse of sky.

The particularly powerful third visual experience is one of transition and reorientation resulting from any diagonal movement across the landscape grid. Roads, railroads, and highways form an overlay of pathways across the checkerboard of fields and section lines. As one moves along these linear networks, the field lines, hedgerow, woodlots, buildings and towns are approached (obliquely), passed (beside) and moved beyond in a continuously changing pattern of triangles, diagonals, and tangents.

These visual experiences are recreated at a walking scale both inside the house looking out (the viewing frame) and outside in the garden by its organization and spatial bisection. The three organizing rules and viewing frames establish the background for how the larger landscape is transformed into a small place that expresses the larger region's characteristics.

The essential experience of region in the house form itself is accomplished by aligning the major room spaces off center to the quarter sections of the garden. This permits all three view positions to occur in every room as one moves through the rooms or sits looking out of the windows. The secondary effect of placing the house at the center or intersection of the garden's major quadrants is to establish the center place. The wings of the house point to the landscape frames and tell the stories of season, sun, and culture. This house as center and core becomes, in winter or summer, the perceptual intersection of the garden. Most of the house and garden can be experienced daily at this intersection.

Ephemeral Qualities

The physical backdrop reveals the ephemeral and seasonal qualities in the garden. The ephemeral qualities of the landscape can make this austere land particularly vivid, reminding that our sense of place endures even as the experience is passing.

These include:

Sky: the richness and detail of winter trees against the sky.

Fog: the ground fog of late fall shrouding the intermittent lines of hedgerows.

Storms: the background of sky displays of lightning, thunderstorms, changing cloud patterns.

Light: the shift of light and sun during the day or the angle and intensity during the seasons—low warm light of late afternoon.

Wind: the ever-changing wind of east central Illinois across water, over tall grass, through pine trees, oak trees in winter, or the occasional absence of wind—its unexpected stillness.

Rain: the splash of rain on ponds or the temporary flooding of field.

Snow: the dusting and drifting of dry snow.

Frost: the early morning frost on field of soybean stubble looking like a forty-acre raked Japanese sand garden.

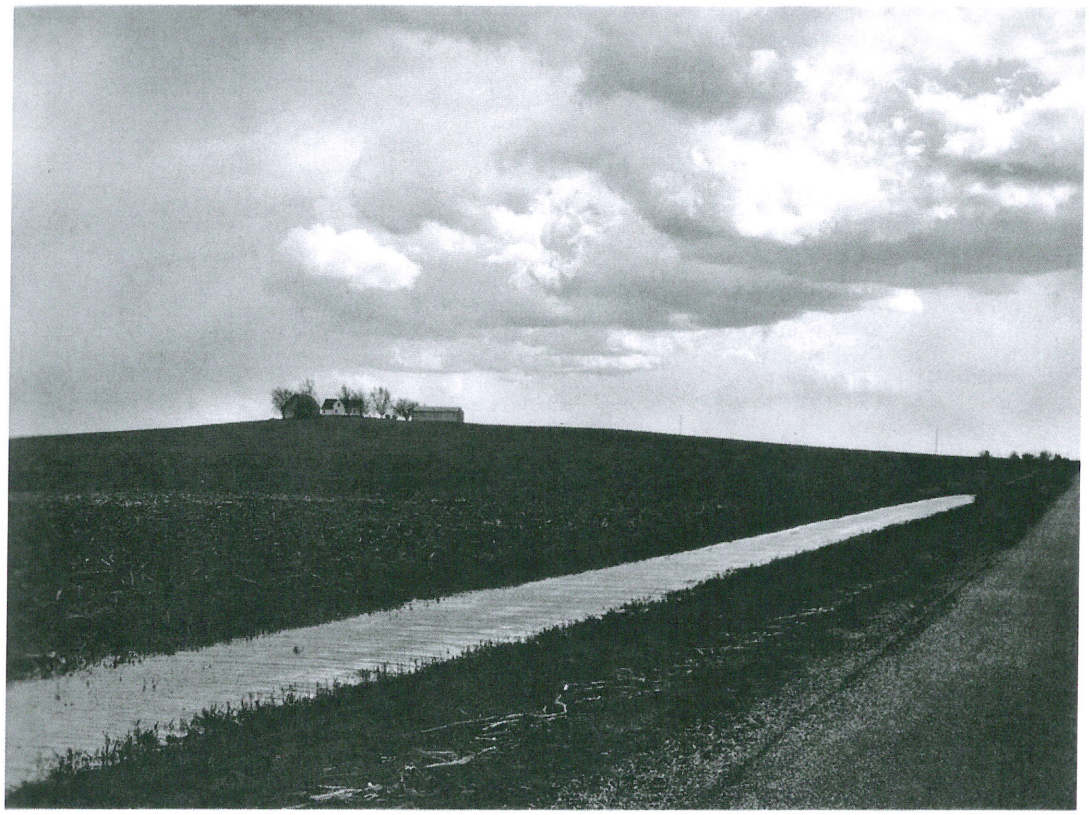
Ice: the crystal destruction of ice storms in fall or spring.

Water: the flat, thin water of flooded fields, or frozen ponds, or evening still water, or gushing water from field tiles into drainage ditches.

Time: the aspect of age and its effect revealed on trees and structures; the appearance of growth originally controlled and confined, but now aging or escaping. The landscape reveals the simultaneous effects of time—growing, escaping, and dying.

What I intend by these gardens is not a personal picturesque notion of garden design but a closely observed reading of context that transforms the common, everyday landscape into a carefully constructed distillation of place. The designed parts of the garden focus one's experience back on the larger setting but in such a way as to reexperience and re-see what is so often taken for granted. To treat such everyday landscape patterns and rituals as worthwhile subjects is a matter of conscious decision. Through their use I assert the importance of those objects and places and refer to the history and labor of those who created these landscapes.

When gardens have meant something to a culture or a period of history, they have done so by referring to something shared, understood, and valuable to that culture. My horizon, lowland, and remnant prairie gardens create physical references to a set of shared ideas and themes that created and still exist in a common American landscape. Such regional vocabularies, crafted into regional gardens all over the country, might counter the often-placeless generic gardens too often made in America today.



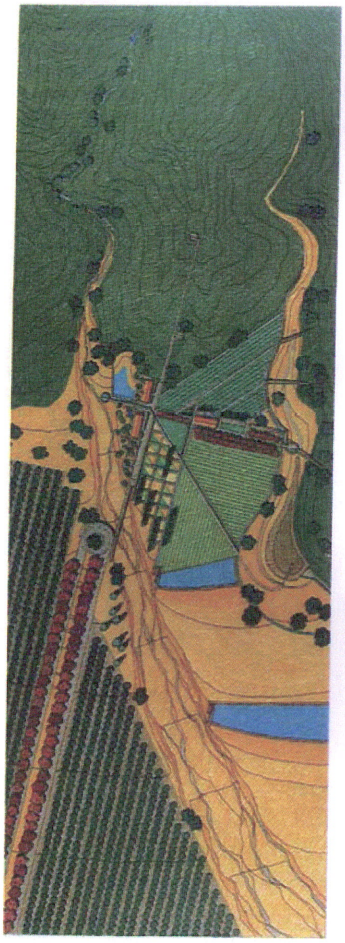
10-7

10-7
The Midwest landscape that inspired the garden design [Terrance Harkness]

Foothill Mountain Observatory: Reconsidering Golden Mountain

Terry Harkness

A 30-acre park about entwined natural and cultural expressions in the landscape surrounding it, Sierra Madre, California



The Foothill Mountain Observatory is a landscape observatory. It provides a lens, an experiential window onto the landscape of southern California. The park is designed to focus the observation and experience of natural and cultural processes at a local scale—water and flood, mountain building and mass erosion, seasonal drought and fire on the one hand, and human labor, harvest and wealth, misuse and care on the other.

This landscape's history is one of gradual and catastrophic regimes and transformations. A semiarid Mediterranean climate of sun, drought, Santa Ana winds and winter rainstorms, unexpected and intermittent earthquakes, wild chaparral fires, debris flows and mud slides are overlaid by a long history of cultural presence—early Indian burning of spring grasslands, ranchers settling and guarding the foothill canyons to harvest the precious water flows, the small 10- to 20-acre citrus farms of agrarian care, and the generations of immigrants seeking the alluring and elusive dream of "golden mountain."

The observatory's organizational strategy incorporates contrast and comparison, intersection and edge, proximity and overlook. An orchardist agrarian prototype provides a comparative frame between the surrounding sea of speculative tract development and the landscape observatory itself. Suburban development, the reconstruction of the vanished citrus culture, and the interpretative park coexist so that one can compare past, present, and future histories.

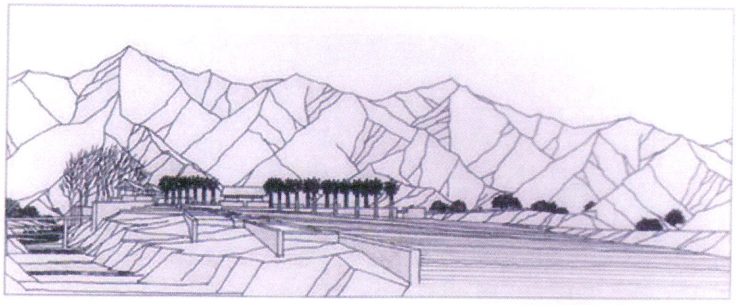
The park is at the San Gabriel range's intersection of geologies, topographic orders, and vegetative regimes. Visitor movement and built structures knit mountain range to valley basin, and mountain ridge to canyon below. Geology's tectonic and fluvial forces are measured by the stability or displacement over time of marking structures adjacent to walks, walls, terraces, tanks, and overlooks. The observer is brought to the edge of the interactions of water and erosion, canyon opening and valley alluvial deposition, plant generation, fire destruction, and plant renewal.

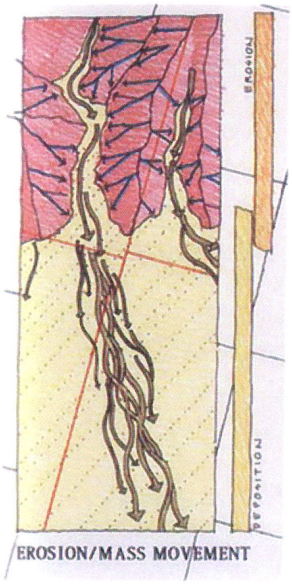
Water is the fundamental measure by which geologic process, vegetative selection, and geography are understood. Water's movement, collection, distribution, and conservation mark gravity and transport, growth and renewal. Water is revealed from its unconstrained to its managed equivalent. Vegetation types relate to topographic and moisture breaklines with native and introduced species zoned as water conservation comparison plots. Vegetation and water use are investigated on gradients of arid, semiarid, to moist regimes. The park distills California's water history and the vegetative history of native and introduced species.

Recent massive alterations have erased many southern California landscapes that spoke of competing human and natural possibilities. The Foothill Mountain Observatory reconsiders and refocuses on immediate, local processes that ground our experience, use, and care of this heritage. Living on the precipice, this park can reveal as daily experience this regional landscape's continuity and its changing expression.

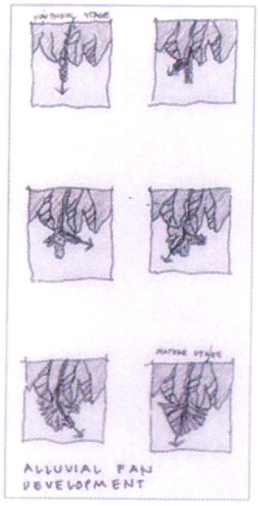
[O]nce in his life a man ought to concentrate his mind upon the remembered earth. . . . He ought to give himself up to a particular landscape in his experience, to look at it from as many angles as he can, to wonder about it, to dwell upon it.

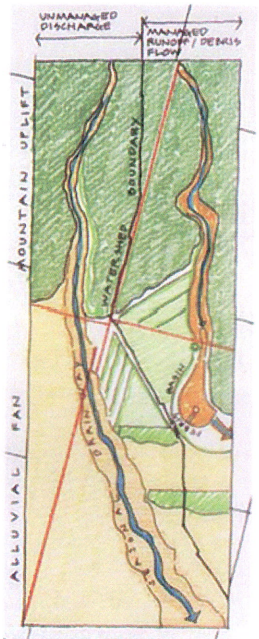
—Scott Momaday



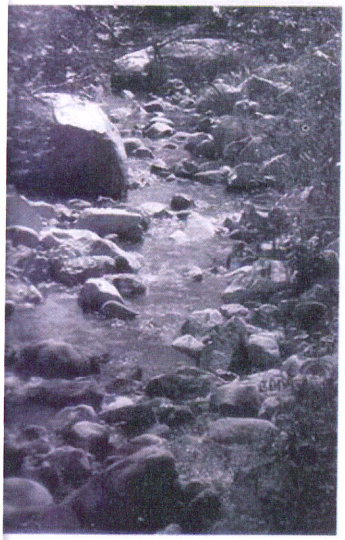


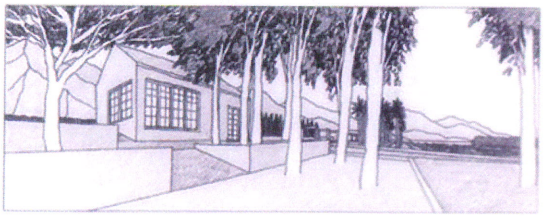
EROSION/MASS MOVEMENT

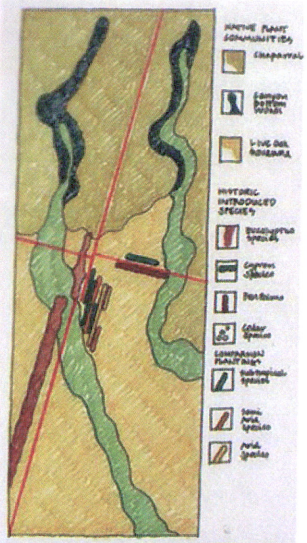




FLOOD CONTROL/
MANAGEMENT

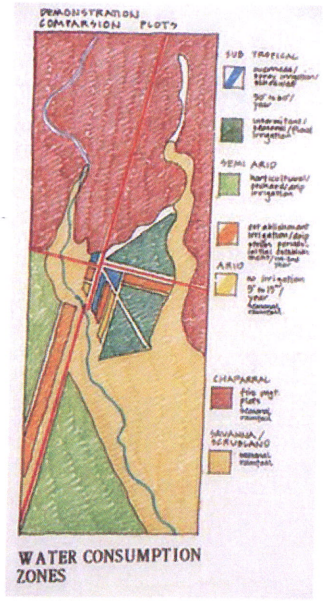




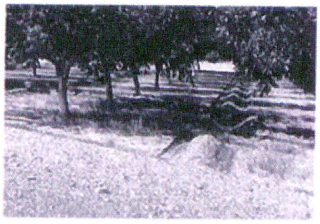


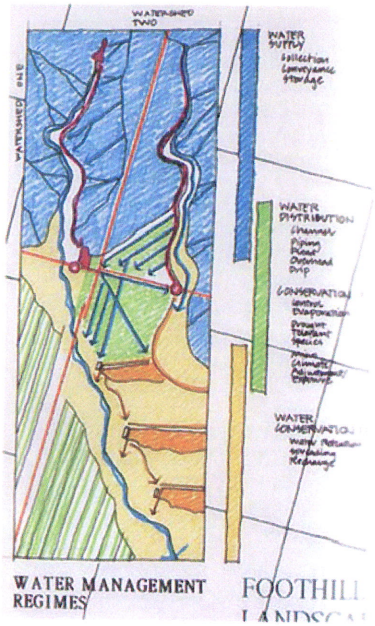
PLANT COMMUNITY TYPES

IRRIGATION / HORTICULTURAL MANAGEMENT / STRUCTURE

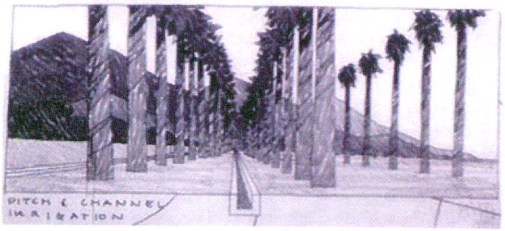


WATER CONSUMPTION ZONES

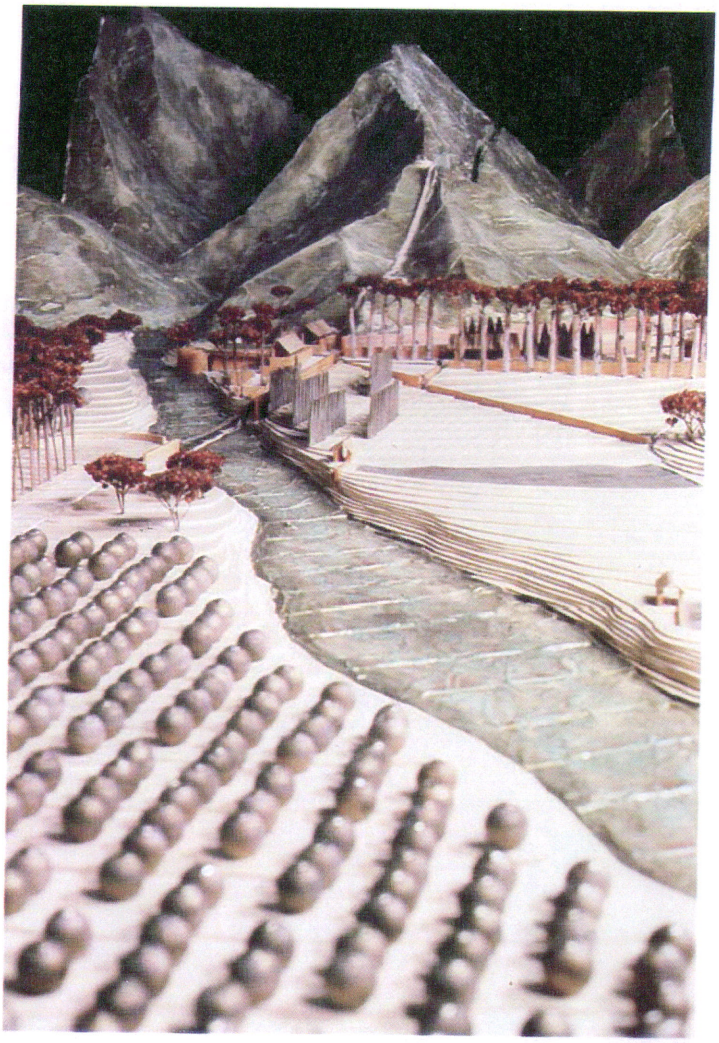


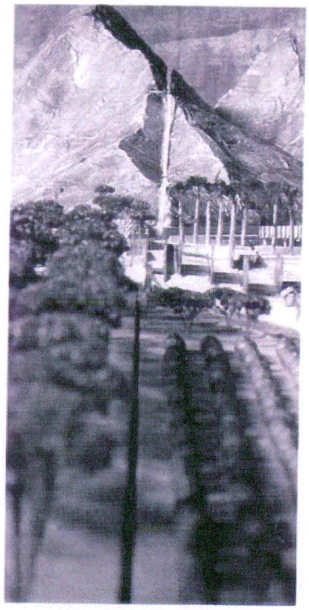


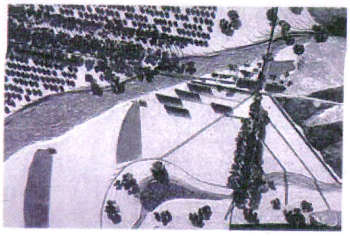
WATER MANAGEMENT REGIMES

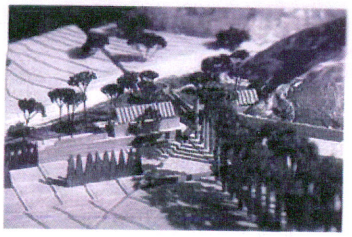


FOOTHILL LANDSCAPE









Credits

Assistance with model: Ken McCown