TEXAS BOUNDARIES

exas Boundaries: Evolution of the State's Counties *by Luke Gournay. College tation: Texas A&M Press, 1995. $29.50.*

aking Measures Across the American andscape *by James Corner and Alex S. MacLean. New Haven: Yale University ress, 1996. $40.00.*

eviewed by Danny Marc Samuels

o make a mark upon the land is a funamental act of design. Those particular arks that subdivide and measure the urface of the earth into a mosaic of sable or saleable or governable areas ccur simultaneously at many scales, rom global meridians and latitudes, to ational and local political boundaries, to ndividual property lines. Although themelves conceptual and invisible, these articial constructs interact with the natural ndscape to create the most enduring esigns we make.

The intricate overlay and interplay of hese sets of lines of survey tell an evoluionary history. Like cracks in mud, the urface is first broken into large areas, nd successive cracking events fracture it nto ever smaller areas. There is continual ccommodation, warpage, and deformaion as historical accidents become permaently embedded into the pattern. As property is divided, roads laid down, fences tretched, buildings built, boundaries djusted, plants grown, the invisible lines ecome more and more manifest and ore permanently etched. Even over enturies, whatever else changes, the emarcation persists.

On the ground, these patterns are erceived almost subliminally. We may ot be aware of the particular geometry f the landscape in which we stand, but ve sense a profound difference between a ural English landscape with irregular lots formed by the wanderings of cows nd separated by hedgerows, and a Midvestern gridded landscape with straight rajectories of roads and wire fences ividing 40-acre rectangles. Viewed from he air, however, the nature of the mosaic nd its evolutionary history become pparent. Who cannot gaze for hours rom an airplane window upon the everascinating pastiche of land uses laid out efore us?

The view from a plane crossing the United States reveals a changing panoraa that reflects the unfolding history of he country. The original colonies on the East Coast inherited the patterns of Europe — boundary lines for the most part followed natural features in irregular configurations. Soon the pressure of migration into the western territories necessitated a system for apportioning and selling the land from remote offices. As early as 1785, nine years after the Declaration of Independence, the Continental Congress was concerned about how to demarcate the western territories, and, with the Enlightenment influence of Thomas Jefferson, passed a land ordinance that set forth endless ranges of townships divided into 36 square-mile sections (640 acres). A rigorous and artificial rectangular order was indelibly impressed upon the natural landscape. Over time, Congress encouraged westward settlement by making ever smaller parcels of land available to more people for homesteading, eventually reducing, through successive quarterings, the square mile to the 40-acre family plot. Curiously, the land ordinances provided only for boundary lines; rights-of-way for roads had to be taken from adjoining land. (The story of the U.S. survey was told in detail in Hildegard Binder Johnson's *Order Upon the Land*, 1976, unfortunately long out of print.) Over time, the basic rectangular survey was overlaid by other geometries and scales: the diagonal vectors of the railroads in the 19th century, the crystalline grids of towns that were first oriented to river fronts or railroad lines, then fractured to align with the survey grid and later, in the 20th century, with the sinuous sweeps of interstate highways, which immediately and completely transformed the character of towns and cities. And now, the lines of air routes, telecommunication beams, and Internet connections are even more invisible, but no less landscape-altering.

The dominant characteristic of the Midwestern American landscape has always been orthogonality: gridded farms, gridded towns. The grid has often been criticized for its banality or authoritarian nature. But in fact, as Spiro Kostof points out, the grid has no intrinsic political viewpoint; it is simply a neutral framework within which anything may happen, be it Manhattan, Iowa, Chicago, or Phoenix. It may, indeed, be construed as most democratic, infinitely accommodating and flexible, modified by alteration and overlay, taking on the character of whatever is going on within it, and maturing eventually into a rich complexity. And certainly, in its contrast to nature, with which it coexists, the grid has a compelling beauty of its own.

The land development history of Texas, as a glance at a county map of Texas shows, seems to recapitulate that of the United States: an initial irregular geometry on its east (Gulf) coast is transmuted into a rectangular pattern in the west. The watershed areas along the coast were settled first, mostly by European and American impresarios who enjoyed enormous Spanish land grants beginning in 1821. With Texas independence in 1836, the original 23 eastern counties, roughly based on the land grants, had county seats along rivers, with boundaries surveyed back from and perpendicular to the river. Land was measured in leagues (4,428 acres), 5,000 by 5,000 *varas* (the Spanish unit of measure, later fixed at 33 1/3 inches). After Texas joined the United States in 1845, the original enormous counties were progressively subdivided, and large blocks of new counties were periodically added to the north and west, usually in ranges following orthogonally along latitude lines — 31 new counties in the northeast in 1846, 29 down the center in 1858, 54 in the Panhandle in 1876. A new state constitution in 1876 provided rules for county creation: new counties created from unorganized land could not be smaller than 900 square miles (30 by 30 miles), and they had to be as square as possible; when counties were subdivided, each part had to be at least 700 square miles; and county seats had to be centrally located. Texas was not subject to the U.S. survey system, but land subdivision within counties, because of the influence of the railroads, sometimes followed the mile-square system, although it was discontinuous and often oriented to the rail line rather than to the compass points. By 1921, the present configuration, with 254 counties, was essentially formed. From the point of view of land surveys, Texas is a crazy quilt, with no consistent orientation or measure at all.

Most of *Texas Boundaries: The Evolution of Texas Counties*, a slim, dry history that recounts the process of county formation, is virtually a chronology detailing the origins of every Texas county. Unfortunately, the book is limited by dealing only with county lines, and not other aspects of land survey in Texas. This book's interest, however, lies in its graphic presentation, which consists of a sequence of maps (computer generated by the author) showing the county subdivision at successive points in history, with new counties highlighted. This amounts almost to a freeze-frame animation, which, when regarded in sequence (one imagines flipping the pages), imparts an impression of the actual evolution in time of the map of Texas. As such, this book introduces a new technique into the repertoire of landscape representation.

Another recent book that greatly expands the repertoire is the stunning *Taking Measures Across the American Landscape*. Here Alex MacLean's sumptuous aerial photographs are thoughtfully juxtaposed with map drawings: collages of drawings, paintings, and photographs by landscape architect James Corner. Together they graphically explore a wide sweep of the landscape history of the United States, from the sacred land markings of Native Americans, through panoplies of geometry brought by diverse settlers, to various ramifications and peculiarities of the rectangular survey, to the large-scale effects of modern transportation, agriculture, water, energy, and military projects. There is more than enough thoughtful text (the historical essay by British geographer Denis Cosgrove is particularly enlightening) to provide a firm scholarly grounding to the rich visual mix.

These books indicate that new ways of regarding and representing the landscape can render new insights. A book (or CD-ROM) that combines a rigorous and thorough history with a detailed and engaging graphic presentation, however, has yet to be produced. Perhaps — as in the parable recounted by Jorge Luis Borges and Adolfo B. Casares (*Extraordinary Tales*, 1971) of the obsessive king who commissions the royal cartographers to make a detailed map of the kingdom and ends up with a map at a 1:1 scale, exactly covering the kingdom itself, and no place to put it — we are wishing for too much. ■