

# NATIONAL REGISTER BULLETIN

## HISTORIC RESIDENTIAL SUBURBS

GUIDELINES FOR EVALUATION AND DOCUMENTATION  
FOR THE NATIONAL REGISTER OF HISTORIC PLACES

David L. Ames, University of Delaware  
Linda Flint McClelland, National Park Service

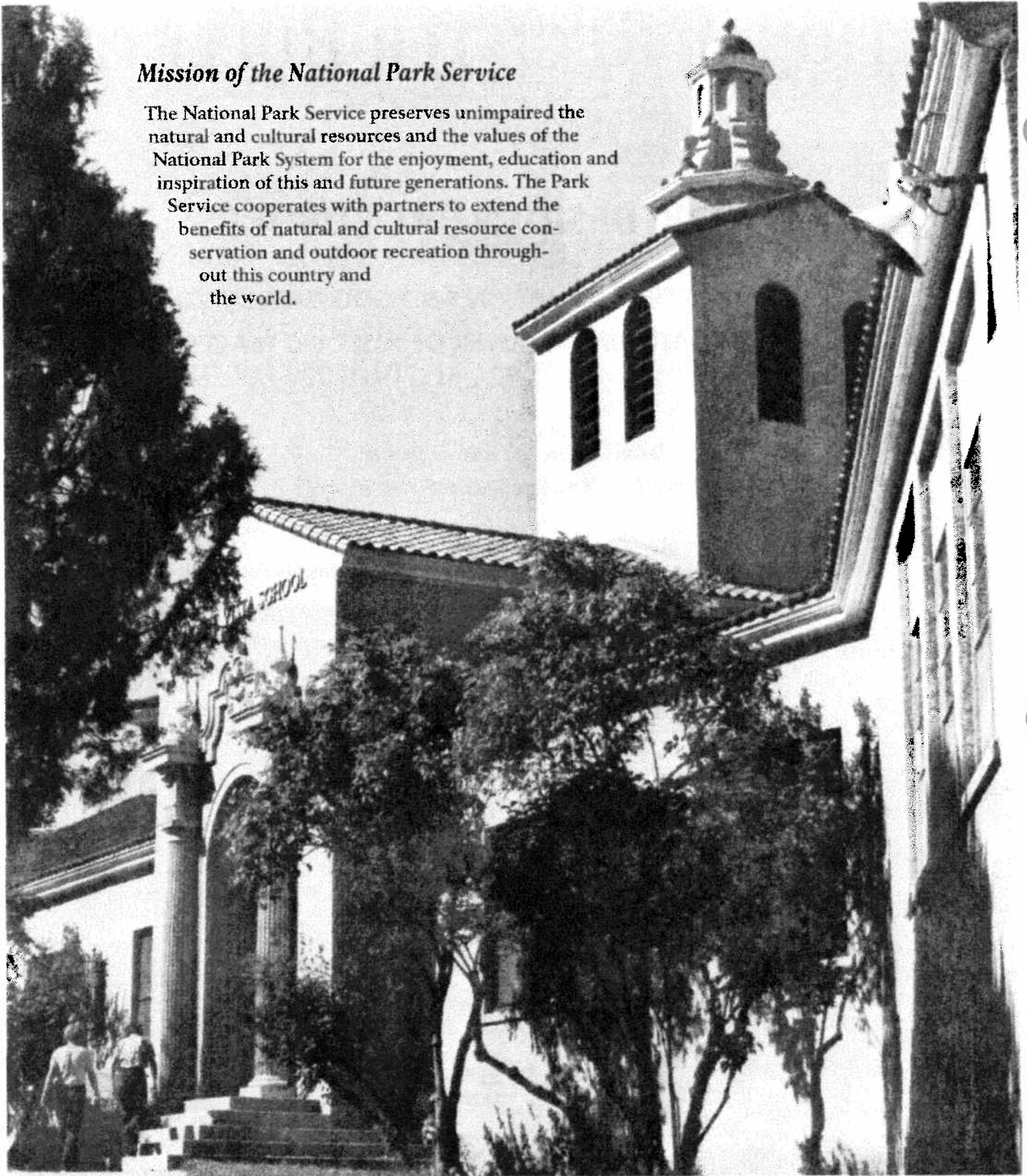
September 2002

U.S. Department of the Interior, National Park Service, National Register of Historic Places



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



*Above: Monte Vista School (1931), Albuquerque, New Mexico. In keeping with formal Beaux Arts principles of planning, the Spanish Colonial Revival school was designed as an architectural landmark marking the entrance to the Monte Vista and College View neighborhoods. (Photo by Kathleen Brooker, courtesy New Mexico Office of Cultural Affairs)*

*Inside front cover and title page: Plat (c. 1892) and Aerial View (1920), Ladd's Addition, Portland, Oregon. Platted as a streetcar suburb at the beginning of the City Beautiful movement, Ladd's Addition represents one of the earliest documented cases of a garden suburb with a complex, radial plan. (Plat and photograph courtesy Oregon Historical Society, negs. 80838 and 39917)*

# FOREWORD

The body of literature on America's suburbanization is vast and growing, covering many disciplines and reflecting diverse opinions. This bulletin attempts to bring together information about current scholarship and preservation practice relating to the history of suburban neighborhoods in the United States. The focus of this bulletin is the identification, evaluation, and registration of residential historic districts and associated suburban resources, such as schools and shopping centers. The information and methodology should also be useful in understanding the significance of other resources that have shaped the metropolitan landscape, such as parkways and public water systems.

The bulletin has been developed in tandem with a national multiple property listing entitled "Historic Residential Suburbs in the United States, 1830-1960, MPS" under which related properties may be listed in the National Register of Historic Places. Because the context for suburbanization, which forms Section E of the Multiple Property Documentation Form, brings together diverse information nowhere else available in a single source, a condensed version has been included in this bulletin to enhance its usefulness. Both the bulletin and multiple property form are intended to encourage the expansion of existing historic resources surveys, foster the development of local and metropolitan suburbanization contexts, and facilitate the nomination of residential historic districts and other suburban resources to the National Register.

The National Park Service is greatly indebted to Professor David L. Ames of the Center for Historic Architecture and Design, University of Delaware, for drawing our attention to the rich history of America's suburbs, and for producing "A Context and Guidelines for Evaluating

America's Historic Suburbs for the National Register of Historic Places," which was circulated for review and comment in fall of 1998. In response to the many comments received, we broadened our literature search to additional related areas and expanded the project beyond its original scope. The conceptual framework of chronological periods based on developments in transportation technology and subdivision planning and the contextually-based survey methodology introduced by Dr. Ames, however, remain at the core of the current bulletin and multiple property form. We believe they represent a sound and useful approach for evaluating the nation's rich legacy of suburban properties.

We greatly appreciate the comments and recommendations offered by the bulletin's many reviewers and the contributions of many other scholars and practitioners involved in the study of suburban neighborhoods across the nation. Comments came from people representing different professional disciplines and various points of view, indicating a wide range of opinion on how the topic should be approached for National Register purposes. We carefully considered all recommendations in determining the final format of the bulletin and in deciding what subjects to include in the final text.

The impressive number of residential historic districts listed in the National Register of Historic Places since 1966 attests to the wealth of professional expertise in State historic preservation programs and elsewhere in the preservation field, and the increasing popular interest in recognizing and preserving historic neighborhoods. We have relied heavily on National Register documentation as a source of information about American suburbs and as verification of the broad national patterns documented by current literary sources. We acknowledge the contributions

made by many nomination preparers to the understanding of suburbanization in the United States.

Considerable discussion has surrounded the selection of an inclusive set of dates covering the historic period of America's suburbanization. The dates 1830-1960 should be used as a general guide and adjusted to accommodate local historical events and associations. In keeping with advances in transportation technology, the organizing framework for the suburbanization context, we have used 1830, the date of the introduction of the steam-powered locomotive, for the purposes of this bulletin. 1960 was selected as a logical closing date based on the current literature that provides a historical assessment of twentieth-century suburbanization and for the practical purposes of contextual development and field surveys. The history of specific local and metropolitan areas may support other dates that better reflect local patterns and trends. While we recognize the potential exceptional significance of planned new towns such as Columbia, Maryland, and Reston, Virginia, and model planned unit developments (called "PUDs"), and their roots in the American Garden City movement, addressing them is beyond the scope of this bulletin.

Suburbs are of great interest to scholars of the American landscape and built environment and have design significance in several areas, including community planning and development, architecture, and landscape architecture. Suburban neighborhoods were generally platted, subdivided, and developed according to a plan and often laid out according to professional principles of design practiced by planners and landscape architects. For these reasons, this bulletin puts forth a landscape approach, consistent with that presented in earlier National Register bulletins on designed and rural historic districts, but adapted to the special character-

istics of suburban neighborhoods. The landscape approach presented here is based on an understanding that suburban neighborhoods possess important landscape characteristics and typically took form in a three-layered process: selection of location; platting and layout; and *design of the house and yard*. Surveying and evaluating residential historic districts as cultural landscapes will better equip preservationists to recognize these important places as having multiple aspects of social and design history, identify significant values and characteristics, and assist in planning their preservation.

We have profiled the roles of real estate developers, town planners, architects, and landscape architects, so that the contributions of each profession to the design of suburban America will be recognized and in hopes that future nominations will document similar contributions and recognize important collaborative efforts. The landscape approach also offers a suitable framework for integrating information about the social history and physical design of America's suburban places because they 1) were shaped by economic and demographic factors, 2) resulted from *broadbased decisions* about how land could be best used to serve human needs, and 3) were designed according to established principles of landscape architecture, civil engineering, and community planning.

Several topics have been introduced here that did not appear in the earlier draft. These include the Better Homes movement of the 1920s, the rise of small house architects and merchant builders, the highly influential Federal Housing Administration principles of housing and subdivision design of the 1930s, trends in African American suburbanization, prefabricated methods of house construction, and the landscape design of home grounds and suburban yards. The sources for researching local suburban history and historic neighborhoods and the list of sources for *recommended reading* have been substantially expanded.

New technologies are rapidly changing the ways we gather data about historic neighborhoods and the ways in which we carry out surveys. The increasing availability of *computerized databases offering* a wealth of detailed tax assessment and planning information, coupled with advances in Geographical Information Systems (GIS), are making it possible to assemble information about large numbers of residential subdivisions and to plot this information in the form of detailed property lists and survey maps. We encourage the use of these new tools and recognize their value in managing information about suburban development, organizing surveys, and providing a comparative basis for evaluation. These advances are particularly welcome at a time when many communities are just beginning to examine their extensive legacy of post-World War II suburbs. The lack of experience using these sources and methods to document suburbs, however, makes providing more detailed guidance impractical at this time. We hope that future revisions of this bulletin will *highlight the success* and results of many of the pioneering projects currently underway.

Several reviewers requested our discussion of planning be expanded to include company towns, philanthropic projects, and government-sponsored communities. Providing a comprehensive history of such developments was beyond the scope of the present context, which is primarily concerned with the development of privately-financed and constructed neighborhoods. We have included references to specific cases where the planning, design, or history of a company town or philanthropic project provided an important model or exerted substantial influence on the design of privately developed suburbs. Greenbelt communities, public housing, and defense housing projects are *discussed only to the extent* that they influenced the development of private residential communities or illustrate prevailing trends in housing or subdivision design, leaving their social history and the administrative

histories of the programs that created them to be told elsewhere. Selected *bibliographical entries* for these kinds of communities are included in the list of recommended reading materials.

Every effort has been made to provide the most up-to-date list of sources of information. These include materials currently in print or likely available in a strong central or university library or through a library loan program. With the upsurge of interest among scholars in suburbanization in recent years, the body of literature is expanding rapidly. We apologize for any omissions and continue to welcome your recommendations for new bibliographical sources that can be included in future revisions.

Carol D. Shull  
*Keeper of the  
National Register of Historic Places*  
September 2002

## CREDITS AND ACKNOWLEDGMENTS

This bulletin was developed under the supervision of Carol D. Shull, Keeper of the National Register of Historic Places. Many individuals representing a variety of preservation organizations contributed to its development. The authors recognize the expert survey and registration activities carried out by State historic preservation programs and the wealth of information about America's suburbs contained in countless nominations to the National Register since its beginnings in 1966. Appreciation is extended to Beth L. Savage and Sarah Dillard Pope of the National Register staff who contributed substantially to the production of this bulletin through their comments and editorial assistance. Thanks is also extended to other members of the National Register for their comments and support: Patrick Andrus, Shannon Bell, Beth Boland, John Byrne, Marilyn Harper, Paul Lusignan, Octavia Pearson, Erika Seibert, and Daniel Vivian.

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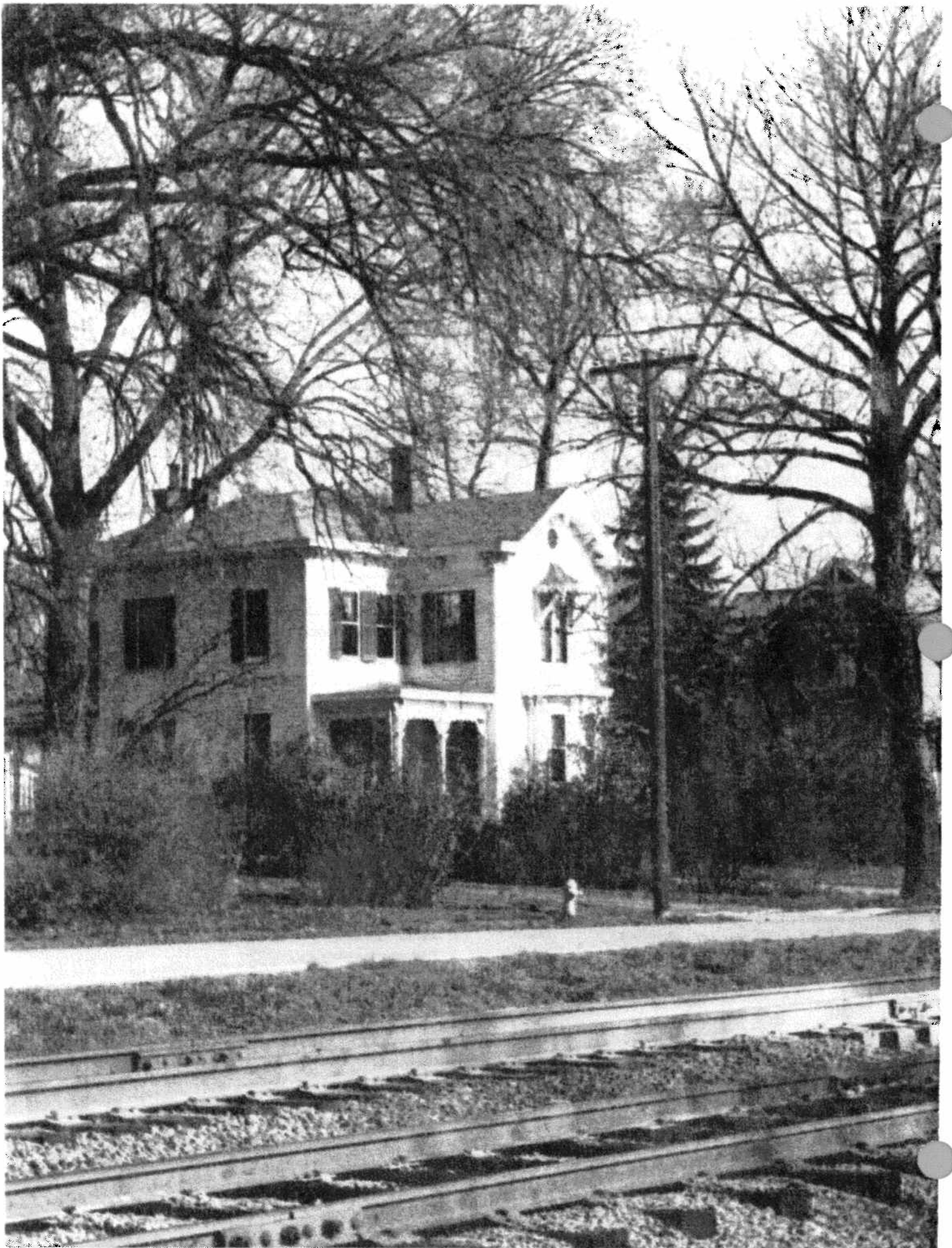
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## INTRODUCTION



**Modeled after a Tuscan villa, the Parker House** (c. 1870) in the 392-acre Glendale Historic District, Hamilton County, Ohio, shows the widespread influence of mid-nineteenth-century pattern books which offered local builders plans for romantic house types and decorative features, such as roof brackets, hood molds, and porch rails. Platted in 1851 with lots from one to 20 acres by civil engineer Robert C. Phillips for the Cincinnati, Hamilton and Dayton Railroad, Glendale is considered the earliest Picturesque suburb in the United States and the first to feature a naturalistic plan of curvilinear streets closely following the site's undulating topography. (Photo by Glendale Heritage Preservation, courtesy National Historic Landmarks Survey)

**M**any of America's residential neighborhoods are significant historic places. Even though many preservationists think of suburbs as relatively recent developments and a new type of cultural landscape, most having been built since the end of World War II, Americans have been extending their cities outward by building suburban neighborhoods since the mid-nineteenth century. Transportation to and from earlier suburbs was provided successively by the horse-drawn carriage, steam-driven train, horse-drawn omnibus, electric streetcar and, finally, the mass-produced, gasoline-powered automobile and motorbus.

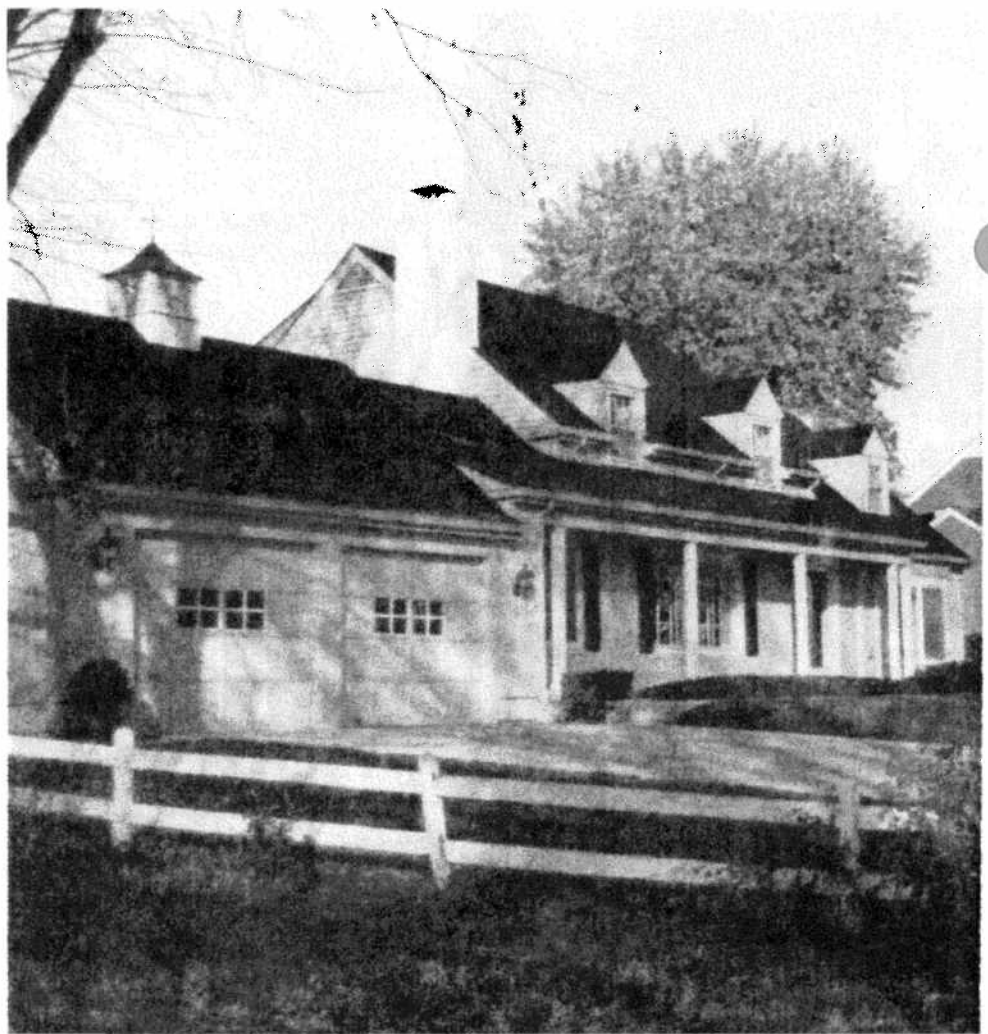
This bulletin and the corresponding multiple property listing, "Historic Residential Suburbs in the United States," recognize the important role that transportation played in fostering America's suburbanization and in shaping the physical character of American suburbs. For this reason, contextual information has been organized in a chronological format with each time period corresponding to the introduction and rise of a particular method of transportation. Each successive generation of suburb has been named for the predominant mode of transportation that spawned it—"railroad suburb," "streetcar suburb," "automobile suburb," and "freeway suburb." Each of these types produced a distinctive suburban landscape, contributing to the growth of American cities and coinciding with a major event in American history—the emergence of the metropolis.

Demographically, suburbanization spurred the growth of population on the edge of cities. In the second half of the nineteenth century, American cities grew rapidly as they industrialized. The degraded conditions of the city, coupled with a growing demand for housing in an environment that melded nature with community, created pressures for suburbanization. Advances in transportation, most notably the introduction of the electric streetcar in 1887 and the mass production of gasoline-powered automobiles after 1908, allowed an increasingly broad spectrum of households to suburbanize.

Suburbanization spurred the rapid growth of metropolitan areas in the twentieth century. In 1910, the U.S. Census recognized 44 metropolitan districts—areas where the population of the central city and all jurisdictions within a 10-mile radius exceeded 100,000. By the 1920s, suburban areas were growing at a faster rate than central cities—33.2 percent compared to 24.2 percent in the previous decade. During the 1940s, the average population of core cities increased 14 percent while that of the suburbs increased 36 percent. For the first time, the absolute growth of the population residing in suburbs nationwide, estimated at nine million, surpassed that of central cities, estimated at six million. This trend continued, and in the 1950s, the population of suburban areas increased by

19 million compared to an increase of six million in the core cities. This growth signaled the post-World War II suburban boom. By 1960, a greater number of people in metropolitan areas lived in the suburbs than in the central city, and, by 1990, the majority of all Americans lived in suburban areas.<sup>1</sup>

Historically, the residential subdivision has been the building block of America's suburban landscape. Its origin can be traced to the eighteenth-century suburbs of London and, in the United States, to the Romantic landscape movement of the mid-nineteenth century. The two residential developments recognized as the design prototypes of the modern, self-contained subdivision, where single-family houses were located along curvilinear roads in



a parklike setting, were Llewellyn Park (1857), in Orange, New Jersey, just west of New York City, and Riverside (1869), Illinois, west of Chicago. The early residential suburbs fostered an emerging American aspiration for life in a semi-rural environment, apart from the noise, pollution, and activity of the crowded city, but close enough to the city for commuting daily to work.

The American ideal of suburban life in the parklike setting of a self-contained subdivision fueled the aspirations of rising middle- and lower-income families. These aspirations were increasingly met as advances in transportation opened fringe land for residential development and lowered the time and cost of commuting to work in the city. Even those having modest incomes would achieve the

ideal in the form of small, detached houses on the narrow lots of strictly rectilinear plats or the spacious grounds of garden apartment villages. The passage of Federal legislation in the 1930s, establishing a system of home-loan banking and creating insurance for long-term, low-interest home mortgages, put home ownership within reach of many Americans and further encouraged widespread suburbanization. With more favorable mortgage guarantees and builders' credits by the end of the 1940s, this system, to a previously unprecedented degree, helped finance the great suburban boom of the postwar years. For many Americans, life in the postwar suburbs represented the fulfillment of the dream of home ownership and material well-being.

Postwar suburbs—the result of one of the largest building booms in American history—represented a new and distinctive stage in the succession of suburban neighborhood types. They, furthermore, created an almost seamless suburban landscape in the extensive territory they occupied, the manner in which large numbers of homes were rapidly mass-produced, and the dispersed pattern of settlement made possible by the construction of modern freeways.

As the postwar suburbs approach 50 years of age, they are being included in local surveys and are being evaluated according to the National Register criteria. Several having exceptional importance are already listed in the National Register of Historic Places. The number eligible for listing in the National Register is likely to increase dramatically in the next decade, presenting a major challenge to decision makers and preservation planners at the local, State, and Federal and tribal government levels.

This bulletin offers guidance to Federal agencies, State historic preservation offices, Indian tribes, Certified Local Governments, preservation professionals, and interested individuals in developing local and metropolitan contexts for suburban development and in preparing National Register nominations and determinations of eligibility for historic residential suburbs. An overview of the national context for suburbanization in the United States provides a chronological framework for understanding national trends that may have influenced local patterns of suburbanization. Guidelines for identification set forth a methodology for developing local contexts and conducting local surveys, while guidelines for evaluation examine the key issues of evaluating the significance, integrity, and boundaries of National Register eligible properties.<sup>2</sup>

*Architect-designed Cape Cod homes built between 1948 and 1955 in Mariemont (1922-1960), a model Garden City near Cincinnati, reflect the enduring popularity of Colonial Revival house types in twentieth-century domestic design. (Photo by Steve Gordon, courtesy Ohio Historic Preservation Office)*



# DEFINING HISTORIC RESIDENTIAL SUBURBS

Suburbanization is the process of land development on or near the edge of an existing city, usually occurring at a lower density than the central city. In the United States, the development of residential neighborhoods has led this process and has influenced the physical character of the American landscape as cities have expanded outward. First appearing in the mid-nineteenth century, residential suburbs reflect important aspects of the decentralization of American cities and towns as well as important patterns of architecture, community planning and development, landscape design, social history, and other aspects of culture.

For the purposes of the National Register program, a historic residential suburb is classified as a historic district and is defined as:

A geographic area, usually located outside the central city, that was historically connected to the city by one or more modes of transportation; subdivided and developed primarily for residential use according to a plan; and possessing a significant concentration, linkage, and continuity of dwellings on small parcels of land, roads and streets, utilities, and community facilities.

This definition applies to a broad range of residential neighborhoods which, by design or historic association, illustrate significant aspects of America's suburbanization. The following typically meet this definition and may be surveyed, evaluated, and documented for National Register listing using the guidelines found in this bulletin:

- planned residential communities;
- residential neighborhoods that through historic events and associations have achieved a cohesive identity;
- single residential subdivisions of various sizes;
- groups of contiguous residential subdivisions that are historically

interrelated by design, planning, or historic association;

- residential clusters along streetcar lines or major thoroughfares;
- entire villages built along railroads, trolley lines, or parkways; and
- concentrations of multiple family units, such as duplexes, double and triple-deckers, and apartment houses.

Nonresidential resources located within or adjacent to a historic neighborhood may contribute to significance if they are integrally related to the neighborhood by design, plan, or association, and share a common period of historic significance. These include:

- shopping centers;
- parks and parkways;
- institutions and facilities that supported and enhanced suburban domestic life (e.g. schools, churches, stores, community buildings, libraries, parks, and playgrounds); and
- transportation facilities associated with daily commuting, including train stations, bus shelters, boulevards, and parkways.

This bulletin may also be useful in documenting several other property types which, although falling outside the context of suburbanization, share similar design characteristics and patterns of historic development. These include:

- vacation or resort developments;
- company towns;
- urban residential neighborhoods;
- resettlement communities; and
- public housing developments<sup>3</sup>

Historic residential suburbs exhibit diverse physical characteristics and reflect national trends in various ways. For example, a subdivision platted in the 1920s, but developed over a period of many years due to local economic conditions, availability of mortgage financing, or the relationship between developers and builders, may exhibit a broad range of architectural styles and housing types. The homogeneous

physical character of other suburbs, on the other hand, may be the result of any of the following factors:

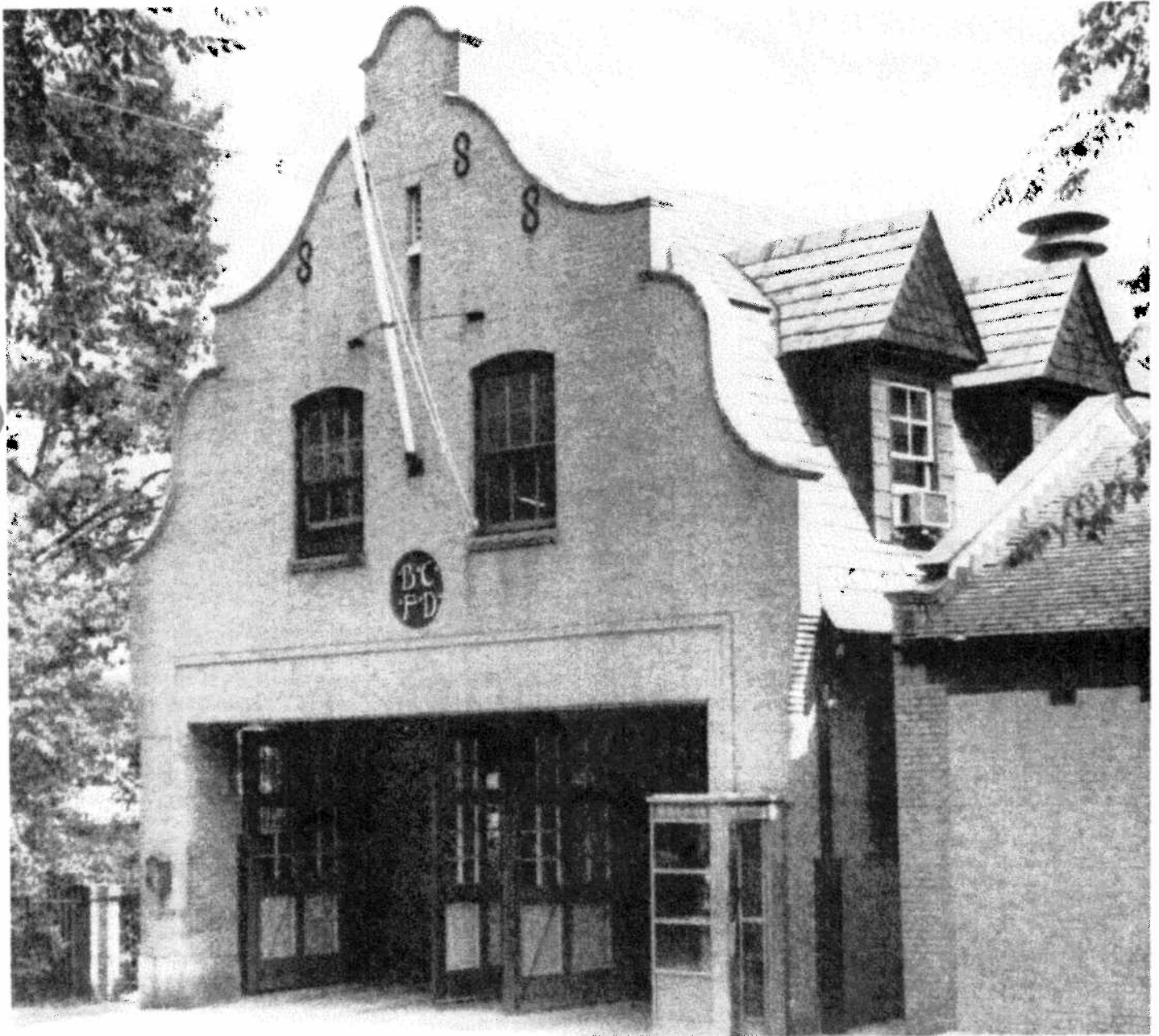
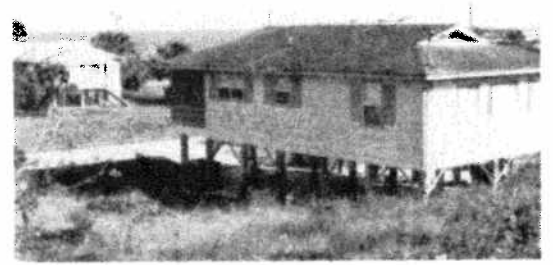
- a relatively short period of development;
- planning specifications for lot size, uniform setbacks, or the relationship of dwellings to the street and to each other;
- deed restrictions dictating dwelling cost, architectural style, or conditions of ownership;
- local zoning ordinances and subdivision regulations;
- housing of a similar size, scale, style, and period of construction, built by a single or small number of architects or builders;
- unifying landscape design, including features such as gateways, signs, common spaces, tree lined streets, walls and curbs, and street patterns; and
- adherence to FHA standards to qualify for mortgage insurance.

For the purposes of this bulletin, a historic suburb is defined by the historical events that shaped it and by its location in relation to the existing city, regardless of current transportation modes or the city's legal boundaries. It applies to the densely built streetcar suburbs of

(top left) **Community park in the Avondale Estates Historic District** (1924-1941), a suburb of Atlanta, features a manmade lake, a club house, and shaded grounds. (Photo by James R. Lockhart, courtesy Georgia Department of Natural Resources)

(top right) **The American Beach Historic District** (1935-1965) on Florida's Amelia Island originated as a planned vacation community for prosperous African Americans during the era of segregation. (Photo by Joel McEachin, courtesy Florida Division of Historical Resources)

(bottom) **Baltimore City Fire Station** (c. 1905) in Jacobethan Revival style illustrates the English village setting and provision of city services at Roland Park, one of the nation's most influential planned streetcar suburbs. (Photo by Nancy Miller, courtesy of Maryland Department of Housing and Community Development)





**Due to a local "Own Your Own Home" campaign, Des Moines led other American cities in the 1920 Census in the percentage of homes occupied by their owners. Located near streetcar lines, many were bungalows bought on installment in small subdivisions such as the Woodland Place Plat, listed in the National Register under the Des Moines Residential Growth and Development, 1900-1942, MPS. (Photo by James E. Jacobsen, courtesy State Historical Society of Iowa)**

the 1890s even though the streetcars and trolley tracks that created them have disappeared and many have been incorporated into the legal limits of the

city. Conversely, it applies to newer cities such as Los Angeles, called the "suburban metropolis," where the single-family home in a subdivision became the building block of the entire city as legal boundaries expanded outward in response to pressures for new development.<sup>4</sup>

As a dominant trend in American history, suburbanization has progressively cut across lines of social and economic class, extending from the wealthy to the working classes. Although the earliest suburbs, distinguished by stately houses set on large landscaped lots, were developed for the upper-

middle classes, the aspiration for the freestanding house on a residential street was equally shared by middle- and even working-class families, many of whom by the turn of the century had settled in temple-fronted homes or modest bungalows on the small rectangular lots and rectilinear streets of the city's gridiron plan. Although suburban life has appealed to all socioeconomic groups, historically the middle class has been the largest group to establish homes in suburban neighborhoods. To many Americans, especially after World War II, home ownership became equated with the attainment of middle-class status.

## USING HISTORIC CONTEXT TO EVALUATE ELIGIBILITY

To qualify for the National Register, a property must represent a significant aspect of history, architecture, archeology, engineering, or culture of an area, and it must have the characteristics that make it a good representative of the properties associated with that aspect of the past. Historic residential suburbs are historic districts comprised of sites (including the overall plan, house lots, and community spaces), buildings (primarily houses), structures (including walls, fences, streets and roads both serving the suburb and connecting it to corridors leading to the larger metropolitan area), and objects (signs, fountains, statuary, etc.).

Eligibility for listing in the National Register of Historic Places is evaluated according to the National Register Criteria for Evaluation. Eligible are historic residential suburbs and neighborhoods:

- A. that are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. that are associated with the lives of persons significant to our past; or
- C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. that have yielded, or may be likely to yield, information important in pre-history or history.

An eligible district must meet one of the above criteria and possess integrity of location, design, setting, materials, workmanship, feeling, and association. Criteria Consideration G, requiring exceptional importance, should be applied to neighborhoods that have not yet reached 50 years of age. Although many will be evaluated for significance at the local level, historic suburbs within major metropolitan areas should be

evaluated for significance at the State level as well as local level. Those that introduced important trends or design principles later adopted nationally or regionally, represent outstanding artistic achievement, or were particularly influential as prototypes for subsequent design merit study for designation as National Historic Landmarks.

In considering National Register eligibility, several determinations must be made:

- how the district illustrates an important aspect of America's suburbanization, and reflects the growth and historic development of the locality or metropolitan area where it is located; and
- whether the district possesses
  - 1) physical features characterizing it as a historic residential suburb, and
  - 2) attributes of historic integrity conveying its association with important historic events or representing significant aspects of its historic design.

Decisions concerning significance and integrity are best made when based on factual information about the history of a neighborhood and a knowledge of local patterns of suburbanization. Such information may be organized into a historic context defined by theme, geographic area, and chronological period. One or more historic contexts can be developed for a metropolitan area or a locality within it to bring together information about important events in transportation, ethnic heritage, industry, architecture, and community development, which shaped its growth and development and influenced its suburbanization.

Several approaches may be followed for developing historic contexts:

- A **metropolitan-wide historic context** would
  - 1) identify specific events which contributed to the region's historic growth and development;
  - 2) establish where and when suburbanization took place, tracing the emergence of suburban communities outside the central city; and
  - 3) define important aspects of community planning, architecture, or landscape architecture that materially contributed to the character of

suburban development on a regional scale.

- A **local context**, developed for an individual community or jurisdiction within the metropolitan area, would
  - 1) define local patterns of historic suburban development in themes such as transportation, community planning, and architecture;
  - 2) relate local patterns to both broad national trends and the specific events that influenced the growth of the metropolitan area of which it is a part; and
  - 3) identify specific neighborhoods illustrating significant patterns.
- A **thematically based context** would document a single significant pattern or trend of suburbanization, establishing its importance and identifying neighborhoods associated with it. Such a context could be based on a locally significant pattern, such as the numerous subdivisions of bungalows and foursquares which shaped the character of Des Moines in the early twentieth century, or an important regional trend, such as merchant-builder Joseph Eichler's modernistic subdivisions in California.

## UNDERSTANDING RESIDENTIAL SUBURBS AS CULTURAL LANDSCAPES

Residential neighborhoods form one of America's most distinctive landscape types. For this reason, their significance is best evaluated using a landscape approach which recognizes the presence of historic landscape characteristics and seeks to understand the inter-relationship of these characteristics spatially and chronologically. Subdivision development typically occurred in several clearly defined stages, which can be read as a series of layers imprinted on the land:

- The first layer resulted from the selection of a parcel of land dedicated for residential use and is defined by geographical location and

relationship to natural topography and cultural factors, such as proximity to places of employment and availability of transportation.

The second corresponds to the subdivision design, usually the result of a predetermined plan or plat with very precise boundaries. This layer is characterized by an internal circulation network, a system of utilities, blocks of buildable house lots, and, sometimes, community facilities.

The third represents the arrangement of each home and yard with its dwelling, garage, lawn, driveway, gardens, walls, fences, and plantings.

The length of time in which each layer took form depends on the particular history of the subdivision, local building and real estate practices, and factors such as economics, availability of financing, and the demand for housing in a particular location.

Many of America's residential suburbs resulted from the collaboration of developers, planners, architects, and landscape architects. The contributions of these professional groups, individually and collectively, give American suburbs their characteristic identity as historic neighborhoods, collections of residential architecture, and designed landscapes. In addition to the professionally designed plans and landscaped

settings of many historic subdivisions, countless vernacular landscapes have been shaped in tandem by home-builders, seeking conformity with local zoning regulations and national policy, and home owners, following popular trends in home design and gardening.

### *Landscape Characteristics*

The following landscape characteristics can be used as a guide for examining these layers, describing the physical evolution of a suburb, understanding the varied forces that shaped its development, and determining aspects of significance. A knowledge of landscape





characteristics related to the suburban development of a particular metropolitan area is valuable in developing typologies for suburban planning, domestic architecture, and landscape design. Information about landscape characteristics should be gathered during field survey and included in National Register documentation. For additional guidance, consult National Register bulletin *How to Evaluate and Nominate Designed Historic Landscapes*.

#### **Land Use and Activities**

The selection of land for residential subdivision has historically resulted from a combinations of factors,

including demographics, proximity to transportation, availability of water and other utilities, and opportunities for employment. Topographic features, such as floodplain, deeply-cut stream valleys, and escarpments, often influenced the choice of land considered suitable for residential development.

Predominantly residential in use, subdivisions typically contain single-family houses, multiple family housing, or a combination of the two. Facilities that support domestic life and provide recreational pleasure, such as schools, shops, community buildings, playgrounds, and parks may also be present. While the private yard is a distinguishing feature of American

suburbs, many suburbs also include common areas that function as parks or playgrounds.

Subdivision development relies on the availability of public utilities, including water, sewer, electricity, natural gas, telephone, and road maintenance. Before the advent of water mains, the design of many subdivisions included reservoirs and water towers and, even in the twentieth century, apartment villages often included power generating and sewage treatment plants.

Private deed restrictions have been used since the nineteenth century to limit development within suburban subdivisions to residential use and exclude nonconforming activities such as industry or commerce. Since the 1920s, local zoning ordinances and subdivision regulations have been adopted in many jurisdictions to control the use and character of residential neighborhoods. In addition, master plans, comprehensive plans, and regional plans have been adopted in many localities to specify both the location and the density of residential construction.

#### **Response to the Natural Environment**

Climate, topography, soil, and the availability of water historically determined the suitability of sites for residential construction. Water has always been a critical factor for residential development, and many early suburbs incorporated provisions for reservoirs and water towers. The advent of public systems of water, especially in metropolitan areas, facilitated residential subdivision on a large scale.

Historically natural topography was a strong determinant of design, influencing street patterns, site drainage, the size and shape of building lots, and provision of community parks.

*The subdivision of areas having a varied or dramatic topography, such as the Whitley Heights Historic District (1918-1928) in Los Angeles, required the expertise of master site planners and architects who were able to create efficient systems for traffic circulation and water drainage, make use of natural features for scenic and picturesque effects, and design houses to fit irregular, steeply sloping sites. (Photo by Brian Moore, courtesy California Office of Historic Preservation)*



Residential suburbs were designed to follow the natural topography of the land. In areas of relatively flat topography, the most common solution was to extend the existing rectilinear grid of city streets. The subdivision of areas having varied topography—in the form of steep hillsides, rocky bluffs and outcroppings, or wooded ravines—often required the design expertise of master landscape architects and engineers, who were able to utilize natural features for scenic and picturesque effects, as well as create efficient systems for traffic circulation and water drainage. Stream valleys, ravines, flood plains, and canyons were often left undeveloped to allow for site drainage and provide for outdoor recreation. In some places, such sites were avoided because of the high cost of construction. In others, particularly where there was a market for more expensive housing, they were considered desirable for the privacy, variety, and picturesque qualities such a setting afforded.

Climate, soil, and availability of water, as well as decorative value and taste, often influenced the retention of existing trees and the planting of new trees and shrubs, whether native or exotic. In arid regions, public water and irrigation made possible the planting of lawns and non-native vegetation. While nineteenth-century yards and neighborhoods reflected the increasing variety of exotic species becoming available in the United States, those of the early twentieth century exhibited more planting of trees and shrubs that were native or better-suited to regional conditions.

Natural topography, climate, wind direction, orientation to the sun, and views may have influenced the placement of houses on individual lots as well as the arrangement of rooms, placement of windows, and provisions for outdoor living (e.g. porches, patios, and gardens.) Twentieth-century concerns for domestic reform led designers such as Henry Wright and the Federal housing agencies to encourage the design of dwellings, in reference to sun and wind direction, to maximize natural lighting conditions and air circulation.

Early neighborhoods are more likely to reflect indigenous or regional build-

ing materials, including stone, brick, adobe, tile, and wood. With the introduction of pre-cut mail order housing in the early twentieth century and the expanded use of prefabricated components, such as plywood, asbestos board, and steel panels, during and after World War II, home building materials became more a function of cost and taste, rather than geographical availability. In the 1930s, a national market began to emerge for materials, such as California redwood, Northwest red cedar, and Arkansas soft pine, which could be shipped anywhere in the country. The diffusion of regional prototypes nationwide in the twentieth century further severed the relationship between house design and local sources of building materials.

### *Patterns of Spatial Organization*

Spatial organization applies to both the subdivision of the overall parcel and the arrangement of the yard, sometimes called the “home ground.” The expansion of public utilities, particularly water and sewer mains, as well as improvements in transportation influenced the design of many new neighborhoods.

Prevailing trends of city planning and principles of landscape design exerted substantial influence on the spatial organization of new subdivisions. In some places, the gridiron plan of the city was simply extended outward, providing rectilinear streets and new blocks of evenly sized house lots. In others, a larger parcel was developed to form a more private, or nucleated, enclave separate from busy thoroughfares; such subdivisions frequently reflected principles of landscape architecture in the layout of streets and lots to follow the existing topography and create a parklike setting that fulfilled the ideal of domestic life in a semi-rural environment.

A general plan or plat, drawn up in advance and often filed with the local government, indicated the boundaries of the parcel to be developed, provision of utilities and drainage, and the layout of streets and lots. The general plan was drawn up by the developer, often with the assistance of a surveyor, engineer or site planner.

Written specifications accompanying a general plan sometimes prescribed design requirements such as the distance to which buildings must be set back from the street; the size, style, or cost of houses to be built; and any restrictions on the use of land or the design of individual housing lots. Private deed restrictions were commonly used to specify the size, scale, style, and cost of dwellings and in other ways controlled the setback and placement of a house on its lot. In addition, local zoning ordinances and subdivision regulations influenced the character of suburban neighborhoods by placing limits on the density, number of dwellings per acre, height of dwellings, distance between dwellings, and the distance, or setback of each dwelling from the street.

Whether the result of popular trends or professional landscape design, the organization of the domestic yard includes the arrangement of the house and garage in relationship to the street or common areas; the placement of walks and a driveway; and the division of front, back, and side yards into areas for specialized uses. Depending on their period of development, domestic yards typically included walks, driveways, lawns, trees and shrubbery, foundation plantings, and a variety of specialized areas, including gardens, patios, swimming pools, play areas, storage sheds, and service areas.

### *Cultural Traditions*

The design of American suburbs springs from advances made in England and the United States in the development of picturesque and Garden City models for suburban living. With the rise of suburbs, regional vernacular forms of housing gave way to a wide variety of house types and styles popularized by pattern books, periodicals, mail order catalogs, stock plan suppliers, and small house architects. Popular housing forms were often modest adaptations of high-style domestic architecture. Similarly, popular garden magazines and landscape guides exerted influence on the design of domestic yards and gardens.

The romantic allusions to historic European prototypes that characterized mid-nineteenth-century housing styles, promoted by landscape designer Andrew Jackson Downing and others, gave way to an eclecticism of style by the end of the century that derived from the mainstream architectural styles and achievements of the Nation's emerging architectural profession. Regionalism, native materials, and local building traditions persisted in homes of the Arts and Crafts movement before World War I; their widespread publication as modest bungalows by editors, such as Gustav Stickley and Henry Wilson, resulted in the diffusion of examples nationwide. Similarly, following World War I, great interest in America's rich and diverse cultural heritage resulted in the popularity of revival house styles and types, typically drawn from English, Dutch, Spanish, and other Colonial traditions and associated with a particular geographical region. Deed restrictions in the exclusive planned communities sometimes dictated a homogeneous style of housing adapted to local climate, regional building traditions, or prevail-

ing cultural tastes. In the case of Palos Verdes, California, this meant the Spanish Colonial Revival style, and in communities like Shaker Village, Ohio, preference persisted for the English Colonial and Tudor Revival styles.

The majority of residential neighborhoods of the period, however, were distinguished by a variety of styles drawn from many stylistic traditions, many of which had little association with the cultural identity or traditions of the region where they are located. Such nationalization of housing styles based on historical prototypes, such as the Cape Cod or Monterey Revival, as small house architects, designers of stock plans, and manufacturers of pre-cut, mail order houses adapted colonial forms for modern living and marketed them to a national audience.

By the mid-twentieth century, the emergence of prefabricated building components further contributed to the nationalization of small house types and styles that, while American in derivation, bore little or no association to the history of the region where they were located. By the 1950s, types such as the Cape Cod and western Ranch

house were adopted by large-scale builders and appeared in large numbers and multiple variations across the country.

The values and traditions that shaped life in American suburbs are typically viewed as stemming from a mainstream of American culture, one often interpreted as quintessentially middle-class. Such neighborhoods often possess strong cultural associations derived from the social values and experiences shared by past generations. Having evolved and changed over the course of many years, many neighbor-

***Dwelling in the romantic Germanic Cottage style (1928) by Milwaukee architect William F. Thalman is one of the many fine homes built for Milwaukee's rising professional class in the 133-acre Washington Highlands Historic District (1916-1940), in Wauwatosa, Wisconsin. The winding tree lined roads (at the left) and meandering streambed of Schoonmaker Creek (in the foreground), incorporated in the subdivision's 1916 plan by landscape architects Hegemann & Peets, reflect the persistence of a naturalistic tradition drawn from Olmsted's nineteenth-century suburbs. (Photo by Cynthia Lynch, courtesy Wisconsin State Historical Society)***



hoods have also become identified with a succession of home owners and residents representing different economic, immigrant, or racial groups that contributed to the prosperity and vitality of the growing metropolis.

### **Circulation Networks**

Roads and walkways provide circulation for automobiles and pedestrians within a suburban neighborhood. The circulation network is a key organizing component of the subdivision site plan and often illustrates important aspects of design. Distinctive street patterns may reflect a designer's response to natural topography, adherence to established principles of design, adoption of popular trends, or imitation of successful prototypes.

Typically a hierarchy of roads exists, whereby major roads provide entry into and circulation through a subdivision (e.g. loop or perimeter road, central boulevard or parkway, and collector roads), while others form tiers, spur roads, cul-de-sacs, or traffic circles. Entry roads provide important links to the surrounding community, metropolitan area, and local and regional systems of transportation, including highways, parkways, train lines, subways, and streetcar lines. Sidewalks, paths, and recreational trails form a circulation network for pedestrians, which may follow or be separate from the network of streets.

Circulation networks contain specific features such as embankments, planted islands or medians, traffic circles, sidewalks, parking areas, driveway cuts, curbing, culverts, bridges, and gutters, that contribute to aesthetic as

*Circulation networks contain features that contribute to aesthetic as well as functional aspects of design. (left) Historic street lighting and brick pavement in the Oak Circle Historic District in Wilmette, a suburb of Chicago, add considerably to the neighborhood's historic setting. (right) Cul-de-sacs at Green Hills, Ohio, were designed with circular islands to accommodate turning automobiles, reduce the cost of paving, and enhance the community's parklike setting. (Photo by Truckenmiller, courtesy Illinois Historic Preservation Agency; photo by Paul Richardson, courtesy Ohio Historic Preservation Office)*

well as functional aspects of design. Streets and roads were typically recessed below the grade of adjoining house lots in subdivisions laid out according to principles of landscape architecture. Grade separations, in the form of tunnels (underpasses) and bridges (overpasses), may be present in communities having separate circulation systems for pedestrians and motorists.

### **Boundary Demarcations**

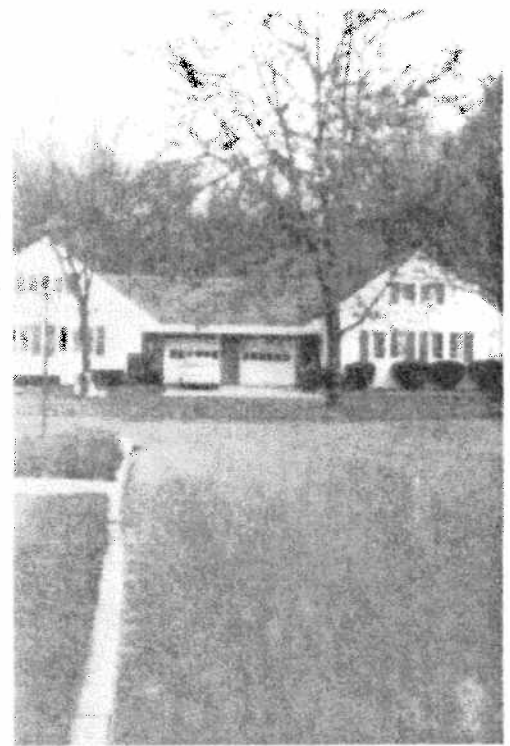
Fences, walls, and planted screens of trees and shrubs may separate a suburban neighborhood from surrounding development and provide privacy between adjoining homes. Gates, gate houses, pylons, signs, and planted gardens typically signified the entrance to many early planned subdivisions and may be important aspects of design. The sense of enclosure created by siting houses on curvilinear streets and cul-de-sacs was considered a desirable feature of subdivision design by the FHA in the 1930s. It was derived from the pioneering work of landscape architect Frederick Law Olmsted, American Garden City designers, Clarence Stein

and Henry Wright, and neighborhood theorist Clarence Perry.

Boundaries between housing lots may be unmarked to allow for spacious, free-flowing lawns between dwellings or they may be marked by fences, walls, hedges, gardens, or walkways. In some places, deed restrictions limited or prohibited the construction of fences. Retaining walls between house lots or along streets are common in areas having steeply sloping topography. In multiple family housing developments, a sense of enclosure and privacy may be provided by the arrangement of dwellings to create recessed entry courts, private gardens, patios, and playgrounds.

### **Vegetation**

Trees, shrubs, and other plantings in the form of lawns, shade trees, hedges, foundation plantings, and gardens often contribute to the historic setting and significance of historic neighborhoods. Plantings were often the result of conscious efforts to create an attractive neighborhood as well as a cohesive, semi-rural setting. Preexisting trees—often native to the area—may have been



retained. Street trees planted for shade or ornamental purposes may reflect a conscious program of civic improvements by the subdivider, a municipal or local government, village improvement society, or community association. Parks, playgrounds, and public buildings such as schools and community buildings may have specially designed plantings. In addition, the grounds of individual residences may be notable examples of domestic landscape design or the work of master landscape designers. By the 1930s neighborhood planting was considered important for maintaining long-term real estate value.

While the plantings of individual yards typically reflect the tastes and interests of homeowners, they may also reflect once popular trends in domestic landscape design or include vegetation left from previous land uses. Neighborhood plantings are frequently dominated by grassy lawns, occasional specimen trees, shade trees, and shrubbery. Regional horticultural practices, as well as historic trends, may be reflected in the choice of native species or exotic species well adapted to the local conditions and climate. Plants may have a strong thematic appeal for

their seasonal display (for example, flowering apple trees, magnolias, azaleas and rhododendrons, oleanders and crape myrtles, sugar maples, palm trees, and golden rain trees). In the 1950s neighborhood associations in some areas engaged landscape architects to develop landscape plans for home owners at a modest cost.

#### ***Buildings, Structures, and Objects***

Dwellings and buildings associated with domestic use, including garages, carriage houses, and sheds, make up most of the built resources in a residential neighborhood. Some neighborhoods will include schools, churches, shopping centers, community halls, and even a train station or bus shelter.

Dwellings may conform to a typology of models, styles, or methods of construction specified in the plans or initial architectural designs for the suburb, or they may reflect prevailing trends and styles related to the period in which the suburb was developed. Depending on the subdivision's pattern of development, one or more architects may be associated with the design of the dwellings.

Bridges, culverts, and retaining walls may be present on roads and paths, especially where the topography is rugged and cut by streams, ravines, or arroyos. Evidence of utility systems may include water towers, reservoirs, and street lighting. Large apartment villages frequently contained facilities such as a power-generating plant, sewage treatment plant, or maintenance garage.

#### ***Clusters***

Although a historic residential suburb generally reflects an even distribution of dwellings, some also contain clusters of buildings in the form of apartment villages, shopping centers, educational campuses, and recreational facilities. Such clusters are often integral aspects of neighborhood planning and contribute to design and social history.

#### ***Archeological Sites***

Historic residential suburbs may contain pre- and post-contact sites, such as quarries, mounds, and mill sites, which have been left undisturbed in a park or on the undeveloped land of a flood plain, ravine, or outcropping. Existing homes and domestic yards that yield information related to data sets and research questions important in understanding patterns of suburbanization and domestic life may also be contributing archeological sites.

#### ***Small-scale Elements***

Small-scale elements dating from the historic period contribute collectively to the significance and integrity of a historic neighborhood. Such elements include lamp posts, curbs and gutters, stairs and stairways, benches, signs, and sewer covers. Outdoor fireplaces, pergolas, gazebos, fountains, monuments, and statuary may be present in common areas or individual yards.





## **AN OVERVIEW OF SUBURBANIZATION IN THE UNITED STATES, 1830 TO 1960**



*Historic view (c. 1935) of suburban streetcar and corner drug store, Indianapolis. As the introduction of the electric streetcar spurred the expansion of metropolitan areas across the Nation after 1887, commercial centers emerged at nodes along streetcar lines. The streetcar continued to shape the daily life of commuters and their families well into the twentieth century, eventually to be displaced by automobiles, buses, and motorcycles, which offered greater speed and mobility. (Photo by Bass Photo Company, courtesy William Henry Smith Memorial Library, Indiana Historical Society)*

# TRANSPORTATION

The evolution of American suburbs from 1830 to 1960 can be divided into four stages, each corresponding to a particular chronological period and named for the mode of transportation which predominated at the time and fostered the outward growth of the city and the development of residential neighborhoods:

1. Railroad and Horsecar Suburbs, 1830 to 1890;
2. Streetcar Suburbs, 1888 to 1928;
3. Early Automobile Suburbs, 1908 to 1945;
4. Post-World War II and Early Freeway Suburbs, 1945 to 1960.

The chronological periods listed above should be viewed as a general organizing framework, rather than a fixed set of dates, thereby allowing for overlapping trends, regional influences, and variations in local economic or social conditions. Within each period, a distinctive type of residential suburb emerged as a result of the transportation system that served it, advances in community planning and building practices, and popular trends in design.

The following overview examines the major national trends that shaped America's suburbs, including the development of urban and metropolitan transportation systems, the evolution of building and planning practices, a national system of home financing, the design of the residential subdivision, and trends in the design of the American home.

*In 1890 at the urging of real estate developers, the Burlington and Quincy Railroad built an attractive and comfortable suburban station at Berwyn, Illinois, nine and one-half miles west of downtown Chicago. (Photo by Charles Hasbrouck, courtesy Illinois Historic Preservation Agency)*

## TRENDS IN URBAN AND METROPOLITAN TRANSPORTATION

The laying out of new transportation routes, using new technologies, spurred the outward movement of suburban development. New circulation patterns formed the skeleton around which new land uses and suburbs became organized. Farmland near the city was acquired, planned, and developed into residential subdivisions of varying sizes. Separate from the city, new subdivisions were designed as residential landscapes, combining the open space, fresh air, and greenery of the country with an efficient arrangement of houses.

### *Railroad and Horsecar Suburbs, 1830 to 1890*

With the introduction of the Tom Thumb locomotive in 1830, the Baltimore and Ohio Railroad became the first steam-powered railroad to operate in the United States. Soon after, railroad lines rapidly expanded westward from major northeastern cities, making possible the long-distance transportation of raw materials and manufactured goods. On the eve of the Civil War, an extensive network of railroads existed in the eastern half of the United States, connecting major cities as far west as Chicago.

Seeking new sources of revenue, railroad companies started to build passenger stations along their routes connecting cities with outlying rural villages. These stations became the focal points of villages that developed in nodes along the railroad lines radiating outward from cities. Land development companies formed with the purpose of laying out attractive, semi-rural residential communities.

Railroad suburbs offered the upper and upper-middle classes an escape from the city to what historian John

Stilgoe has called the "borderland," where rural countryside and the city, with its modern amenities, merged. The railroad simultaneously provided access to the center city while insulating communities from the urban, lower classes who could not afford the high cost of commuting, creating what historian Robert Fishman has called a "bourgeois utopia."<sup>5</sup>

By the mid-1860s, railroad commuting was well established in many cities. Outside Philadelphia, "mainline" suburbs developed along the route of the Pennsylvania Railroad at places such as Swarthmore, Villanova, and Radnor. Lines from New York City extended north and east to Westchester County, Long Island, and New Haven, Connecticut, and west and south into New Jersey. In 1850, 83 commuter stations lay within a 15-mile radius of the city of Boston. The building of a railroad south of San Francisco in 1864 stimulated the rapid growth of a string of suburban towns from Burlingame to Atherton.<sup>6</sup>

Outside Chicago, which rapidly developed during the railroad era, extensive new suburbs took form in places such as Aurora, Englewood, Evanston, Highland Park, Hinsdale, Hyde Park, Kenwood, Lake Forest, Wilmette, and Winnetka. Eleven separate railroad lines operated in the city between 1847 and 1861, and by 1873 railroad service extended outward to more than 100 communities. The most famous was Riverside, a Picturesque planned suburb west of the city, developed by Emery E. Childs of the Riverside Improvement Company. Designed in 1869 by Olmsted, Vaux, and Company, Riverside would become a highly emulated model of suburban design well into the twentieth century.<sup>7</sup>

Revolutionizing cross-city travel in the 1830s, horse-drawn cars provided the first mass transit systems by offering regularly scheduled operations along a fixed route. Due to the introduction of the horse-drawn omnibus and later the



more efficient horse-drawn streetcar that operated on rails, the perimeters of many cities began to expand in the 1850s. By 1860, horsecar systems operated in New York, Baltimore, Philadelphia, Pittsburgh, Chicago, Cincinnati, Montreal, and Boston.<sup>8</sup>

Horse-drawn cars increased the distance one could commute in one-half hour from two to three miles, thereby extending the distance between the center city and land desirable for residential development from 13 to almost 30 square miles. Horsecar tracks followed the main roads radiating out from the center city toward the emerging railroad suburbs on the periphery. Transportation began to influence the geography of social and economic class, as the cost of traveling

between home and work determined where different groups settled. The middle and working classes settled in neighborhoods closer to the central city accessible by horse-drawn cars, while those with higher incomes settled in the railroad suburbs.<sup>9</sup>

Following the precedent of Central Park in New York City in 1858, large, publicly-funded, naturalistic parks began to appear in many of America's rapidly industrializing cities. Aimed at improving the quality of life, they offered city dwellers the refreshing experience of open space, natural scenery, and outdoor recreation. In cities such as Buffalo, Brooklyn, Boston, and Louisville, the desire to connect parks with the central city and each other resulted in the cre-

ation of parkways and boulevards that were essentially extensions of park carriage roads. Characterized as wide, tree lined roadways often running alongside natural brooks and streams, these roads quickly became desirable corridors along which new neighborhoods and suburban estates were built for those wealthy enough to travel by horse and carriage.

### *Streetcar Suburbs, 1888 to 1928*

The introduction of the first electric-powered streetcar system in Richmond, Virginia, in 1887 by Frank J. Sprague ushered in a new period of suburbanization. The electric streetcar, or trolley,

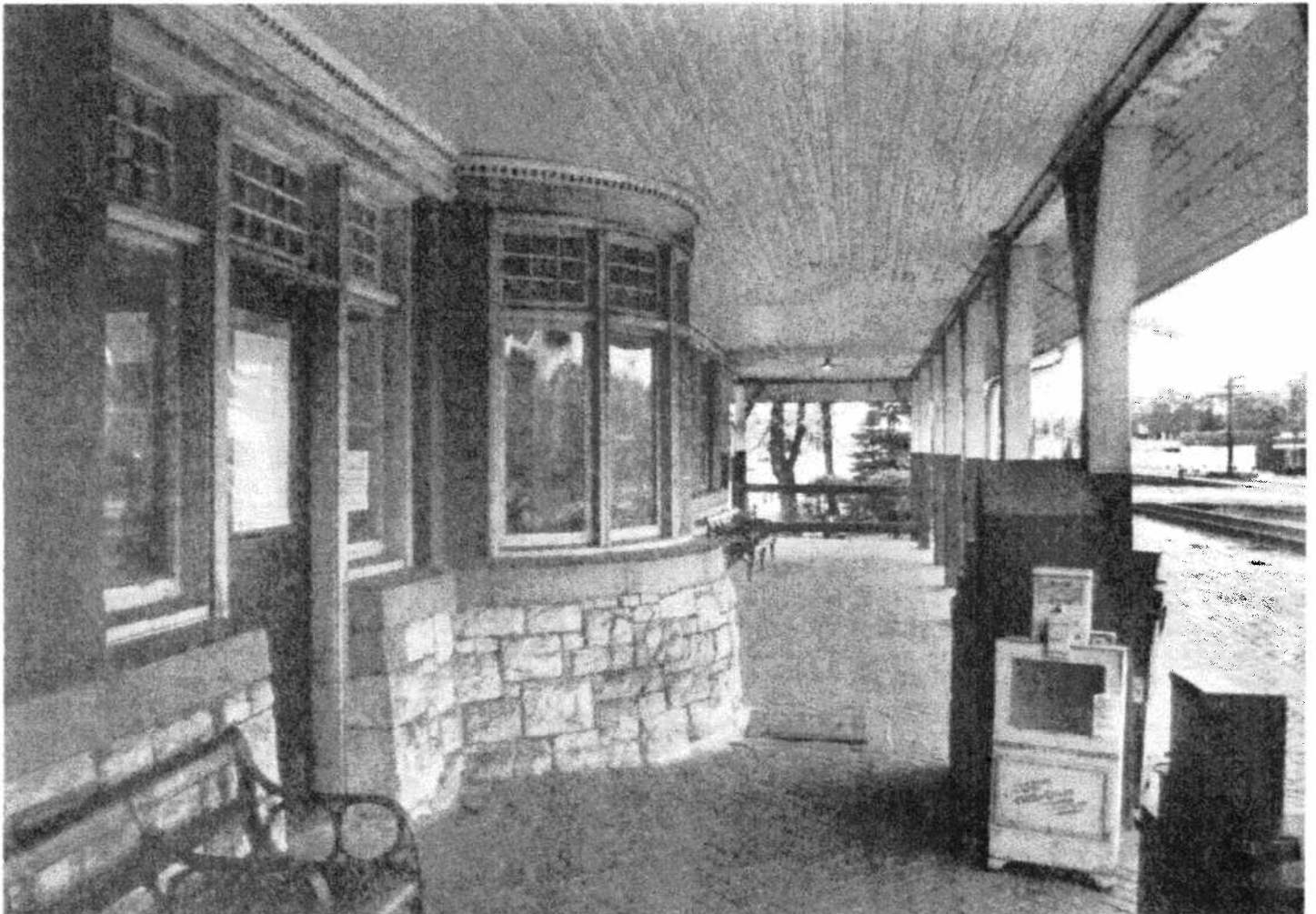


Figure 1.  
**Milestones in Urban and Metropolitan Transportation**

1830	Baltimore and Ohio Railroad introduces the steam locomotive in America.	1923	Detroit Rapid Transit Commission announces comprehensive system of mass transit including a centralized subway.
1868-92	Parkways designed by Olmsted firm for Brooklyn, Buffalo, Boston, and Louisville.	1928-29	Radburn developed as the "Town for the Motor Age."
1887	Electric streetcar introduced by Frank J. Sprague in Richmond, Virginia.	1938	Bureau of Public Roads report, <i>Toll Roads and Free Roads</i> , calls for a master plan for highway development, a series of upgraded interregional roads, and the construction of express highways into and through cities to relieve urban traffic congestion.
1893-1915	Kessler Brothers design park and boulevard system for Kansas City.	1939	New York World's Fair "Futurama" presents designer Norman Bel Geddes's vision for a national highway system and the modern city of the motor age.
1902	<i>Improvement of Towns and Cities</i> by Charles Mulford Robinson calls for civic improvements such as roads, site planning, playgrounds and parks, street plantings, paving, lighting, and sanitation.	1940	Arroyo Seco Freeway opens in Pasadena; first modern, high-speed turnpike opens in Pennsylvania.
1908	Introduction of the Model-T automobile by Henry Ford.	1944	Federal Aid Highway Act calls for a limited system of national highways and a National System of Interstate Defense Highways; Interregional Highway Committee recommends creation of a 32,000-mile national network of express highways, now known as the Eisenhower Interstate System.
1911	<i>The Width and Arrangement of Streets</i> by Charles Mulford Robinson is published, later republished as <i>City Planning</i> (1916).		
1916	Federal Aid Highway Act (42 U.S. Stat. 212), commonly called the "Good Roads Act," establishes Bureau of Public Roads and authorizes Federal funding of 50 percent of State road projects within a Federal aid highway network.		
1916-24	Construction of Bronx River Parkway, New York.		

allowed people to travel in 10 minutes as far they could walk in 30 minutes. It was quickly adopted in cities from Boston to Los Angeles. By 1902, 22,000 miles of streetcar tracks served American cities; from 1890 to 1907, this distance increased from 5,783 to 34,404 miles.<sup>10</sup>

By 1890, streetcar lines began to foster a tremendous expansion of suburban growth in cities of all sizes. In older cities, electric streetcars quickly replaced horse-drawn cars, making it possible to extend transportation lines outward and greatly expanding the

availability of land for residential development. Growth occurred first in outlying rural villages that were now interconnected by streetcar lines, and, second, along the new residential corridors created along the streetcar routes.

In cities of the Midwest and West, such as Indianapolis and Des Moines, streetcar lines formed the skeleton of the emerging metropolis and influenced the initial pattern of suburban development.<sup>11</sup>

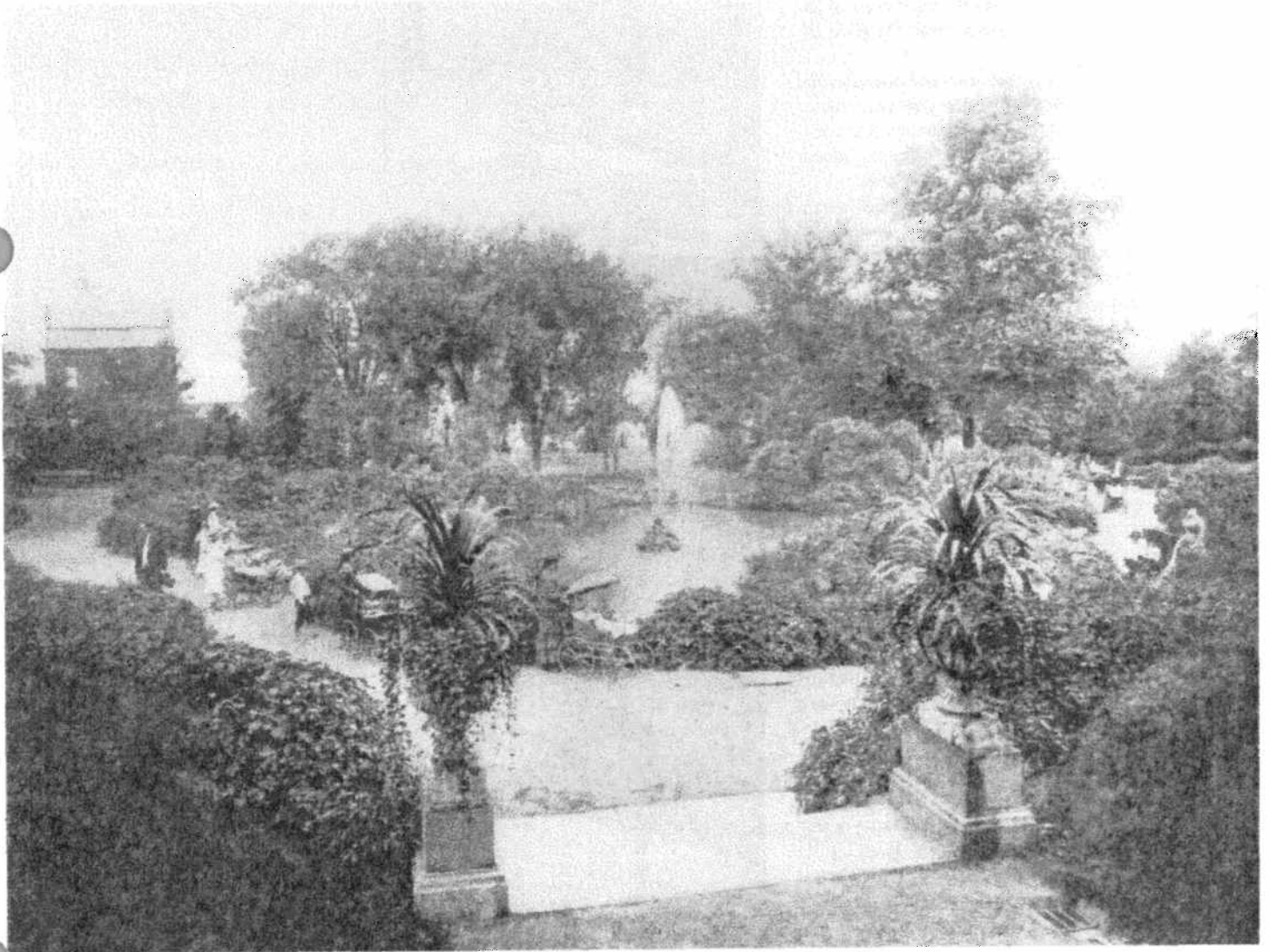
Socioeconomically, streetcar suburbs attracted a wide range of people from the working to upper-middle

class, with the great majority being middle class. By keeping fares low in cost and offering a flat fare with free transfers, streetcar operators encouraged households to move to the suburban periphery, where the cost of land and a new home was cheaper. In many places, especially the Midwest and West, the streetcar became the primary means of transportation for all income groups.<sup>12</sup>

As streetcar systems evolved, cross-town lines made it possible to travel from one suburban center to another, and interurban lines connected



**Nineteenth-century public parks** were pleasure grounds with gardens of exotic plants, fountains and ponds, paths for strolling, and sometimes a spacious greensward. In Buffalo (at the left), the creation of a system of parks and parkways by Frederick Law Olmsted spurred the transformation of adjoining land into attractive, tree lined neighborhoods, such as the Parkside East Historic District. In St. Louis (below), Lafayette Square became the heart of a growing residential district distinguished by some of the city's finest homes. (Photo by L. Newman, courtesy New York Office of Parks, Recreation and Historic Preservation; historic photo courtesy Landmarks Association of St. Louis)



outlying towns to the central city and to each other. Between the late 1880s and World War I, a number of industrial suburbs appeared outside major cities, including Gary, Indiana, outside Chicago, and Homestead and Vandergrift, both outside Pittsburgh.<sup>13</sup>

Concentrated along radial streetcar lines, streetcar suburbs extended outward from the city, sometimes giving the growing metropolitan area a star shape. Unlike railroad suburbs which grew in nodes around rail stations, streetcar suburbs formed continuous corridors. Because the streetcar made numerous stops spaced at short intervals, developers platted rectilinear subdivisions where homes, generally on small lots, were built within a five- or 10-minute walk of the streetcar line. Often the streets were extensions of the gridiron that characterized the plan of the older city.

Neighborhood oriented commercial facilities, such as grocery stores, bakeries, and drugstores, clustered at the intersections of streetcar lines or along the more heavily traveled routes. Multiple story apartment houses also appeared at these locations, designed either to front directly on the street or to form a u-shaped enclosure around a recessed entrance court and garden.

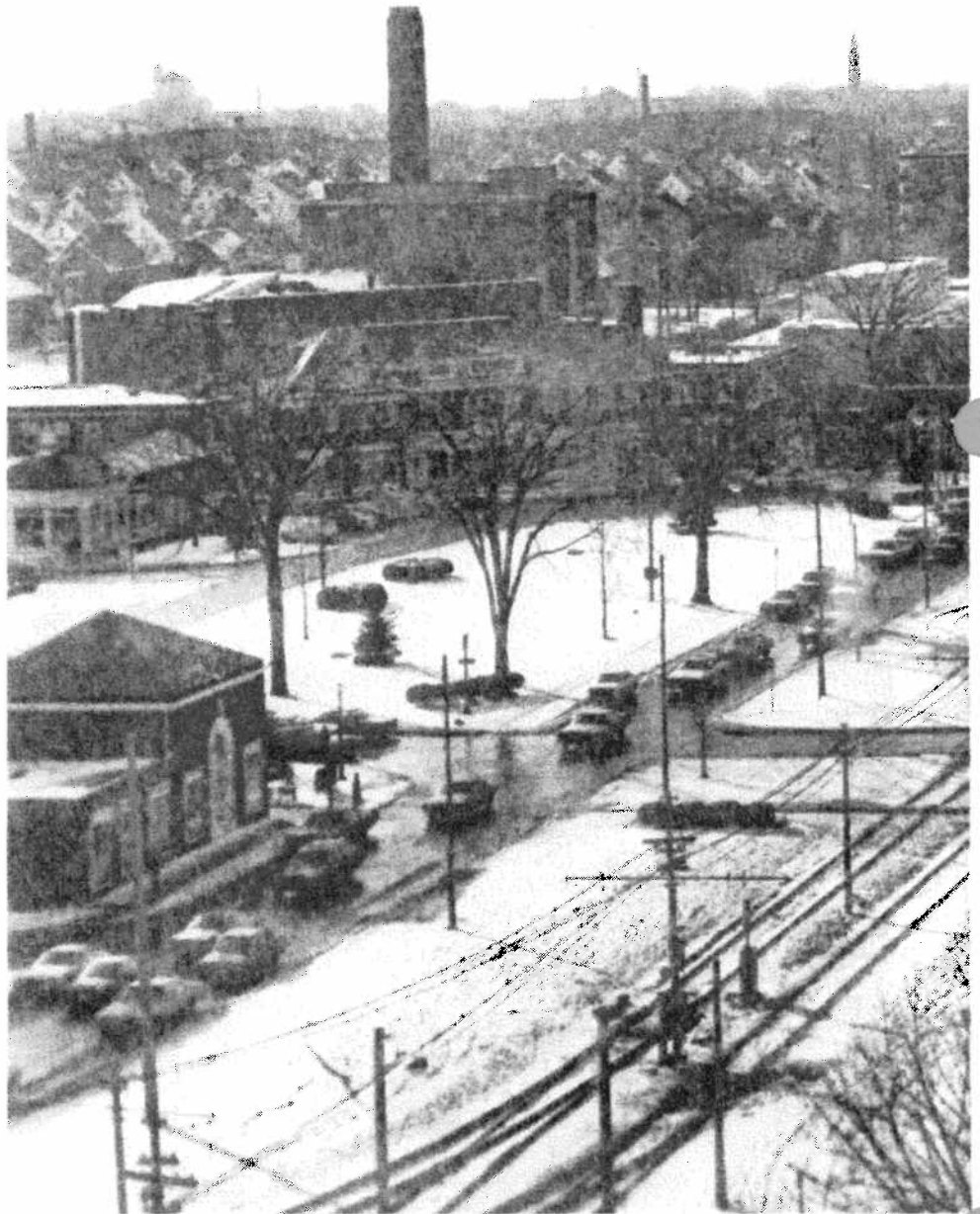
In many places the development of real estate closely followed the introduction of streetcar lines, sometimes being financed by a single operator or developer. East of Cleveland, Ohio, the community of Shaker Village took form after 1904 when O. P. and M. J. van Sweringen set out to create a residential community for middle- and upper-class families. To ensure the fastest and most direct service for home owners they eventually purchased a right-of-way and installed a high-speed electric streetcar to downtown Cleveland. By 1911, the community of Shaker Village was incorporated, establishing a system of local government that would ensure the community's development as a residential suburb for decades to come.<sup>14</sup>

Streetcar use continued to increase until 1923 when patronage reached 15.7 billion and thereafter slowly declined. There was no distinct break between streetcar and automobile use from 1910 to 1930. As cities continued to grow and the

demand for transportation increased, the automobile was adopted by increasing numbers of upper-middle to upper-income households, while streetcars continued to serve the middle and working class population. Streetcar companies, however, in the 1920s remained confident about their industry's future. By the 1930s, many became mass transit companies, adding buses and trackless trolleys to their fleets to make their routes more flexible. In a

few cities—Boston, Chicago, New York, and Detroit—mass transit included elevated trains and subways.<sup>15</sup>

By the 1940s, streetcar ridership had dropped precipitously. The vast increase in automobile ownership and decentralization of industry to locations outside the central city after World War II brought an end to the role of the streetcar as a determinant of American urban form.



### **Early Automobile Suburbs: 1908 to 1945**

The introduction of the Model-T automobile by Henry Ford in 1908 spurred the third stage of suburbanization. The rapid adoption of the mass-produced automobile by Americans led to the creation of the automobile-oriented suburb of single-family houses on spacious lots that has become the

quintessential American landscape of the twentieth century.

Between 1910, when Ford began producing the Model-T on a massive scale, and 1930, automobile registrations in the United States increased from 458,000 to nearly 22 million. Automobile sales grew astronomically: 2,274,000 cars in 1922, more than 3,000,000 annually from 1923 to 1926, and nearly four and a half million in 1929 before the stock market crashed.

*Bird's eye view (1974) of Shaker Square, outside Cleveland, Ohio, shows the transit right-of-way, planned shopping center, nearby apartment houses, and outlying subdivisions of detached houses which attracted residents to the newly incorporated town of Shaker Heights in the early decades of the twentieth century. (Photo by Eric Johannesen, courtesy Ohio Historic Preservation Office)*



According to Federal Highway Administration statistics, 8,000 automobiles were in operation in 1900, one-half a million in 1910, nine-and-a-quarter million in 1920, and nearly 27 million in 1930.<sup>16</sup>

The rise of private automobile ownership stimulated an intense period of suburban expansion between 1918 and the onset of the Great Depression in 1929. As a result of the increased mobility offered by the automobile, suburban development began to fill in the star-shaped city created by the radial street-car lines. Development on the periphery became more dispersed as workers were able to commute longer distances to work, as businesses moved away from the center city, and as factories, warehouses, and distribution centers were able to locate outside the railroad corridors due to the increased use of rubber-tired trucks.<sup>17</sup>

The popularity of the automobile brought with it the need for a new transportation infrastructure that included the construction and improvement of roads and highways, development of traffic controls, building of bridges and tunnels, and widening and reconstruction of downtown streets. One of the most unheralded structures that facilitated the growth of the suburbs was the perfected

mechanical road. Automobiles required smooth, hard surfaces, and before 1900, even in cities, most roads were unpaved. Asphalt, introduced in the 1890s, became the common road surface by 1916.<sup>18</sup>

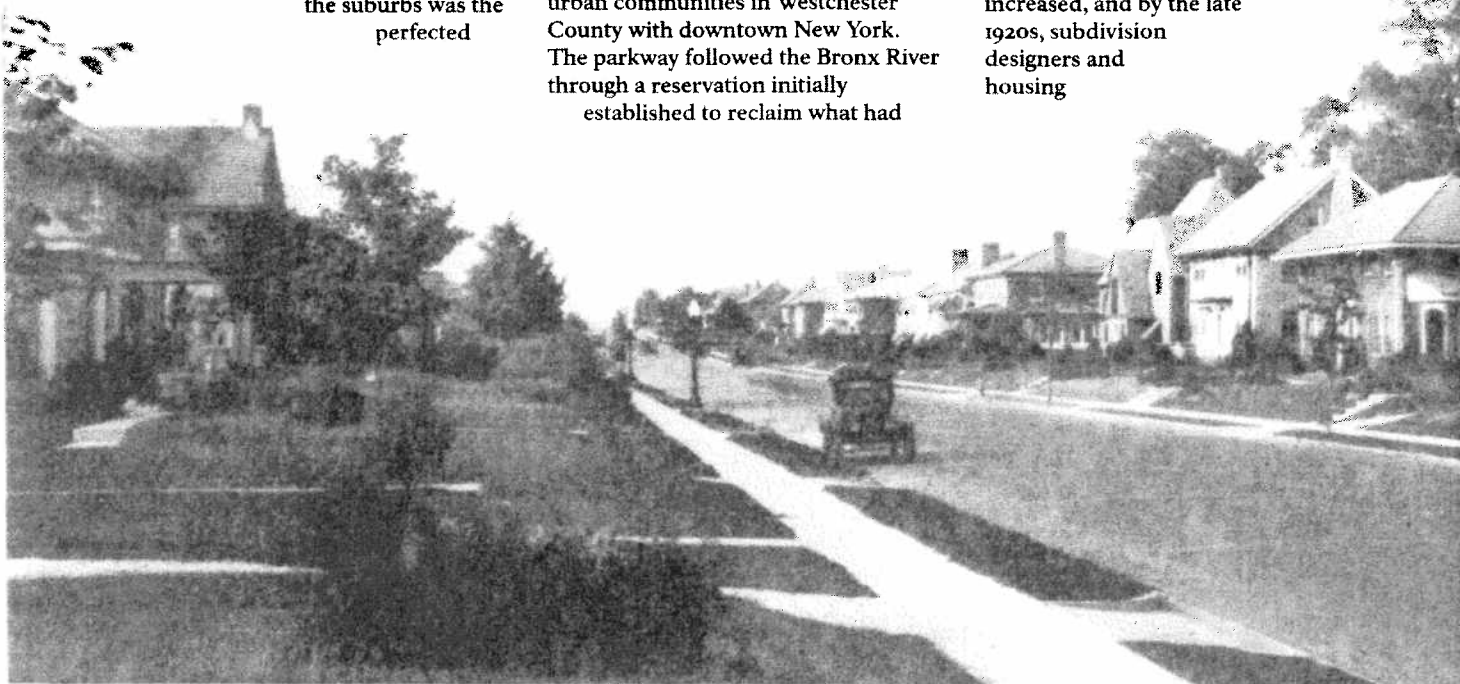
Beginning in the 1890s, the City Beautiful movement spurred advances in city planning and urban design. Transportation planning, as well as the improvement of streets, was recognized as central to the coordinated growth of urban areas. In cities such as Kansas City, Denver, and Memphis, the collaboration of planners, landscape architects, architects, and local political leaders, forged a rich legacy of parkways and boulevards that linked new residential suburbs with the center city. Highly influential were the writings of Charles Mulford Robinson, a journalist and advocate for Denver's park and parkway system. These included *Improvement of Towns and Cities* (1901), *Width and Arrangement of Streets* (1911), and *City Planning, with Special Reference to the Planning of Streets and Lots* (1916).

Proposed in 1906 and built between 1916 and 1924, the Bronx River Parkway was one of the first modern parkways designed for automobiles. Sixteen miles in length, the parkway connected suburban communities in Westchester County with downtown New York. The parkway followed the Bronx River through a reservation initially established to reclaim what had

become a polluted and unsightly watershed. Featuring a right-of-way ranging from 300 to 1,800 feet, the parkway was extensively planted with trees and shrubs, provided scenic river views, and achieved the illusion of being totally separated from adjoining development. The alignment featured graceful curves and gently followed the undulating topography to give motorists, many of whom were daily commuters, a pleasurable driving experience.<sup>19</sup>

Metropolitan areas expanded as streets, parkways, and boulevards extended outward, opening up new land for subdivision. As new radial arterials were built, suburban development became decentralized, creating fringes of increasingly low densities. With commuters no longer needing to live within walking distance of the streetcar line, residential suburbs could be built at lower densities to form self-contained neighborhoods that afforded more privacy, larger yards, and a park-like setting. Neighborhood improvements typically included paved roads, curbs and gutters, sidewalks, and driveways, as well as connections to municipal water systems and other public utilities.<sup>20</sup>

Concerns over pedestrian safety emerged as automobile use increased, and by the late 1920s, subdivision designers and housing



reformers alike were examining ways to separate neighborhood traffic from arterial traffic and to design neighborhoods that remained safe, quiet, and free of speeding traffic. The "Radburn Idea," first introduced by Clarence Stein and Henry Wright in their 1928 design for a "Town for the Motor Age," called for separate circulation systems to serve pedestrians and automobiles. Published a year later in the regional plan for metropolitan New York City, Clarence Perry's Neighborhood Unit Formula called for a hierarchy of streets of varying widths to control automobile traffic.

In 1916 the United States Congress passed the Federal Aid Highway Act, authorizing expenditure of Federal funds for up to 50 percent of the cost of State road projects within the Federal aid network. During the 1920s, most States established highway departments, and the total miles of surfaced highway in the Nation doubled.<sup>21</sup>

During the "golden age of highway building" from 1921 to 1936, more than 420,000 miles of roads were built in the United States. The increase in intercity highways and roads connecting farms with markets made new land available for suburbanization. Advances in highway engineering, including

the development of divided highways, bridges and tunnels, and cloverleaves, made automobile travel faster and safer.<sup>22</sup>

Suburban areas continued to grow faster than central cities, and the planning of metropolitan highway systems gained increasing attention. High speed roads extending outward from central cities appeared in major metropolitan areas: Lakeshore Drive to Chicago's northern suburbs opened in 1933; and, in 1936, the Grand Central Parkway was added to the already extensive system of roads on Long Island built under Robert Moses's direction. In 1940, the opening of the Arroyo Seco Freeway in Los Angeles heralded a new age of freeway construction connecting city and suburb.<sup>23</sup>

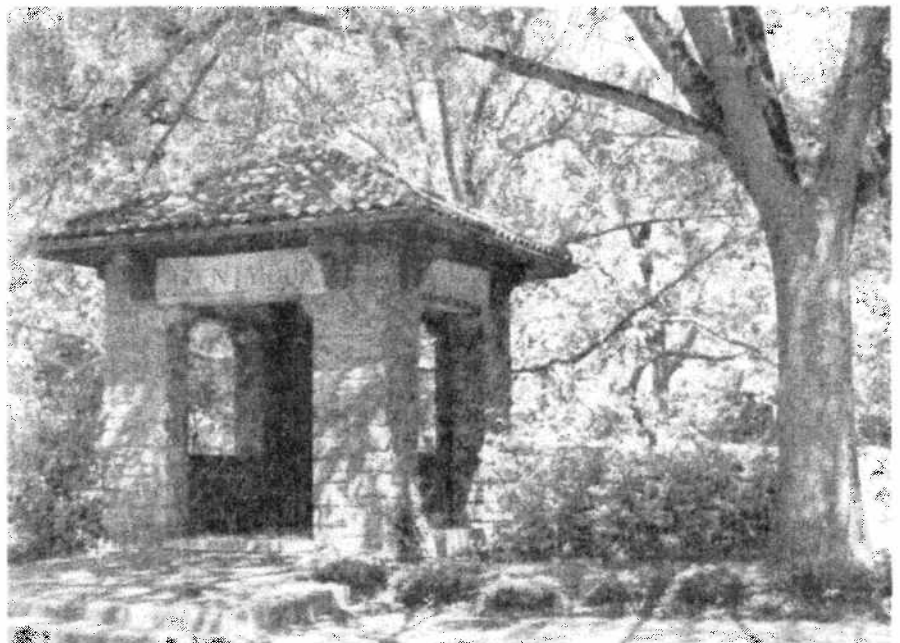
The Futurama exhibit sponsored by General Motors Corporation at the 1939 New York World's Fair presented one of the most influential and memorable visions for the future of highway engineering, and with it suburban life. Designed by Norman Bel Geddes, the exhibit featured a huge diorama of the American landscape overlaid with an intricate network of high-speed, multi-lane, limited-access highways joining country and city. Called "magic motorways," the highways featured total separation of grades and graduated

speeds. A ring highway surrounded the city interconnecting with radial freeways that guided suburban commuters to the center city where exit ramps eventually led to underground garages.<sup>24</sup>

In its 1938 report, *Toll Roads and Free Roads*, the Bureau of Public Roads called for a master plan for highway development, a series of upgraded interregional roads, and the construction of express highways into and through cities to relieve urban

*(left) Historic photograph (c. 1928) of a typical new subdivision of "better homes" in Indianapolis. By the 1920s, improvements in suburban street design to accommodate the automobile, the growing acceptance of land-use controls, and the development of public utilities resulted in a host of suburban amenities, including paved roads, mandatory setbacks, sidewalks and driveways, concrete curbs, street lighting, and underground utilities. (Photo by Bass Photo Company, courtesy William Henry Smith Memorial Library, Indiana Historical Society)*

*(right) Streetcar Waiting Station at Brentmoor Park, Clayton, Missouri, one of three residential parks designed by Henry Wright and featured in a 1913 Architectural Record article, entitled "Cooperative Group Planning." Each subdivision featured an arrangement of fine houses along a private curvilinear drive, commonly owned gardens and grounds, and a perimeter service road. (Photo by Esley Hamilton, courtesy Missouri Department of Natural Resources)*



traffic congestion. The report also outlined the routes for six transcontinental highways and debated the feasibility of using tolls to support highway construction.<sup>25</sup>

The emergency of World War II intervened, and Federal highway spending was limited to the improvement of roads directly serving military installations or defense industries. In 1941 President Franklin D. Roosevelt appointed a seven-member Inter-regional Highway Committee to work with Public Roads administrator Thomas H. MacDonald on recommendations for national highway planning following the war. The committee's recommendations for an extensive 32,000-mile national network of expressways resulted in the Federal Aid Highway Act of 1944. The act authorized a National System of Interstate Highways, which included metropolitan expressways designed to relieve traffic congestion and serve as a framework for urban redevelopment.<sup>26</sup>

Since Congress did not appropriate additional funds for the system's construction until the mid-1950s, State highway departments were forced to rely on other sources, including public bonds, toll revenues, and the usual matching Federal funds earmarked for the improvement of the Federal aid highway network.<sup>27</sup>

From the end of World War I until 1945, increasing automobile ownership accelerated suburbanization and significantly expanded the amount of land available for residential development. This trend further stimulated the design and construction of a new infrastructure of roads, highways, bridges, and tunnels, laying the groundwork for highway systems that would transform metropolitan areas after World War II.

### ***Post-World War II and Early Freeway Suburbs: 1945 to 1960***

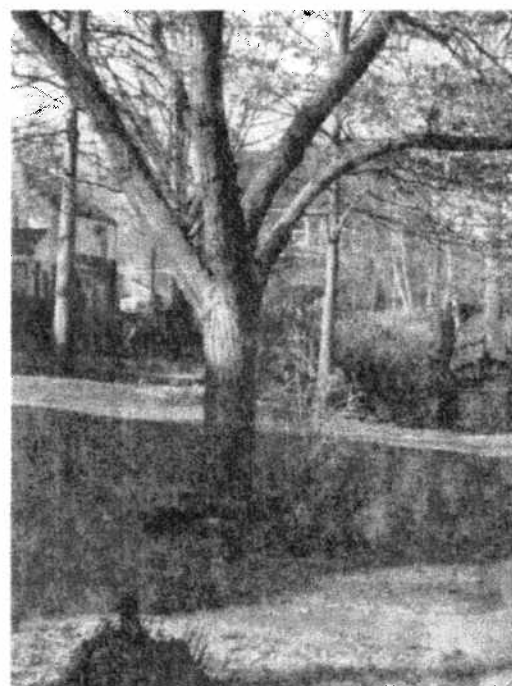
The fourth and most dramatic stage of suburbanization in the United States followed World War II. The postwar housing boom, manifested in the so-called "freeway" or "bedroom" suburbs, was fueled by increased automobile ownership, advances in build-

ing technology, and the Baby Boom. A critical shortage of housing and the availability of low-cost, long-term mortgages, especially favorable to veterans, greatly spurred the increase of home ownership.

Highway construction authorized under the 1944 act got off to a slow start, but by 1951, every major city was working on arterial highway improvements with 65 percent of Federal funds being used for urban expressways. Under President Dwight D. Eisenhower, the Federal Aid Highway Act of 1956 provided substantial funding for the accelerated construction of a 41,000-mile, national system of interstate and defense highways which included 5,000 miles of urban freeways.<sup>28</sup>

By the late 1950s, the interstate system began to take form and already exerted considerable influence on patterns of suburbanization. As the network of high-speed highways opened new land for development, residential subdivisions and multiple family apartment complexes materialized on a scale previously unimagined. Increasing national prosperity, the availability of low-cost, long-term mortgages, and the application of mass production and prefabrication methods created favorable conditions for home building and home ownership. These factors gave rise to merchant builders, who with loan guarantees and an eager market, were able to develop extensive tracts of affordable, mass produced housing at unprecedented speeds.

The increase of large, self-contained residential subdivisions, connected to the city by arterials and freeways, created a suburban landscape dependent on the automobile for virtually all aspects of daily living. Retailing facilities migrated to the suburbs and were clustered in community shopping centers or along commercial strips. Large regional shopping centers began to appear first along arteries radiating from the center city and then along the new circumferential highways. By 1960, the construction of suburban industrial and office parks added further impetus to the decentralization of the American city and the expansion of America's suburban landscape.







(above) **The Park-and-Shop (1930) in the Cleveland Park Historic District, Washington, D.C.**, designed by architect Arthur B. Heaton for real estate developers Shannon & Luchs, illustrates the convenience of shopping in one's neighborhood. Located on a busy street leading out of the city, this early shopping center provided an innovative front automobile parking lot and a collection of stores serving daily needs that were planned, developed, owned and managed as a single unit. (Photo courtesy Library of Congress, Theodor Horydczak Collection, LC-H814-T-1049)



**Designed as the "Town for the Motor Age," Radburn, New Jersey**, featured separate circulation systems for pedestrians and automobiles. A network of interconnected pedestrian paths and a grade separation (visible at the right), similar to the "arches" Olmsted designed for Central Park in New York City, enabled residents to reach their neighborhood park on foot and pass from one park to another without crossing busy streets. (Photo by Louis DiGeronimo, courtesy New Jersey Department of Environmental Protection)

# LAND USE AND SITE DEVELOPMENT

## SUBURBAN LAND DEVELOPMENT PRACTICES

The basic landscape unit of residential suburban development is the subdivision. The development process starts with a parcel of undeveloped land, often previously used for agricultural purposes, large enough to be subdivided into individual lots for detached, single-family homes and equipped with improvements in the form of streets, drainage, and utilities, such as water, sewer, electricity, gas, and telephone lines. In other suburban neighborhoods, groups of attached dwellings and apartment buildings would be arranged within a large parcel of land and interspersed with common areas used for walkways, gardens, lawns, parking, and playgrounds.

### *Developers and the Development Process*

Until the early twentieth century, most subdivisions were relatively small, and suburban neighborhoods tended to expand in increments as adjoining parcels of land were subdivided and the existing grid of streets extended outward. Subdivisions were generally planned and designed as a single development, requiring developers to file a plat, or general development plan, with the local governmental authority indicating their plans for improving the land with streets and utilities. Homes were often built by different builders and sometimes the owners themselves.

As metropolitan areas established large public water systems and other public utilities, developers could install utilities at a lower expense and often used enhancements, such as paved roads, street lighting, and public water, to attract buyers. Early planned subdivisions typically included utilities in the form of reservoirs, water towers, and drainage systems designed to follow the

natural topography and layout of streets. Power plants and maintenance facilities were also included to support many of the larger planned developments of multiple family dwellings.

Historically the subdivision process has evolved in several overlapping stages and can be traced through the roles of several groups of developers.

### *The Subdivider*

Beginning in the nineteenth century, the earliest group of developers, called “subdividers,” acquired and surveyed the land, developed a plan, laid out building lots and roads, and improved the overall site. The range of site improvements varied but usually included utilities, graded roads, curbs and sidewalks, storm-water drains, tree planting, and graded common areas and house lots. Lots were then sold either to prospective homeowners who would contract with their own builder, to builders buying several parcels at once to construct homes for resale, or to speculators intending to resell the land when real estate values rose. Land improvement companies typically organized to oversee the subdivision of larger parcels, especially those forming new communities along railroad and streetcar lines. Most subdividers, however, operated on a small scale—laying out, improving, and selling lots on only a few subdivisions a year.<sup>29</sup>

### *The Home Builder*

By the turn of the twentieth century, subdividers discovered they could enhance the marketability of their land by building houses on a small number of lots. At a time of widespread real estate speculation and fraud, home building helped convince prospective buyers that the plan on paper would materialize into a suburban neighborhood. Subdividers still competed in the market through the types of improvements they offered, such as graded and paved roads, sidewalks, curbs, tree

plantings, and facilities such as railroad depots or streetcar waiting stations. These developers continued to view their business as selling land, not houses, and the realization of subdivision plans took many years.<sup>30</sup>

### *The Community Builder*

The term “community builder” came into use in the first decade of the twentieth century in connection with the city planning movement and the development of large planned residential neighborhoods. Developers of this type were real estate entrepreneurs who acquired large tracts of land that were to be developed according to a master plan, often with the professional expertise of site planners, landscape architects, architects, and engineers. Proximity to schools, shopping centers, country clubs and other recreational facilities, religious structures, and civic centers, as well as the convenience of commuting, became important considerations for planning new neighborhoods and attracting home owners.<sup>31</sup>

Community builders, such as Edward H. Bouton of Baltimore and J. C. Nichols of Kansas City, greatly affected land use policy in the United States, influencing to a large extent the design of the modern residential subdivision. Nichols’s reputation was based on the development of the Country Club District in Kansas City—an area that would ultimately house 35,000 residents in 6,000 homes and 160 apartment buildings. Because they operated on a large scale and controlled all aspects of a development, these developers were concerned with long-term planning issues such as transportation and economic development, and extended the realm of suburban development to include well-planned boulevards, civic centers, shopping centers, and parks.<sup>32</sup>

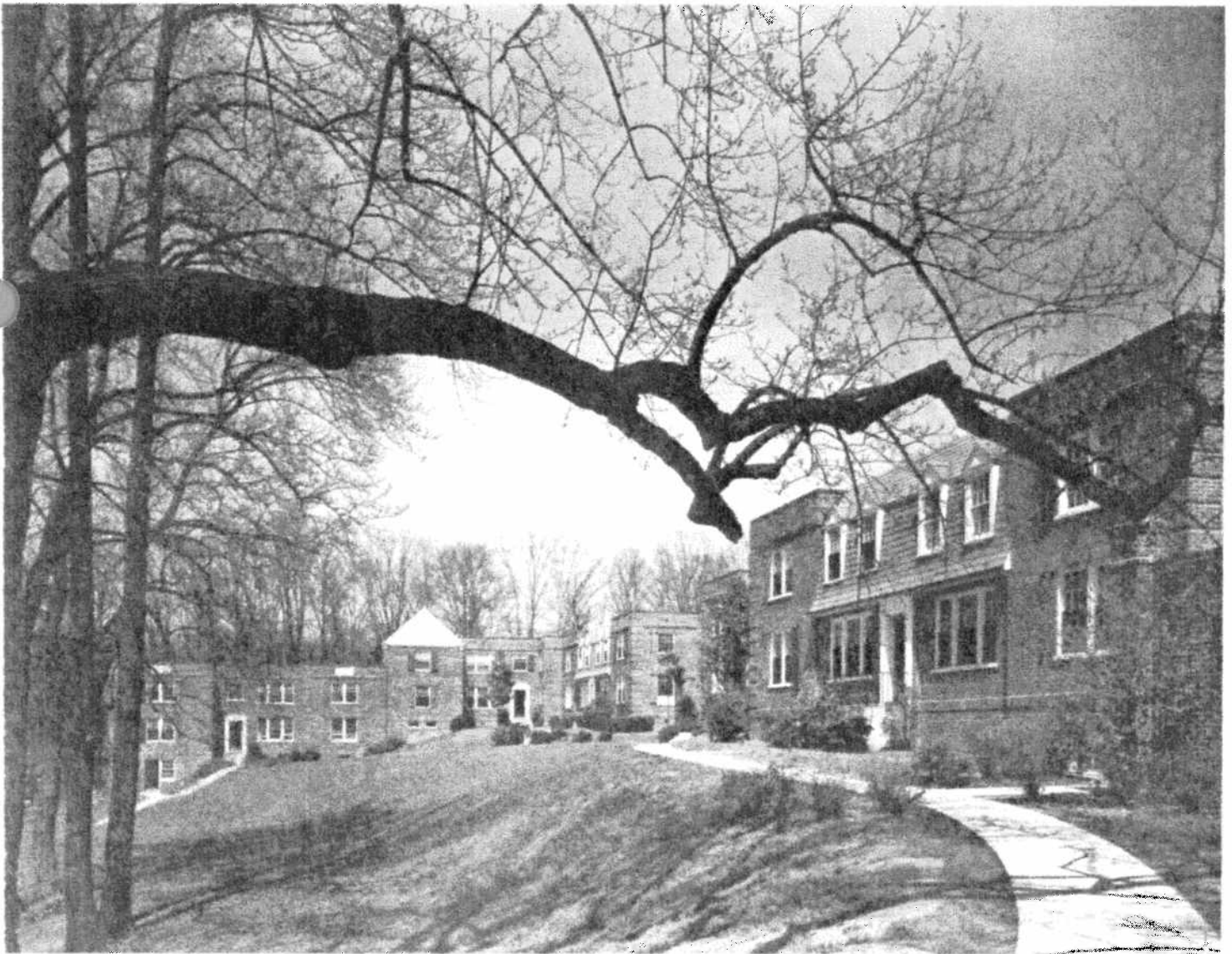
To promote predictability in the land market and protect the value of their real estate investments, community builders became strong

advocates of zoning and subdivision regulations. Nichols and other leading members of the National Association of Real Estate Boards (NAREB) sought alliances with the National Conference on City Planning (NCCP), American Civic Association (ACA), and American City Planning Institute (ACPI) to bring the issues of suburban development within the realm of city planning.<sup>33</sup>

Community builders often sought expertise from several design professions, including engineering, landscape architecture, and architecture. As a result, their subdivisions tended to

reflect the most up-to-date principles of design; many achieved high artistic quality and conveyed a strong unity of design. By relying on carefully written deed restrictions, as a private form of zoning, they exerted control over the character of their subdivisions, attracted certain kinds of home buyers, and protected real estate values. Many became highly emulated models of suburban life and showcases for period residential design by established local or regional masters.<sup>34</sup>

*Historic view (c. 1940) of Colonial Village, Arlington, Virginia, the first FHA-approved large-scale rental community. Begun in 1935 with financing from the New York Life Insurance Company, it was the first of many such projects by operative builder Gustave Ring which capitalized on the insurance industry's need for secure investments and the loan protection offered under the National Housing Act of 1934. Designed by architects Harvey Warwick and Frances Koenig in the Georgian Revival style, the community was influenced by models of American Garden City planning, particularly Chatham Village and World War I communities, such as Seaside Village and Yorkship. (Photo courtesy Library of Congress, Theodor Horydczak Collection, neg. LC-H814-T-2497-001)*



**Crestwood** (1920-1947) was one of many subdivisions developed in Kansas City's Country Club District by J. C. Nichols, one of the Nation's most influential community developers. The high standard of design for which Nichols became known relied upon the use of deed restrictions that were comprehensive and renewable and the collaboration of designers representing different professions. Landscape architects Hare & Hare laid out the streets, designed entry portals, and developed plans for many small parks, while a host of local architects designed spacious "garden homes" in a variety of revival styles. The city's first neighborhood association was founded here in 1922. (Photo by Brad Finch, courtesy Missouri Department of Natural Resources)

### **The Operative Builder**

By the 1920s, developers were building more and more homes in the subdivisions they had platted and improved, thereby taking control of the entire operation and phasing construction as money became available. In the 1930s when the home financing industry was restructured, such "operative builders" were able to secure FHA-approved, private financing for the large-scale development of neighborhoods of small single-family houses as well as rental communities offering attached

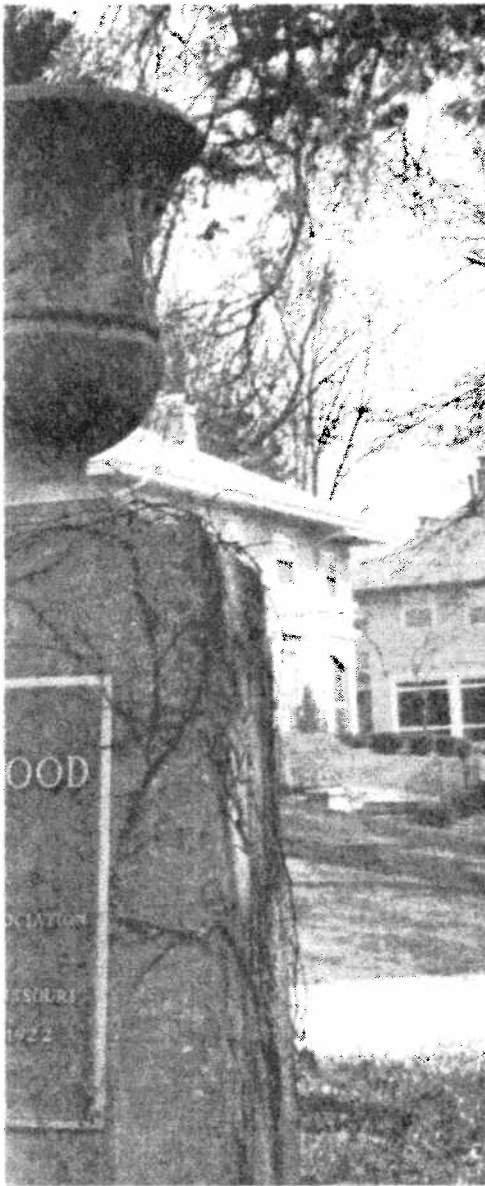
dwellings and apartments. Depression-era economics and the demand for defense-related and veterans' housing which followed encouraged them to apply principles of mass production, standardization, and prefabrication to lower construction costs and increase production time.

### **The Merchant Builder**

Federal incentives for the private construction of housing, for employees in defense production facilities during World War II and for returning



veterans immediately following the War, fostered dramatic changes in home building practices. Builders began to apply the principles of mass production, standardization, and prefabrication to house construction on a large scale. Builders like Fritz B. Burns and Fred W. Marlow of California began to build communities of an unprecedented size, such as Westchester in southeast Los Angeles, where more than 2,300 homes were built to FHA standards between 1941 and 1944.<sup>35</sup>



By greatly increasing the credit available to private builders and liberalizing the terms of FHA-approved home mortgages, the 1948 Amendments to the National Housing Act provided ideal conditions for the emergence of large-scale corporate builders, called “merchant builders.” Because of readily available financing, streamlined methods of construction, and an unprecedented demand for housing, these builders acquired large tracts of land, laid out neighborhoods according to FHA principles, and rapidly constructed large numbers of homes. Since completed homes sold quickly, developers could finance new phases of construction and, as neighborhoods neared completion, move on to new locations.

On Long Island, William Levitt began building rental houses for veterans in 1947. Soon after he shifted to home sales and perfected the process of on-site mass production which became the basis for the large-scale “Levittowns” he created in New York, New Jersey, and Pennsylvania. Outside Chicago, Philip Klutznick, former administrator of the National Housing Agency, with the expertise of town planner Elbert Peets, created the town of Park Forest. In 1949 Fritz B. Burns and Henry J. Kaiser of Kaiser Community Homes built 1,529 single-family homes at Panorama City in California, a suburban community which resulted from the collaboration of Kaiser’s industrial engineers and the Los Angeles architectural firm of Wurde-man and Becket. In the late 1940s, Joseph Eichler began the first of his forward looking subdivisions of contemporary homes in California.<sup>36</sup>

Merchant builders greatly influenced the character of the post-World War II metropolis. The idea of selling both a home and a lifestyle was not simply a marketing ploy by developers to ensure sales, it represented the integration of the suburban ideals of home ownership and community in a single real estate transaction. For many, this meant the attainment of middle-class status, financial prosperity, and family stability—the fulfillment of the American dream.

## ***Financing Suburban Residential Development***

### ***Early Trends***

Until the mid-twentieth century, home ownership was costly and beyond the reach of most Americans. In the nineteenth century, most well-established families purchased their homes outright. By the early twentieth century, several organizations were making home ownership possible for many moderate-income families by offering installment plans that required a small down payment and modest monthly payments. These included building and loan associations, real estate developers, such as Chicago’s Samuel Gross, and even companies, such as Sears & Roebuck, which were in the business of selling mail order houses.

In the 1920s, it was common practice for home owners to secure short-term loans requiring annual or semi-annual interest payments and a balloon payment of the principal after three to five years. This meant that home owners needed to refinance periodically and often carried second and third mortgages. This system worked well during times of prosperity, but during a period of economic downturn and declining real estate values, it was disastrous.<sup>37</sup>

Beginning in the early 1930s, a series of Federal laws dramatically expanded the financing available for the purchase of owner-occupied dwellings and stimulated private investment in the home building industry through the construction of suburban subdivisions and rental apartment villages. The program of Federal home mortgage insurance, established under the National Housing Act of 1934, set the stage for the emergence of large operative builders, and after World War II, merchant builders.

### ***President’s Conference on Home Building and Home Ownership***

President Herbert Hoover drew attention to housing as a national priority, especially in the aftermath of the stock market crash in 1929 when the growth of the home building industry came to an abrupt halt and the rate of mortgage foreclosures quickly accelerated.

*Figure 2.*  
**Federal Laws and Programs Encouraging Home Ownership**

1932	<b>Federal Home Loan Bank Act</b> (47 Stat. 725) establishes home loan bank system authorizing advances secured by home mortgages to member institutions.	1942	<b>Federal defense housing and home loan programs</b> consolidated in the National Housing Agency under Executive Order 9070.
1933	<b>Home Owners' Loan Act</b> (48 Stat. 129) establishes Home Owners' Loan Corporation, an emergency program (1933-36) introducing the concept of low-interest, long-term, self-amortizing loans and enabling home owners to refinance mortgages with five percent, 15-year amortizing loans.	1944	<b>Servicemen's Readjustment Act</b> (58 Stat. 291), commonly known as the "GI Bill," authorized Veteran's Administration to provide loan guarantees for home mortgages for World War II veterans.
1934	<b>National Housing Act</b> (48 Stat. 1246) creates Federal Housing Administration (FHA) to establish national standards for the home building industry and authorizes Federal insurance for privately-financed mortgages for homes, housing subdivisions, and rental housing. First FHA mortgages require a 20 percent down payment and monthly payments amortized over 20 years.	1946	<b>Veterans' Emergency Housing Act of 1946</b> (60 Stat. 215) authorizes Federal assistance in housing returning veterans and extends FHA authority to insure mortgages under Title VI.
1938	<b>Amendments to the National Housing Act</b> (52 Stat. 8) allow Federal mortgage insurance on as much as 90 percent of home's value and extend payments up to 25 years (Title II). Law authorizes the creation of the Federal National Mortgage Association (Fannie Mae) to buy and sell mortgages under the Reconstruction Finance Corporation.	1947	<b>National Housing Agency renamed Housing and Home Finance Agency</b> (61 Stat. 954).
1941	<b>Amendments to the National Housing Act</b> (55 Stat. 31) adds Title VI, creating a program of Defense Housing Insurance targeting the construction of housing in areas designated critical for defense and defense production.	1948	<b>Housing Act of 1948</b> (62 Stat. 1276) liberalizes FHA mortgage terms by allowing insurance on up to 95 percent of a home's value and loan payment periods extending as much as 30 years (Section 203). Also adds Section 611 to Title VI of the National Housing Act to encourage the use of cost-reduction techniques through large-scale modernized site construction of housing.
		1949	<b>Federal Housing Act of 1949</b> (63 Stat. 413) establishes a national housing directive to provide Federal aid to assist in community development, slum clearance, and redevelopment programs.
		1954	<b>Housing Act of 1954</b> (68 Stat. 590) provides comprehensive planning assistance under Section 701.

In December 1931, he convened the President's Conference on Home Building and Home Ownership to examine all aspects of the housing industry. The conference attracted several thousand participants, including many of the Nation's experts in home financing, community planning, house design, and zoning.

The conference was forward looking in seeking solutions for lowering construction costs, for modernizing houses for comfort and efficiency, and for stabilizing real estate values. Conference committees strongly endorsed advances in zoning, construction, community planning, and house design. Of prime concern, however, was broadening home ownership and creating a

system of home mortgage credit that provided better protection for both home owners and lending institutions.<sup>38</sup>

**Federal Home Loan Banking System**

As an initial remedy, the Federal Home Loan Bank Act of July 22, 1932, created the Federal home loan bank system by establishing a credit reserve and

authorizing member institutions, primarily savings and loan associations, to receive credit secured by first mortgages. This was an important and lasting step in organizing the system of mortgage financing that remains in place today. Legislation in 1938 created the Federal National Mortgage Association, commonly known as “Fannie Mae,” to buy and sell mortgages from member institutions, making additional money available for home mortgages.<sup>39</sup>

### **Home Owners’ Loan Corporation**

When the Roosevelt Administration began in 1933, home foreclosures were occurring at a rate of 1,000 per day. Through the emergency Home Owners’ Loan Corporation, established by law June 13, 1933, the Federal government forestalled the avalanche of foreclosures and began to stabilize real estate values. For the first time, home owners were able to secure home loans that were fully amortized over the length of the loan—in this case 15 years at five percent rate of interest. Although the short-lived program lasted only three years, it was considered a success economically and set an important precedent for the use of long-term, low-interest amortized home mortgages, which would a year later become the foundation of the FHA mortgage insurance program.<sup>40</sup>

### **Federal Housing Administration (FHA)**

The creation of a permanent, national program of **mutual mortgage insurance**, under Title II of the National Housing Act of 1934 signed into law by President Franklin D. Roosevelt on June 27, 1934, revolutionized home financing and set in motion a series of events that effectively broadened home ownership. The FHA was authorized to provide Federal insurance for privately-financed mortgages for homes, housing subdivisions, and rental housing. Through the development of standards, as well as its review and approval of properties for mortgage insurance, the FHA institutionalized principles for both neighborhood planning and small house design.

The Federal government insured loans granted by private lending insti-

tutions for as much as 80 percent of a property’s value. Mortgages were to be fully amortized through monthly payments extending over 20 years. Interest rates were to be relatively low, not exceeding six percent at the time, and required down payments were set at 20 percent of the cost of a home. Amendments to the Act in 1938 allowed Federal mortgage insurance on as much as 90 percent of a home’s value and extended payments up to 25 years. The Housing Act of 1948 further liberalized FHA mortgage terms by allowing insurance on as much as 95 percent of a home’s value and extending the period of repayment up to 30 years.<sup>41</sup>

### **Defense Housing Programs**

The addition of Title VI to the National Housing Act on March 28, 1941, created a program of Defense Housing Insurance, targeting rental housing in areas designated critical for defense and defense production. This was continued to provide veterans’ housing after the War and eventually enabled operative builders to secure Federal mortgage insurance on as much as 90 percent of their project costs. The FHA and other World War II housing programs, including the Defense Homes Corporation, financed through the Reconstruction Finance Corporation, and public housing projects, funded under the Lanham Act (54 Stat. 1125), were consolidated in the National Housing Agency in 1942, which was renamed the Housing and Home Finance Agency in 1947.<sup>42</sup>

### **The “GI” Bill**

Under the Servicemen’s Readjustment Act of 1944, commonly called the “G.I. Bill of Rights,” the Veterans Administration (VA) provided guarantees on home mortgages for veterans returning from military service. The liberalized terms of FHA-approved loans enabled veterans to use their “GI” benefit in place of cash, thereby eliminating the down payment on a new house altogether.

## **Planning and Domestic Land Use**

Beginning in the 1890s, the City Beautiful movement sparked renewed interest in the formal principles of Renaissance and Baroque planning, especially in the design of downtown civic centers and planned industrial towns. The Columbian Exposition of 1893 demonstrated the value of a comprehensive planning process that called for the development of a master plan and the collaboration of public officials and designers representing several professions. The writings of Charles Mulford Robinson and the example of Daniel Burnham’s Chicago Plan (1909) stimulated interest in city improvements and offered models for imposing a rational and orderly design upon the Nation’s growing industrial cities.<sup>43</sup>

Calling for a synthesis of aesthetics and functionalism, the City Beautiful movement gained momentum in the early twentieth century, becoming inseparable from the broader movement for efficiency, civic improvements, and social reform that marked the Progressive era. The movement exerted considerable influence beyond the center city, principally in the form of extensive boulevard and parkway systems, public parks and playgrounds, public water systems, and other utilities. In many cities, these measures established an infrastructure that would support and foster suburban development for decades to come.

Concerned with metropolitan growth, city planners became advocates for a coordinated planning process that embraced transportation systems, public utilities, and zoning measures to restrict land use. Dialogue took place among community builders, who made up the National Association of Real Estate Boards (NAREB) and typically relied on deed restrictions to control land use, and planners in organizations such as the American Civic Association (ACA), American City Planning Institute (ACPI), and National Conference on City Planning (NCCP). Together these groups promoted local zoning and comprehensive planning measures, and encouraged the development of residential suburbs

according to established professional principles of landscape architecture and community planning.

### Deed Restrictions

Early land developers maintained control over the development of their subdivisions through the use of deed restrictions. The placement of restrictions on the deed of sale ensured that land was developed according to the original intent; it also protected real estate values for both home owners and the subdivider, who expected to sell improved lots over the course of many years. According to Marc Weiss, restrictions "legitimized the idea that private owners should surrender some of their individual property rights for the common good" and became the "principal vehicle by which subdividers and technicians tested and refined the methods of modern land use planning." Restrictions were attached to the sale of land and considered binding for a specified period of time, after which they could be renewed or terminated. Restrictions were enforceable through civil law suits filed by the developer or other property owners.<sup>44</sup>

Deed restrictions were used to establish neighborhood character by controlling the size of building lots and dictate the design and location of houses. With the advice of Olmsted and Vaux about 1870, the Riverside Improvement Company introduced guidelines requiring a mandatory 30-foot setback and setting a minimum cost of construction. In the exclusive neighborhoods of St. Louis, called "private places," deed restrictions set a minimum cost on dwellings to be built and established mandatory setbacks to ensure that the neighborhood assumed a cohesive and dignified character. Developer Edward H. Bouton's Roland Park (1891), in Baltimore, Maryland, became recognized as one of the Nation's most successful residential developments in large part due to an extensive set of deed restrictions that controlled numerous aspects of design and land use, including lot sizes, building lines, setbacks, minimum dwelling values, and requirements for owner residency.<sup>45</sup>

The use of such private restrictions was upheld at the 1916 meeting of the NCCP by leading representatives of several professions, including Kansas City community builder J. C. Nichols, city planner John Nolen, and landscape architect Frederick Law Olmsted Jr. During the 1920s, deed restrictions became the hallmark of a range of planned residential communities, fashioned as country club or garden suburbs, that were attracting an increasing professional and rising middle class of American cities.<sup>46</sup>

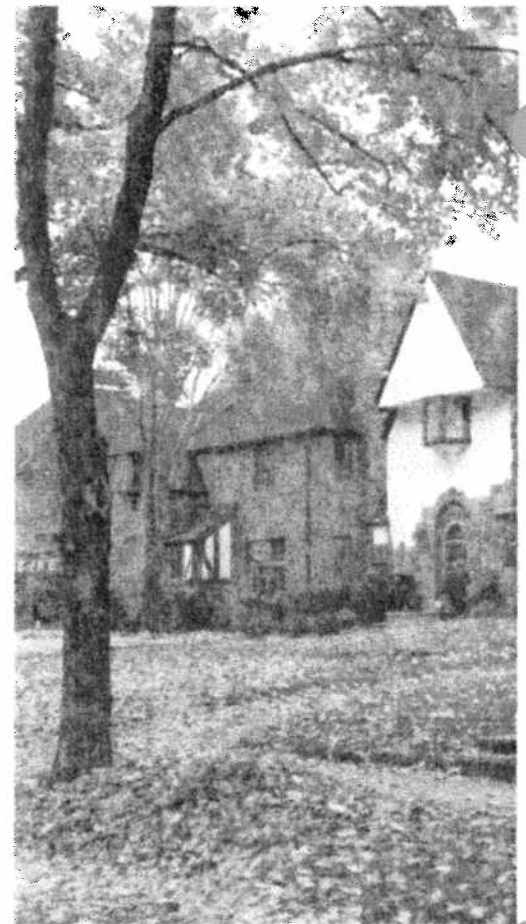
In 1928 the Institute for Research in Land Economics and Public Utilities in Chicago published Helen C. Monchow's *Use of Deed Restrictions in Subdivision Development*, which set forth a comprehensive list of items to be included in deed restrictions, including design factors such as the height of buildings and lot frontage as well as limitations on occupancy and commercial activities. The Committee on Subdivision Layout at the 1931 President's Conference adapted Monchow's list in its recommendations and endorsed deed restrictions—the principal means for ensuring neighborhood stability, maintaining real estate values, and protecting residential neighborhoods from nonconforming industrial or commercial activities—especially in jurisdictions lacking zoning ordinances. The idea that deed restrictions were the foundation of good subdivision design was underscored by the committee's membership, which included preeminent designers John Nolen, Henry Hubbard, and Henry Wright, and was chaired by Harland Bartholomew, an urban

**Streetscape of early Tudor Revival homes in the Shaker Village Historic District (1919-1950), Shaker Heights, Ohio.** Covering almost 3000 acres and including more than 4500 contributing resources, the district retains the cohesive architectural character envisioned by original developers Oris P. and Mantis J. van Sweringen. Set forth in the Shaker Village Standards and enforced through deed restrictions, special design principles required that homes be professionally designed and adhere to one of four architectural styles, a uniform setback from the street, and a minimum cost of construction. (Photo by Patricia J. Forgas, courtesy Ohio Historic Preservation Office)

planner and theorist renowned for work in St. Louis and Des Moines.<sup>47</sup>

Within the context of worsening economic conditions, developers and community builders alike examined the use of such deed restrictions in creating pleasing neighborhoods of moderate priced homes under the new FHA programs. Real estate practices and the rating system used to approve suburban neighborhoods for FHA-insured loans encouraged the use of restrictions in the 1930s and 1940s as a safeguard for maintaining neighborhood stability and property values. The Urban Land Institute's *Community Builder's Handbook*, first published in 1947, advocated deed restrictions, including ones establishing design review committees, to ensure that neighborhoods were maintained in harmony and conformity with the original design intent.

By mid-century the use of deed restrictions to qualify prospective home owners and residents based on factors,





such as race, ethnicity, and religion, became challenged in American courts. In the landmark decision, *Shelley v. Kraemer*, 334 U.S. 1, 1948, the U.S. Supreme Court determined such restrictions based on race “unenforceable,” providing a legal foundation for the principle of equal access to housing and influencing changes in Federal housing policy.<sup>48</sup>

### **Zoning Ordinances and Subdivision Regulations**

Local governments began to impose zoning ordinances in the early twentieth century as a means of controlling land use and ensuring the health, welfare, and safety of the American public. In 1909 Los Angeles passed the first zoning ordinance, creating separate districts or “zones” for residential and industrial land uses. In 1916 New York City was among the first to impose

regulations on the height and mass of buildings through local legislation.

In support of the Better Homes movement following World War I, the U.S. Department of Commerce joined private advocacy groups, such as the NCCP, ACA, and ACPI, in encouraging local legislation for zoning. The Department began publishing an annual report, *Zoning Progress in the United States*, and a series of manuals including *A Zoning Primer* (1922), *A City Planning Primer* (1928), *The Preparation of Zoning Ordinances* (1931), and *Model Subdivision Regulations* (1932). In 1924 the Department’s Advisory Committee on Zoning issued a model zoning enabling act for State governments. By 1926 zoning ordinances had been adopted by more than 76 cities, and by 1936, 85 percent of American cities had adopted zoning ordinances.<sup>49</sup>

Zoning proposals faced opposition and legal challenges in many localities.

In the 1926 case, *Village of Euclid, Ohio v. Ambler Realty Co.* (272 U.S. 365), the U.S. Supreme Court upheld the constitutionality of zoning in which exclusively residential development of single-family houses was supported as the most inviolate of land uses.<sup>50</sup>

The 1931 President’s Conference upheld zoning regulations and comprehensive planning measures as the primary means for controlling metropolitan growth and as an essential factor in designing and regulating stable residential neighborhoods. This was primarily the work of the Committee on City Planning and Zoning, under the leadership of Frederic A. Delano who had previously chaired the committee for New York’s Regional Plan, which concluded that zoning provisions should promote a sense of community and that residential development throughout the metropolitan region should be organized in neighborhood units based on Clarence Perry’s model.<sup>51</sup>

### **Comprehensive Planning and Regional Plans**

Comprehensive planning, coupled with zoning and subdivision regulations, became the focal point of discussions between the Nation’s leading community builders and urban planners beginning in 1912. Organizations such as the ACPI, NCCP, and ACA brought planners, builders, and real estate interests together to promote controls over land use in the Nation’s growing metropolitan areas.

A joint statement of the NAREB and ACPI in 1927 led to the U.S. Department of Commerce’s issuance of a model statute, *A Standard City Planning Act*, to encourage State governments to pass legislation enabling local and metropolitan land-use planning. California became a leader in real estate and planning reform, establishing the Nation’s first State planning statute and enabling subdivision regulations by local ordinance in the late 1920s.<sup>52</sup>

Regional planning commissions and associations began to form in burgeoning metropolitan areas such as New York, San Francisco, and Los Angeles, for the purpose of planning and



coordinating metropolitan growth and developing regional plans. Planning documents such as the multiple volume *Regional Survey of New York and Its Environs* reflected some of the most advanced thinking of the time and addressed a variety of suburban issues such as neighborhood planning, commercial and industrial zoning, recreation, and transportation. Plans would receive substantial attention at the 1931 President's Conference, and would have far-reaching influence on the development of FHA standards for the design of residential suburbs.<sup>53</sup>

## TRENDS IN SUBDIVISION DESIGN

Beyond transportation, an important set of "push and pull" factors motivated families in the mid-nineteenth century to establish their home in the "borderland" outside the city. First was the "push" factor: as American cities rapidly industrialized, they became increasingly crowded and congested places perceived to be dangerous and unhealthy. Creating a "pull" factor, domestic reformers, such as Catharine Beecher and Andrew Jackson Downing, provided a strong antidote for urban living by extolling the moral virtues of country living and domestic economy. The Romantic landscape movement, often called the Picturesque,

provided a compelling image of life in a semi-rural village where dwellings in a host of romantic revival styles blended into a horticulturally rich, naturalistic landscape. In such an environment, the home became a sanctuary from the evils and stresses of life in the city and a proper setting for the practice of democratic ideals.<sup>54</sup>

In the *Treatise on the Theory and Practice of Landscape Gardening* (1841), Downing provided extensive instructions on the location, layout, and planting of rural homes. For an American audience, Downing reinterpreted the principles of the English landscape gardening tradition of Humphry Repton and Capability Brown and the writings of English theorist John Claudius Loudon. He introduced readers to the principles of variety, unity, and harmony, which could be applied to the naturalistic design of home grounds that attained an aesthetic ideal characterized as "picturesque" or "beautiful."<sup>55</sup>

In coming decades, Downing's ideas would transform the American countryside and attract many followers who would give material form to the suburban ideal. Naturalistic gardening principles espoused by Downing, Robert Morris Copeland, H. W. S. Cleaveland, Maximilian G. Kern, Jacob Weidenmann, and others left their imprint in a variety of subdivision types from

gridiron plats to planned curvilinear suburbs.<sup>56</sup>

In the 1890s advances in city planning associated with the City Beautiful movement began to influence both the location and design of residential subdivisions. While the expansion of streetcar lines fostered widespread suburban development, park and parkway systems in many cities became a magnet for upper middle-income neighborhoods. Nineteenth-century influences of informal, naturalistic landscape design gave way to more formal plans based on the Beaux Arts principles of Renaissance and Baroque design, often mirroring the form of planned towns and cities.

In the years preceding and following World War I, American landscape traditions fused with English Garden City influences to form distinctive American garden suburbs with gently curving,

*Rows of bungalows characterize the rectilinear grid of the Santa Fe Place Historic District (1897-1925) in Kansas City, Missouri. Low in profile and structurally simple, the bungalow with an open floor plan and prominent porch, replaced the ornate Victorian suburban home, giving rise in the first decades of the twentieth century to the ubiquitous "bungalow suburbs" of many midwestern cities. (Photo by Patricia Brown Glenn, courtesy Missouri Department of Natural Resources)*



Figure 3.

**Trends in Suburban Land Development and Subdivision Design**

1819	Early rectilinear suburb developed at Brooklyn Heights, New York.	1904	American Civic Association (ACA) formed by the merging of the American League for Civic Improvement and American Park and Outdoor Art Association.
1851	Early curvilinear suburb platted at Glendale, Ohio.	1907-50s	Country Club District, Kansas City, developed by community builder J. C. Nichols, with landscape architectural firm of Hare and Hare.
1853	First village improvement society founded at Stockbridge, Massachusetts.	1909	Los Angeles passes first zoning ordinance creating separate districts or zones for residential land use.
1857-59	Llewellyn Park, New Jersey, platted outside New York City.	1909	Raymond Unwin's <i>Town Planning in Practice</i> published, adopted in England and United States.
1858	First urban park in U. S., Central Park, developed in New York City by Olmsted and Vaux.	1909-11	Forest Hills Gardens developed by Russell Sage Foundation, with architect Grosvenor Atterbury, and landscape architect Frederick Law Olmsted, Jr.
1869	Riverside, outside Chicago, platted by Olmsted and Vaux, establishes ideal model of the Picturesque curvilinear suburb.	1909	National Conference on City Planning (NCCP) founded; First National Conference on City Planning and Problems of Congestion convened.
1869-71	Garden City, Hempstead, Long Island, platted by Alexander Tunney Stewart.	1911-29	Shaker Village, near Cleveland, Ohio, by the van Sweringen Brothers.
1876-92	Sudbury Park, Maryland, designed by Frederick Law Olmsted.	1915	Kingsport, Tennessee, laid out by city planner John Nolen.
1889	Camillo Sitte (Austria), author of <i>Der Stadtebau</i> , calls attention to the informal character of Medieval towns, as a model for village design.	1916	New York City establishes zoning ordinance.
1891-1914	Roland Park, Baltimore, developed by Edward H. Bouton, designed by the Olmsted firm using extensive deed restrictions and featuring cul-de-sacs.	1917	American City Planning Institute (ACPI) founded, renamed the American Institute of Planners (1938).
1893	Columbian World's Exposition, Chicago, introduction of comprehensive planning and City Beautiful movement	1918-19	World War I emergency housing programs under United States Housing Corporation (U.S. Department of Labor) and Emergency Fleet Housing Corporation (U.S. Shipping Board).
1898	Ebenezer Howard, Garden City diagram published in <i>Tomorrow</i> (republished as <i>Garden Cities of Tomorrow</i> , 1902).	1922	Publication of <i>The American Vitruvius: An Architect's Handbook of Civic Art</i> by Werner Hegemann and Elbert Peets.
1902-05	Garden cities of Letchworth (1902) and Hampstead Gardens (1905), England, designed by Parker and Unwin, introducing cul-de-sacs, superblock planning, open-court clustering, and other Garden City features.	1923	U.S. Division of Building and Housing (U.S. Department of Commerce) issues model zoning enabling act for State governments.
1902	<i>Improvement of Towns and Cities</i> by Charles Mulford Robinson calls for civic improvements such as roads, site planning, playgrounds and parks, street plantings, paving, lighting, and sanitation.		

Figure 3, continued

1921	John Nolen makes the first plan for the Garden City at Mariemont, Ohio.	1935	First phase of construction begins at Colonial Village, Arlington, Virginia, the first privately financed, large-scale rental housing community insured by the FHA under Section 207 of the National Housing Act of 1934.
1923	Regional Planning Association of America (RPAA) founded.		
1924	Sunnyside Gardens, New York City, designed by Clarence Stein and Henry Wright of RPAA for the City Housing Corporation.	1935-38	Resettlement Administration establishes greenbelt communities at Greenbelt, Maryland; Greenhills, Ohio; Greendale, Wisconsin; and Greenbrook, New Jersey (never executed).
	<i>Standard State Zoning Enabling Act</i> published by Secretary of Commerce Herbert Hoover's Advisory Committee on Zoning.	1936	FHA publishes <i>Planning Neighborhoods for Small Houses</i> , with the first standards for the design of neighborhoods of small houses, encouraging patterns of curvilinear streets, cul-de-sacs for safety and economy, and neighborhood character.
1926	U.S. Supreme Court upholds constitutionality of zoning ( <i>Village of Euclid, Ohio, v. Ambler Realty Company</i> , 272 U.S. 365, 1926).		Urban Land Institute founded (independent nonprofit research organization).
1927	Publication of John Nolen's <i>New Towns for Old: Achievements in Civic Improvement in Some American Small Towns and Neighborhoods</i> .	1939	Early large-scale FHA-approved neighborhoods of single-family dwellings developed, including Edgemore Terrace, Wilmington, Delaware, and Arlington Forest, Arlington, Virginia.
1928	<i>Standard City Planning Enabling Act</i> published by U.S. Department of Commerce's Advisory Committee on City Planning and Zoning following 1927 joint resolution by ACPI and NAREB. Helen C. Monchow's <i>The Use of Deed Restrictions in Subdivision Development</i> published by Institute for Research in Land Economics.	1941	Developer Fritz Burns begins Westchester, Los Angeles, using FHA mortgage insurance for housing defense workers under Title VI of National Housing Act, as amended.
1928	Radburn, New Jersey, designed as a "Town for the Motor Age" by RPAA-planners Clarence Stein and Henry Wright.	1942	Establishment of the National Association of Home Builders (NAHB), Home Builders and Subdividers Division split from NAREB.
1929	Clarence Perry's Neighborhood Unit plan published in volume 7 of the <i>Regional Survey of New York and Its Environs</i> .	1946-47	Former NHA administrator Phillip Klutznick, and town planner Elbert Peets, begin planning of Park Forest, Illinois; and William Levitt begins development of the first Levittown on Long Island.
1929	Wall Street Crash, Great Depression follows.	1947	Urban Land Institute publishes first edition of <i>Community Builder's Handbook</i> .
1931	President's Conference on Home Building and Home Ownership convened; <i>Neighborhoods of Small House Design</i> by Robert Whitten and Thomas Adams published.	1948	United States Supreme Court rules that covenants based on race to be "unenforceable" and "contrary to public process" ( <i>Shelley v. Kraemer</i> 334 U.S.1).
1932	U.S. Department of Commerce publishes <i>Model Subdivision Regulations</i> .	1949	Joseph Eichler develops his first tract of modern housing at Sunnyvale, California.
1932-36	Chatham Village, Pittsburgh, developed by Buhl Foundation, providing a model for Garden City planning incorporating superblock and connected dwellings.	1951	Publication in England of <i>Toward New Towns</i> by Clarence S. Stein.
1934	<i>The Design of Residential Areas</i> by Thomas Adams published.	1961	Innovative proposal for 260-home subdivision published in <i>Arts &amp; Architecture's</i> Case Study Series.

tree lined streets; open landscaped lawns and gardens; and attractive homes in a panoply of styles. While American designers looked to the historic precedents offered by the European continent for inspiration, the residential communities they fashioned were unequivocally American in the treatment of open space, accommodation of the automobile, the entrepreneurship of real estate developers, and reliance on American industry to make housing functional yet aesthetically appealing.

By the end of the 1930s, the American automobile suburb of small, moderately priced homes along curving tree lined streets and cul-de-sacs had taken form. Reflecting a synthesis of design influences that spanned a century, it was the product of the 1931 President's Conference on Home Building and Home Ownership and the institutionalization of FHA housing standards among the Nation's home builders and home mortgage lenders. It provided the template for the quintessential suburb that in the years following World War II would come to typify the American experience.

### Gridiron Plats

In the United States, the gridiron city plan provided the most profitable means to develop and sell land for residential use. Most American cities laid out in the second half of the nineteenth century were platted in extensive grids. These gridiron plats would guide their future growth, many following the rectilinear land surveys called for by the Northwest Ordinance and the Homestead Act.<sup>57</sup>

The introduction of the streetcar in many cities extended the opportunity for home ownership in suburban neighborhoods to middle- and working-class households by the end of the nineteenth century. Streetcar lines helped form the initial transportation system, overlaying the grid plan of streets and creating a checkerboard of major arterial routes. The gridiron remained the most efficient and inexpensive way to subdivide and sell land in small lots. Many cities extended out-

ward between 1890 and 1920, fulfilling the demand for low-cost houses and providing the template for what has been named the "bungalow suburb."<sup>58</sup>

A similar pattern occurred in the cities laid out after the introduction of the mass produced automobile. In the San Fernando Valley near Los Angeles, development after 1940 took place on a grid of arterial and collector streets that conformed to the section lines of the rectilinear survey; the grid, measuring one square mile, was further subdivided to allow more intensive development.<sup>59</sup>

Gridiron plats received serious criticism in the twentieth century for several reasons: the uniformity of housing, lack of fresh air and sunlight afforded by their narrow lots, the lack of adequate recreational space, and the speculative nature of home building they fostered. Planners and landscape architects looked first to nineteenth-century Picturesque principles of design and later more formal designs with radial curves as an antidote to the endless monotonous grid of American cities.

### Planned Rectilinear Suburbs

The idea for a residential suburb—set apart from center city and accessible by some form of horse-drawn or mechanized transportation—is believed to have originated in the early nineteenth century. These contrasted to urban enclaves with enclosed private gardens, such as Boston's Louisburg Square, or residential streets arranged around public squares, such as the Colonial-period plan for Savannah, Georgia, which were within walking distance of the center city.

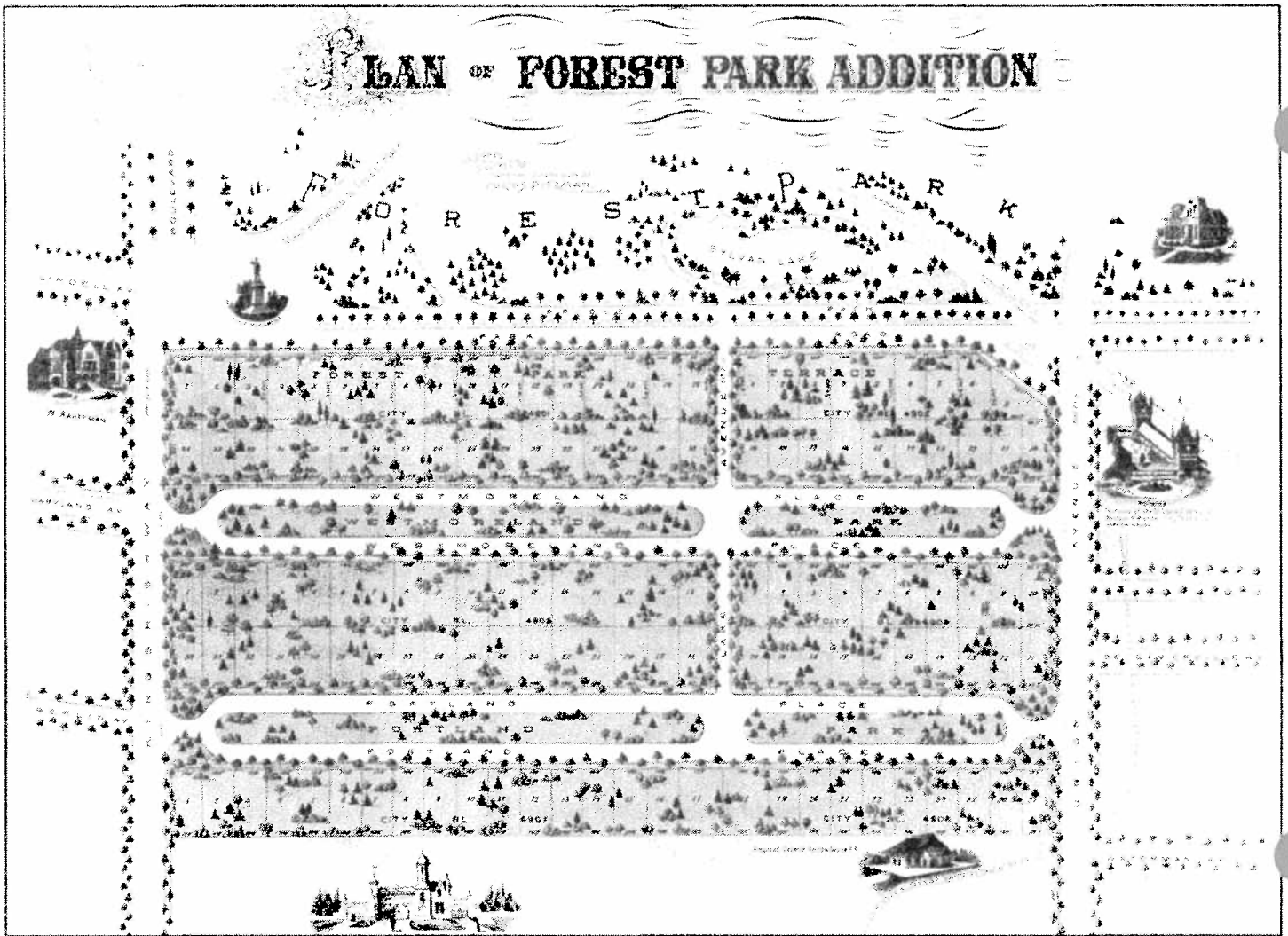
One of the earliest documented residential suburbs is Brooklyn Heights, established in 1819 across the East River from lower Manhattan. Accessible by ferry, the suburb featured a 60-acre plat laid out in a grid with streets 50 feet in width and blocks measuring 200 by 200 feet.<sup>60</sup>

In 1869, merchant and philanthropist Alexander Tunney Stewart purchased a 500-acre parcel of land on Long Island for the purpose of creating a model planned city, "Garden City," which was to be connected to Brooklyn

and New York City by a private commuter railroad. Engineer Delameter S. Denton developed a plan subdividing the tract into uniform building lots along two parallel streets, and architect John Kellum designed several model homes in picturesque revival styles. Thousands of mature shade trees were planted along the streets, and 15 miles of picket fences were constructed to give the new community the character of a small village.<sup>61</sup>

In the Midwest, landscape designer and park planner, Maximilian G. Kern exerted considerable influence on the landscape design and embellishment of neighborhoods based on the rectilinear grid. Kern's *Rural Taste in Western Towns and Country Districts* (1884) offered developers advice on improving the design of residential streets and public spaces while working within the ubiquitous grid of western town planning. With civil engineer Julius Pitzman, Kern designed Forest Park Addition (1887) in St. Louis, a residential subdivision featuring private streets and long landscaped medians, which became a model for the city's exclusive neighborhoods known as "private places."<sup>62</sup>

Highly influential was the modified gridiron plan used by community builder J. C. Nichols in developing the Country Club District in Kansas City, Missouri, and Kansas. Developed as a garden suburb between 1907 and the early 1950s, the District's many residential subdivisions formed a grid of long, narrow rectangular blocks interspersed by an occasional curvilinear or diagonal avenue or boulevard. The landscape architecture firm of Hare and Hare, working for Nichols over a 20-year period beginning in 1913, modified the rectilinear grid so that many of the roads running east to west followed the contours of the rolling topography rather than the straight, parallel lines drawn by the land surveyor. Departure from the grid enabled the designers to create triangular islands at the site of intersecting roads which were developed as small parks and gardens.<sup>63</sup>



**Plan (1887) of Forest Park Addition**, the largest and most elaborate of St. Louis's "private places," was the collaborative design of engineer Julius Pitzman and the city's former park superintendent Maximilian G. Kern, who was also the influential author of *Rural Taste in Western Towns and Country Districts* (1884). (Lithograph by Gast, courtesy Missouri Historical Society, neg. 21508)

### Early Picturesque Suburbs

The Picturesque suburb with its plat of curvilinear streets and roads, the product of the Romantic landscape movement, became the means by which upper-income city dwellers sought to satisfy their aspiration for a suburban home within commuting distance of the city. Although Downing's books focused on the landscape design of individual homes in a rural or semi-rural setting, his ideas for the

curvilinear design of suburban villages appeared in his essays, "Hints to Rural Improvements" (1848) and "Our Country Villages" (1850) which were published in the *Horticulturalist*.<sup>64</sup>

Early Picturesque, curvilinear suburbs, such as Glendale (1851), Ohio, drew from the Picturesque theories of Downing and Loudon as well as the Rural Cemetery movement, which followed the example set in 1831 by Mount Auburn Cemetery outside Boston. By mid-century, rural cemeteries exhibiting curvilinear roadways, naturalistic landscape gardening, and irregular lot divisions that followed the natural topography were appearing outside most major U.S. cities. On a larger scale, early subdivisions reflected similar principles of design, creating a naturalistic, parklike environment for domestic life.<sup>65</sup>

The most influential of the early Picturesque suburbs was Llewellyn Park, New Jersey, located west of New York City, and platted in 1857 by Llewellyn Haskell. Haskell carried out his idea for a protected, gated country park with the advice of Downing's former partner Alexander Jackson Davis and landscape architects Eugene A. Baumann and Howard Daniels. The design featured a layout of curvilinear roads and a common natural park, called the "ramble," and was influenced in large part by Downing's writings and Olmsted and Vaux's plans for Central Park, which was taking form in nearby New York City. Illustrated and described in Henry Winthrop Sargent's supplement to the Sixth Edition of Downing's *Theory and Practice* (1859), Llewellyn Park became one of the best

known and most highly emulated examples of suburban design.<sup>66</sup>

### **Riverside and the Olmsted Ideal**

Riverside, Illinois, outside Chicago, platted by Frederick Law Olmsted and Calvert Vaux in 1869 for the Riverside Improvement Company, further articulated the ideal for the Picturesque suburb, earning a reputation as the archetypal example of the curvilinear American planned suburb. Located on the banks of the Des Plaines River along the route of the Burlington Railroad, Riverside is recognized as the first clearly documented example in the United States where the principles of landscape architecture were applied to the subdivision and development of real estate.<sup>67</sup>

Olmsted's plan provided urban amenities and homes that, built at a comfortable density, afforded privacy in a naturalistic parklike setting. The first design requirement was a tranquil site with mature trees, broad lawns, and some variation in the topography. The second was good roads and walks laid out in gracefully curved lines to "suggest leisure, contemplativeness, and happy tranquility," and the third was the subdivision of lots in irregular shapes. Designed to follow the topography, the curving roads were built without curbs and placed in slight depressions, making them less visible from the individual lots and enhancing the community's pastoral character.<sup>68</sup>

Riverside established the ideal for the spacious, curvilinear subdivision which would be emulated by developers, planners, and home owners for generations to come. Between 1857 and 1950, Olmsted's practice, which was continued by Frederick Law Olmsted, Jr., and John Charles Olmsted under the Olmsted Brothers firm, planned 450 subdivisions in 29 States and the District of Columbia, many of them in conjunction with park or parkway systems.<sup>69</sup>

By the early twentieth century, Olmsted's principles had become the basis for laying out suburban neighborhoods within the emerging professional practice of landscape architecture in

the United States. Olmsted had many followers including, Ernest Bowditch, Stephen Child, Herbert and Sidney Hare, Henry V. Hubbard, George E. Kessler, and Samuel Parsons, Jr. Parsons and Hubbard became highly influential through their writings, which provided instructions in keeping with the Olmsted principles of subdivision design. Parsons, who was the superintendent of New York's Central Park for many years and the designer of the Albemarle Park subdivision in Asheville, North Carolina, provided detailed instructions on laying out home grounds and siting houses along steep, hillside slopes in *How to Plan the Homegrounds* (1899) and *The Art of Landscape Architecture* (1915).<sup>70</sup>

First published in 1917 and used as the standard professional text into the 1950s, the *Introduction to the Study of Landscape Design* by Hubbard and Theodora Kimball, influenced several generations of landscape architects. To demonstrate the layout of subdivisions to follow a site's natural topography, the text illustrated the example of Moss Hill, a subdivision Hubbard and his partner James Sturgis Pray designed in the western suburbs of Boston that was connected to the center city by Olmsted's "Emerald Necklace" of parks and parkways. In a 1928 article in *Landscape Architecture* on the influence of topography on land subdivision, Hubbard showed his readers how a curvilinear plan could be fit to varying slopes and subdivided into small, regularly shaped lots.<sup>71</sup>

The 1930s brought renewed interest in Olmsted's principles after *Landscape Architecture* reprinted Olmsted and Vaux's *Preliminary Report upon the Proposed Suburban Village at Riverside* (1868) and several other selections from the papers of Frederick Law Olmsted. Several months later in a well-illustrated article, "Riverside Sixty Years Later," Howard K. Menhinick praised the village atmosphere, beauty of the mature plantings, and unified setting created by spacious lots, planting strips, and numerous parks. In the *Design of Residential Areas* (1934), prominent city planner Thomas Adams recognized Riverside as a leading example of American suburban design. The

example of Riverside and later advances in curvilinear subdivision design would be applied to neighborhoods of small homes by the FHA in the mid-1930s and the community building standards of the Urban Land Institute in the 1940s and 1950s.<sup>72</sup>

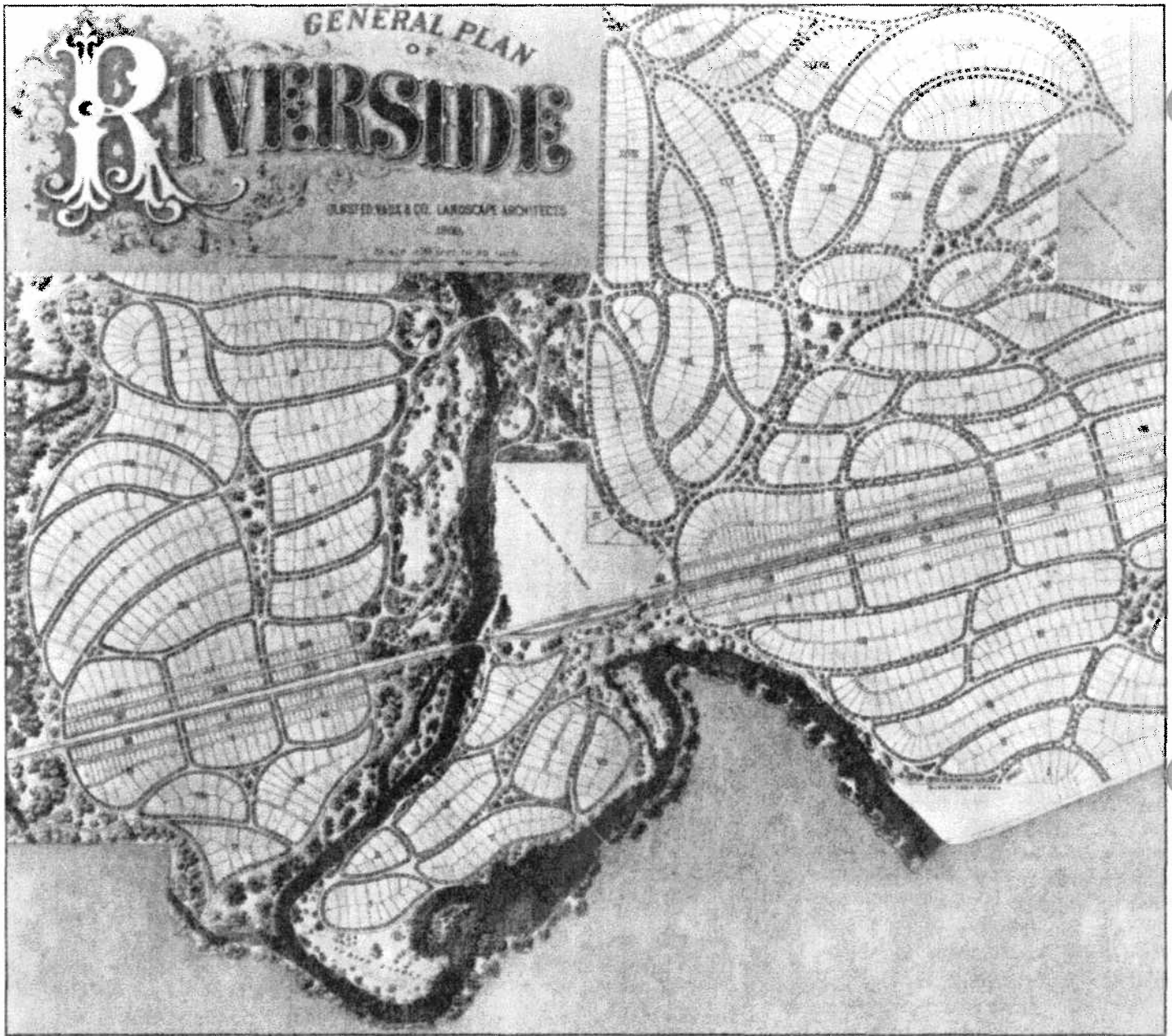
### **City Beautiful Influences**

A movement for the design of cohesive suburban neighborhoods in the form of residential parks and garden suburbs began to emerge in the 1890s and continued into the early decades of the twentieth century. A general plan of development, specifications and standards, and the use of deed restrictions became essential elements used by developers and designers to control house design, ensure quality and harmony of construction, and create spatial organization suitable for fine homes in a park setting.

#### **Boulevards and Residential Parks**

City Beautiful principles, which were expressed in the writings of Charles Mulford Robinson and the creative genius of designers such as George E. Kessler and the Olmsted firm, resulted in the design and redesign of many American cities. They called for the coordination of transportation systems and residential development, and fostered improvements in the design of suburban neighborhoods, such as tree lined streets, installed utilities, and neighborhood parks, many of which were part of the city park systems. Across the Nation, suburbs following naturalistic Olmsted principles emerged such as Druid Hills (1893), in Atlanta, begun by Olmsted, Sr., and completed by the successor Olmsted firm; Hyde Park (1887) in Kansas City and the first phase of Roland Park (1891) in Baltimore, both designs by George E. Kessler.

They also gave rise to grand landscaped boulevards such as Cleveland's Fairmount Boulevard and parkways such as Boston's Jamaicaway, which extending outward from the city center became a showcase of elegant homes and carriage houses on wide spacious lots, often built by the Nation's leading



**1869 Plan** (above) **for Riverside, Illinois, by Olmsted, Vaux and Company** with present day streetscape. Riverside is considered the archetypal example of the American curvilinear planned suburb. Along the broad, gently curving streets, houses on spacious facing lots were offset and informal groupings of shrubs and trees furnished to provide privacy and create an informal, pastoral setting. (Plan courtesy Frederick Law Olmsted National Historical Site, photo courtesy National Historic Landmarks Survey)





architects and echoing popular Beaux Arts forms. In more modest western cities such as Boise, Idaho, boulevards became major corridors from which cross streets, following the city's grid, led to quiet neighborhoods of modest homes built by local builders.

Subdivisions built for the upper-income and professional classes could be laid out according to Olmsted principles, with roads designed to follow the natural topography and natural features such as knolls or depressions shaped into traffic circles or cul-de-sacs. Deep ravines or picturesque outcroppings were often left undeveloped or retained as a natural park for the purposes of recreation or scenic enjoyment. The spacious layout of curving streets and gently undulating topography gave way, however, to more compactly subdivided tracts for rising middle-income residents by the 1890s.

### *Early Radial Plans*

Influenced by the City Beautiful movement, a formalism unknown to the early Olmsted and Picturesque suburbs began to influence the design of residential suburbs. Formal principles of Beaux Arts design, drawn from European Renaissance and Baroque periods, emphasized radial and axial components that provided an orderly hierarchy of residential streets and community facilities.

Ladd's Addition (1891) in Portland, Oregon, would be one of the earliest attempts to adopt a radial plan drawn from Baroque principles of planning for the design of a garden suburb built to accommodate streetcar commuters. Laid out by engineers Arthur Hedley and Richard Greenleaf for developer William S. Ladd, the plan makes use of four wide, diagonal avenues emanating from a central circular park to the four corners of the parcel. Narrower streets running east to west and north to south extended outward to intersect with diagonal cross streets, forming in each quadrant a small diamond-shaped park. A commercial corridor and the streetcar line formed the subdivision's northern edge. The maintenance and planting of the parks became the responsibility of the city park authority,

and by 1910 city landscape architect E. T. Mische had begun an active program of planting. Ladd's Addition predated, yet appears to have anticipated, the formality of Ebenezer Howard's English Garden City diagram, which was published several years later.<sup>73</sup>

Because radial plans were relatively simple to lay out, especially on flat terrain, they maintained some popularity into the 1920s appearing in Tucson's El Encanto Estates in the late 1920s and in Hare and Hare's plan for Wolflin Estates in Amarillo, Texas. Their greatest expression would occur later in response to the English Garden City movement and relate to advances in American city planning that went well beyond the turn-of-the-century residential park to impose a garden-like setting on the larger and more comprehensive scale of a self-contained community.<sup>74</sup>

### *Twentieth-Century Garden Suburbs*

#### *Garden Suburbs and Country Club Suburbs*

As developers like J. C. Nichols defined their role as community builders, they sought increasing control over the design of their subdivisions, devised ways to enhance a neighborhood's parklike setting and to reinforce the separation of city and suburb. Entrance ways with plantings, signs, and sometimes portals, reinforced a neighborhood's separation from noisy and crowded arterials and outlying commercial and industrial activity. The circulation network, often laid out in the formal geometry of axial lines and radial curves, imposed a rational order on many new subdivisions.

Community parks and nearby country clubs provided recreational advantages. By the 1920s efforts were being undertaken to create compatible commercial centers on the periphery or at major points along the streetcar lines or major automobile arteries.

The laying out of traffic circles, residential courts, and landscaped boulevards provided open spaces for planting shade trees, ornamental trees, and gardens. Community parks, often

having community centers or club houses, and nearby country clubs provided recreational advantages.

Examples such as Myers Park in Charlotte, North Carolina, developed between 1911 and 1943 according to plans by John Nolen, Earl Sumner Draper, and Ezra Clarke Stiles, would receive national recognition for their quality of design and become important regional prototypes.<sup>75</sup>

### *Influence of the Arts and Crafts Movement*

The Arts and Crafts movement, with its emphasis on craftsmanship, native materials, harmony of building construction with natural environment, and extensive plantings became a popular idiom for suburban landscape improvements, especially on the West Coast. Promoted by editors such as Gustav Stickley and Henry Saylor, these ideas were quickly imitated nationwide by designers intent on creating residential parks that offered housing in various price ranges from clustered bungalow courts to spacious upper-income subdivisions such as Prospect Park (1906) in Pasadena, in large part the work of master architects Charles and Henry Greene. Country club suburbs by Hare and Hare, such as Crestwood (1919-1920) in Kansas City, featured rusticated stone portals and corner parks. In Henry Wright's residential parks, Brentmoor Park, Brentmoor, and Forest Ridge (1910-1913) outside St. Louis, service entrances were separated from carriage drives, elegant homes were arranged around common parkland, and signs of forged iron and trolley waiting shelters of rusticated stone added to the Craftsman aesthetic.<sup>76</sup>

### *American Garden City Planning*

English Garden City planning had considerable influence in the United States, coinciding with advances in city planning spurred by the City Beautiful movement and widespread interest during the Progressive era for housing reform which extended to the design of neighborhoods for lower-income residents. English social reformer Ebenezer

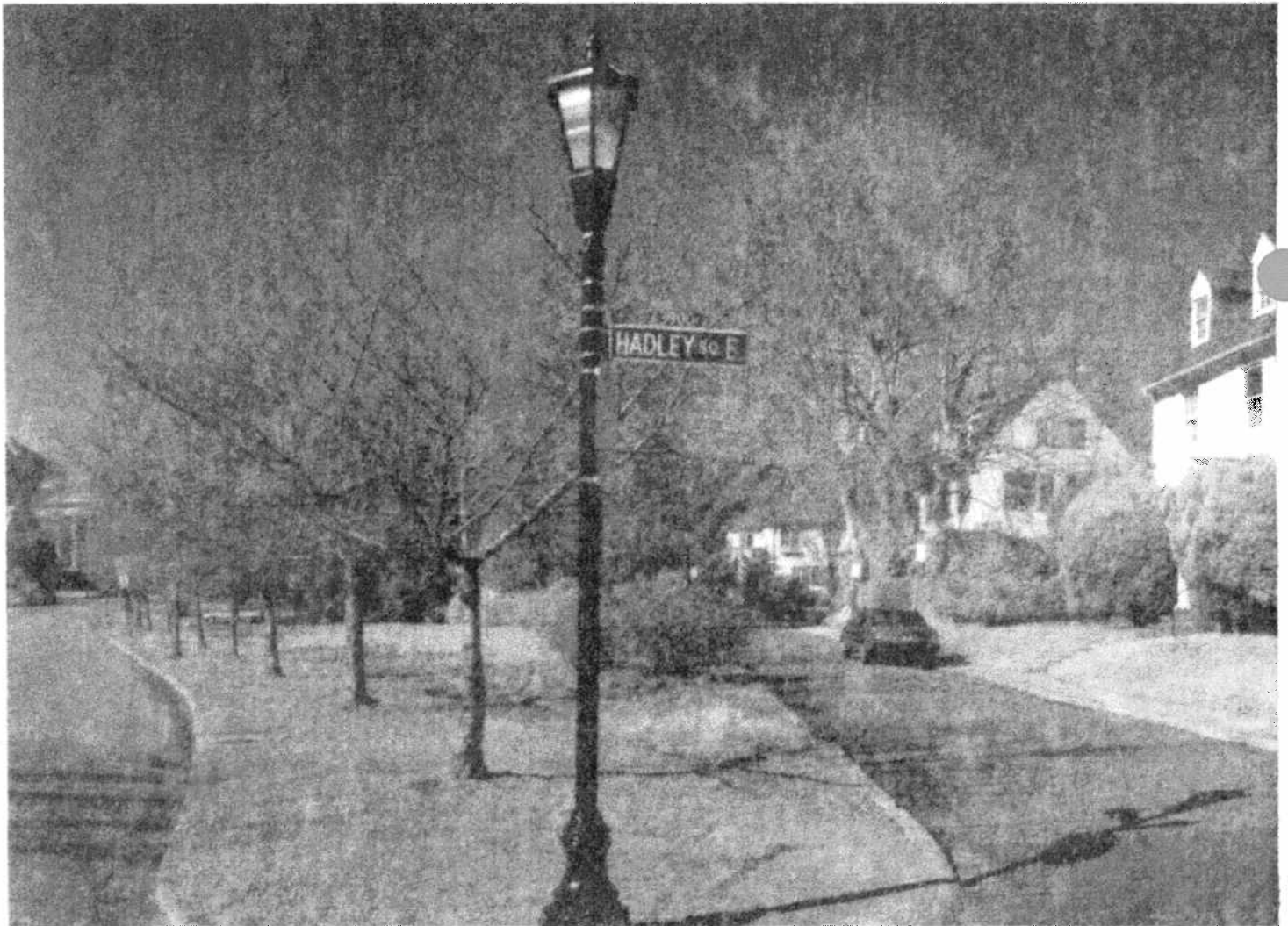
Howard, introduced the Garden City idea in *Tomorrow: A Peaceful Path to Real Reform* (1898), which was republished as *Garden Cities of Tomorrow* (1902). Howard diagramed his ideal city as a series of concentric circles devoted to bands of houses and gardens for residents of mixed income and occupations. A large park, public buildings, and commercial shops formed the center of the city, while an outer ring provided for industrial activities, an agricultural college, and social institutions and linked the community to an outlying greenbelt of agricultural land.

Howard's conceptual diagrams were first translated into the English garden

suburbs of Letchworth (1902) and Hampstead Gardens (1905) by Barry Parker and Raymond Unwin, whose theories would have substantial influence on subdivision design in the United States. Designed as socially integrated communities for working-class families, the English suburbs resulted from comprehensive planning and encompassed a unified plan of architectural and landscape design. Limited in both geographical area and population to promote stability, they were designed to provide a healthy environment offering sunlight, fresh air, open space, and gardens. Innovative was the subdivision of the land into superblocks

which could be developed in a unified manner, with architectural groupings alternating with open parks. A hierarchical circulation system made extensive use of cul-de-sacs that created a sense of enclosure and privacy within each large block.<sup>77</sup>

English Garden City planning influenced American residential suburbs in several ways. It strengthened an already strong interest in developing neighborhoods as residential parks, giving emphasis to both architectural character and landscape treatments as aspects of design. It was consistent with the emerging interest in collaborative planning, whereby residential development



was to be based on sound economic analysis and draw on the combined design expertise of planners, architects, and landscape architects. It provided models for higher-density residential development that offered attractive and healthful housing at lower costs.

Through traveling lectures and his influential *Town Planning in Practice* (1909), English Garden City designer Raymond Unwin called for a formal town center, often taking a radial or semi-radial form that, extending outward in a web-like fashion, gradually blended into more informally arranged streets and blocks. The Garden City movement, under the influence of the

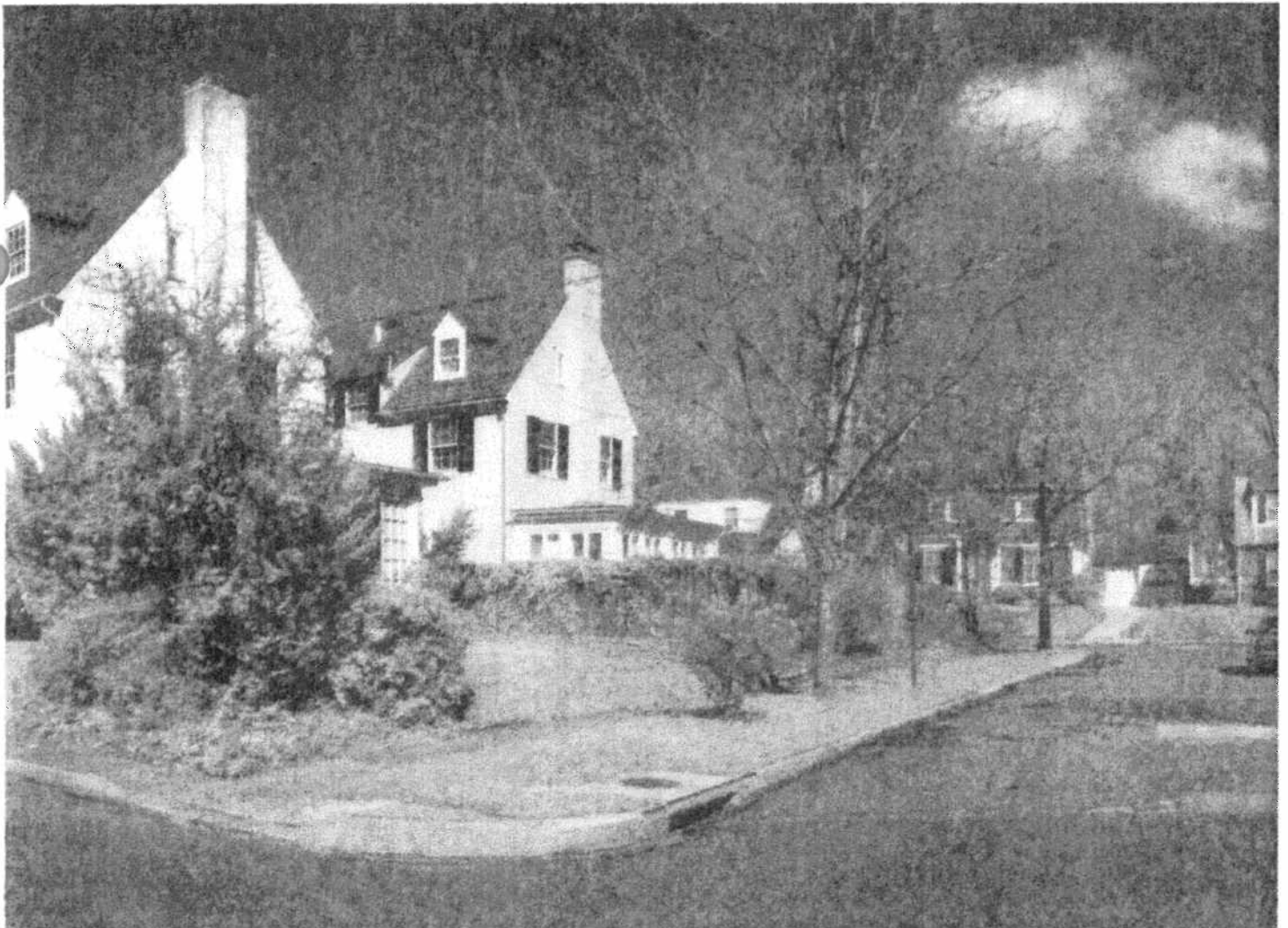
designers Frederick Law Olmsted, Jr., John Nolen and Werner Hegemann and Elbert Peets, would give great complexity to town planning and subdivision design by integrating the principles of English planning with the American Olmsted tradition of naturalistic design.

#### **Forest Hills**

In the United States, the influence of the English garden suburbs melded with interest in Beaux Arts planning and first appeared in the design of Forest Hills Gardens (1909-1911), a philanthropic project sponsored by the Russell Sage Foundation. The design

was a collaboration between developer Edward H. Bouton, landscape architect and planner Frederick Law Olmsted, Jr., and architect Grosvenor Atterbury. Located on the route of the Long Island Railroad, Forest Hills was designed to

*Panoramic view of intersecting streets in Guilford (1912-1950), a Baltimore suburb, shows the formality and precision of design, as well as conventions such as landscaped medians, which characterized the work of the Olmsted Brothers following Olmsted, Jr.'s European tour as a member of the McMillan Commission and the firm's introduction to English Garden City principles. (Photo by Greg Pease, courtesy Maryland Department of Housing and Economic Development)*



house moderate-income, working-class families and served as a model of domestic reform. The design of both the community and individual homes reflected progressive ideas that upheld the value of sunshine, fresh air, recreation, and a garden-like setting for healthy, domestic life. Unlike the spacious Olmsted-influenced curvilinear suburbs built for the rising middle class, the early Garden City influenced designs in the United States were intended to house lower-income, working-class families. The spaciousness of the American garden suburb was replaced by a careful orchestration of small gardens, courts, and common grounds shaped by the architectural grouping of dwelling units.<sup>78</sup>

#### **Guilford**

Guilford (1912), Edward Bouton's second large suburb for Baltimore, built adjacent to Roland Park and also laid out by Frederick Law Olmsted, Jr., applied many planned features such as radial streets, landscaped medians, cul-de-sacs, and planted circular islands to the American idiom of the residential park for the rising middle class. Integrated with public parks and landscaped streets, it attained a highly controlled artistic expression based on Garden City principles.<sup>79</sup>

#### **Washington Highlands**

The plan for Washington Highlands (1916) in Wauwatosa, Wisconsin, by Werner Hegemann and Elbert Peets reflected a fusion of formal and informal elements—allées of evenly spaced trees, symmetrical formal plantings,

with curvilinear streets, including a major street that formed a peripheral arc and followed a low-lying stream bed that functioned as a linear park. Through *The American Vitruvius: An Architect's Handbook of Civic Art* (1922), Hegemann and Peets would exert considerable influence on the design of metropolitan areas in the United States. During the New Deal, Peets would design the Resettlement Administration's greenbelt community at Greendale, Wisconsin.<sup>80</sup>

#### **World War I Defense Housing**

During World War I, the short-lived United States Housing Corporation of the U.S. Labor Department and the Emergency Fleet Corporation of the U.S. Shipping Board, encouraged town planners and designers of emergency housing communities for industrial



workers to adopt Garden City models. Under the leadership of prominent planners and architects Nolen, Olmsted, Jr., and Robert Kohn, these programs encouraged the collaboration of town planners, architects, and landscape architects, and advocated a comprehensive approach to community planning. The AIA sent architect Frederick Ackerman to England to study the new garden cities with the purpose of infusing American defense housing projects with similar principles of design.

For many young designers, working on emergency housing provided an unprecedented opportunity to work on a project of substantial scale and to work collaboratively across disciplines. Dozens of projects appeared across the country in centers of shipbuilding and other defense industries. Many would serve as models of suburban design in subsequent decades. Among the most influential were Yorkship (Fairview) in Camden, New Jersey; Seaside Village in Bridgeport, Connecticut; Union Gardens in Wilmington, Delaware; Atlantic Heights in Portsmouth, New Hampshire; Hilton Village in Newport News, Virginia; and Truxtun in Portsmouth, Virginia.

### **Mariemont**

John Nolen's town plan for Mariemont (1921), Ohio, was heralded for its achievement in integrating a variety of land uses into a well-unified community, which provided commercial zones, industrial zones, and a variety of hous-

**Hilton Village (1918), Newport News, Virginia**, one of the earliest and most complete examples of U.S. government-sponsored town planning during World War I. It was designed by the short-lived Emergency Fleet Corporation to house the families of defense workers at the Newport News Shipbuilding and Dry Dock Company. The community's design illustrates the close collaboration of town planner Henry V. Hubbard and architect Francis Y. Joannes. Variations in the design of roofs, entranceways, and materials in the grouping of similar house types, as well as landscape features, such as staggered setbacks and the retention of existing trees, were introduced to avoid the monotony and austerity characteristic of earlier industrial housing. (Photograph courtesy Mariners Museum, Newport News)



ing types that ranged from apartment houses to large period revival homes. The plan embodied a combination of formal and informal design principles and integrated parks and common areas.

American towns and the residential suburbs that followed similar design principles were frequently hybrid plans where a radial plan of a formal core area extended outward along axial corridors, interspersed by small gridiron areas, and eventually opened outward along curvilinear streets that more closely fit the site's natural topography and followed Olmsted principles. Streets were laid out to specific widths to allow for border plantings, landscaped medians and islands, and shaped intersections that gave formality and unity to residential streets. Noted architects were invited to design houses in a variety of styles.

Mariemont received considerable recognition as a model of community planning. It was featured in Nolen's *New Towns for Old: Achievements in Civic Improvements in Some American Small Towns and Neighborhoods* (1927), which popularized suburban planning and provided a number of highly emulated models including Myers Park in Charlotte, North Carolina, initially planned by Nolen in 1911, and completed under landscape architect Earl Sumner Draper. Mariemont was also highly praised in the *Regional Survey of New York and Its Environs* (1929) and

**Developed 1925 to 1929, Albers Place in Mariemont, Ohio**, illustrates one of planner John Nolen's conventions for organizing space to create a cohesive village setting by adopting a single architectural theme, clustering dwellings around a short court having a narrow circular drive and open central park, and unifying the space with common walls and plantings of trees and shrubs. (Photo by Steve Gordon, courtesy of the Ohio Historic Preservation Office)

the proceedings of the 1931 President's Conference.

While providing a variety of housing types for mixed incomes, the plan for Mariemont introduced an innovative design of interweaving cul-de-sacs and avenues that accommodated a wide range of housing types from rowhouses to duplexes to spacious detached homes that were grouped into clusters serving particular income groups. Often designed by a single firm, clusters exhibited a cohesive architectural style. The plan also called for convenient commercial services at the core of the community in cohesive architectural groupings characteristic of the English garden cities. Mariemont was designed with a separate industrial zone intended to attract a number of industries. English Tudor Revival influences blended with the American Colonial Revival to form attractive housing clusters and a shopping district. In Nolen's design, tree lined streets were designed at varying widths to accentuate the village setting and accommodate transportation

within the community and the needs of each housing group.<sup>81</sup>

### **The RPAA and Sunnyside**

In 1923 architect-planners Clarence Stein and Henry Wright, along with Frederick Ackerman, Charles Whitaker, Alexander Bing, Lewis Mumford, Benton MacKaye, and others, founded the Regional Planning Association of America (RPAA) to promote Garden City principles as a basis for metropolitan expansion. Although the RPAA was broadly concerned with the retention of open space and agricultural zones, their practical accomplishments were focused on the creation of satellite communities that melded Garden City principles with the immediate needs of housing reform.

Its first project, Sunnyside Gardens (1924-1928), was built in Queens outside New York City as a model community for moderate-income families and funded by the City Housing Corporation, a limited dividend company formed by the RPAA and headed by Bing. Although local regulations required the designers to adhere to the gridiron street system, the location's industrial use zoning allowed them to develop each block as a single parcel instead of subdividing it into separate lots. Using architectural groupings to create alternating areas of open and closed space, the designers arranged attached single- and multiple family dwellings to form the perimeter of each block, enclosing a central common set aside for gardening and recreation.<sup>82</sup>

### **Radburn and Chatham Village**

At Radburn, beginning in 1928, Stein and Wright applied Garden City planning principles to the problem of creating an attractive and healthy community of moderately-priced homes. Radburn, initially financed by the City Housing Corporation, was envisioned as a "Town for the Motor Age" derived from the Garden City principles and adapted to the practical needs of an automobile age. Located 16 miles from New York City in Fair Lawn, New Jersey, Radburn was planned as three interconnected neighborhoods each housing up to 10,000 residents. Each

