

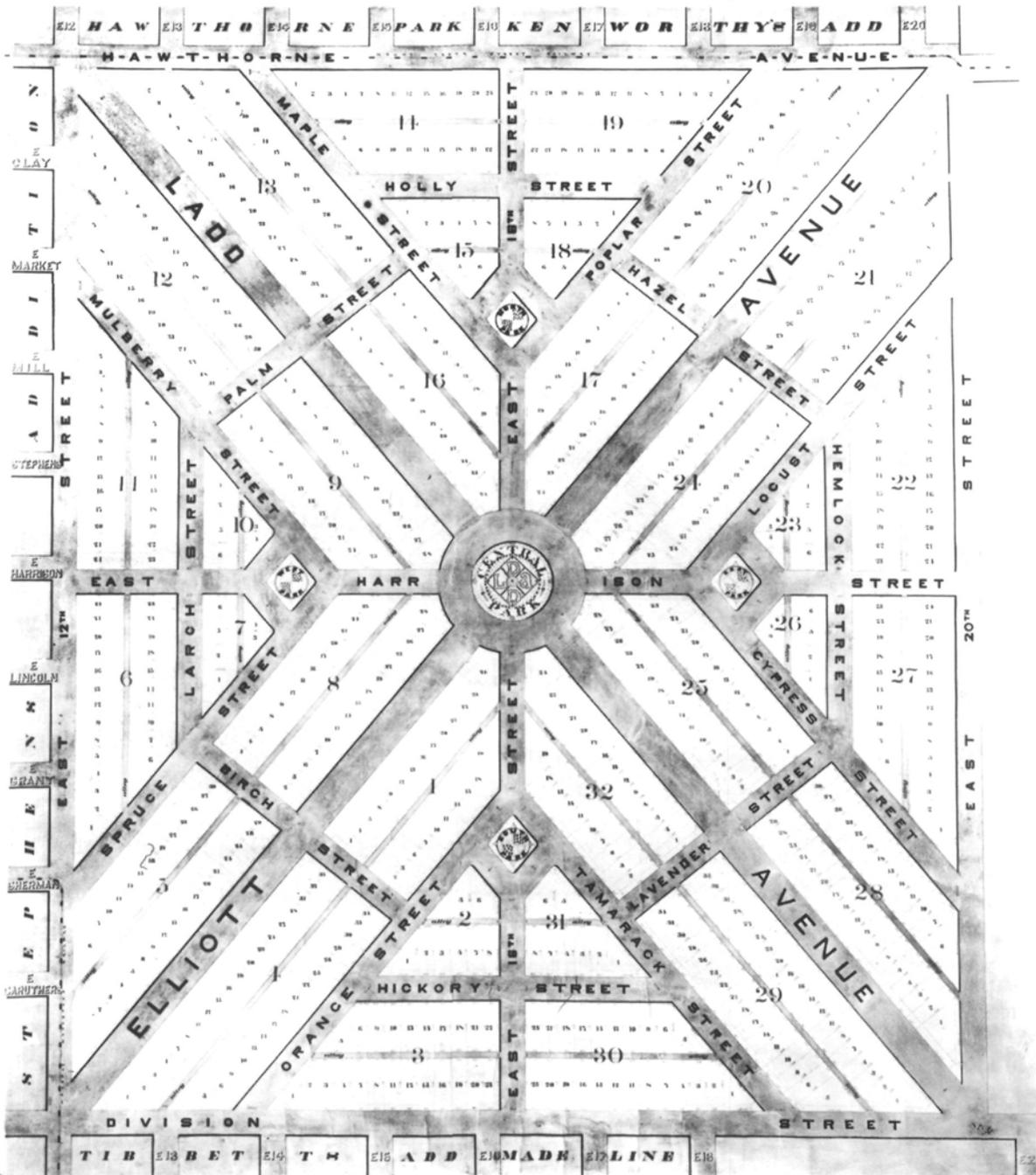


HISTORIC RESIDENTIAL SUBURBS

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



MAP
OF
LADD'S ADDITION
TO THE
CITY OF PORTLAND
AS PLANNED BY THE CITY



NATIONAL REGISTER BULLETIN

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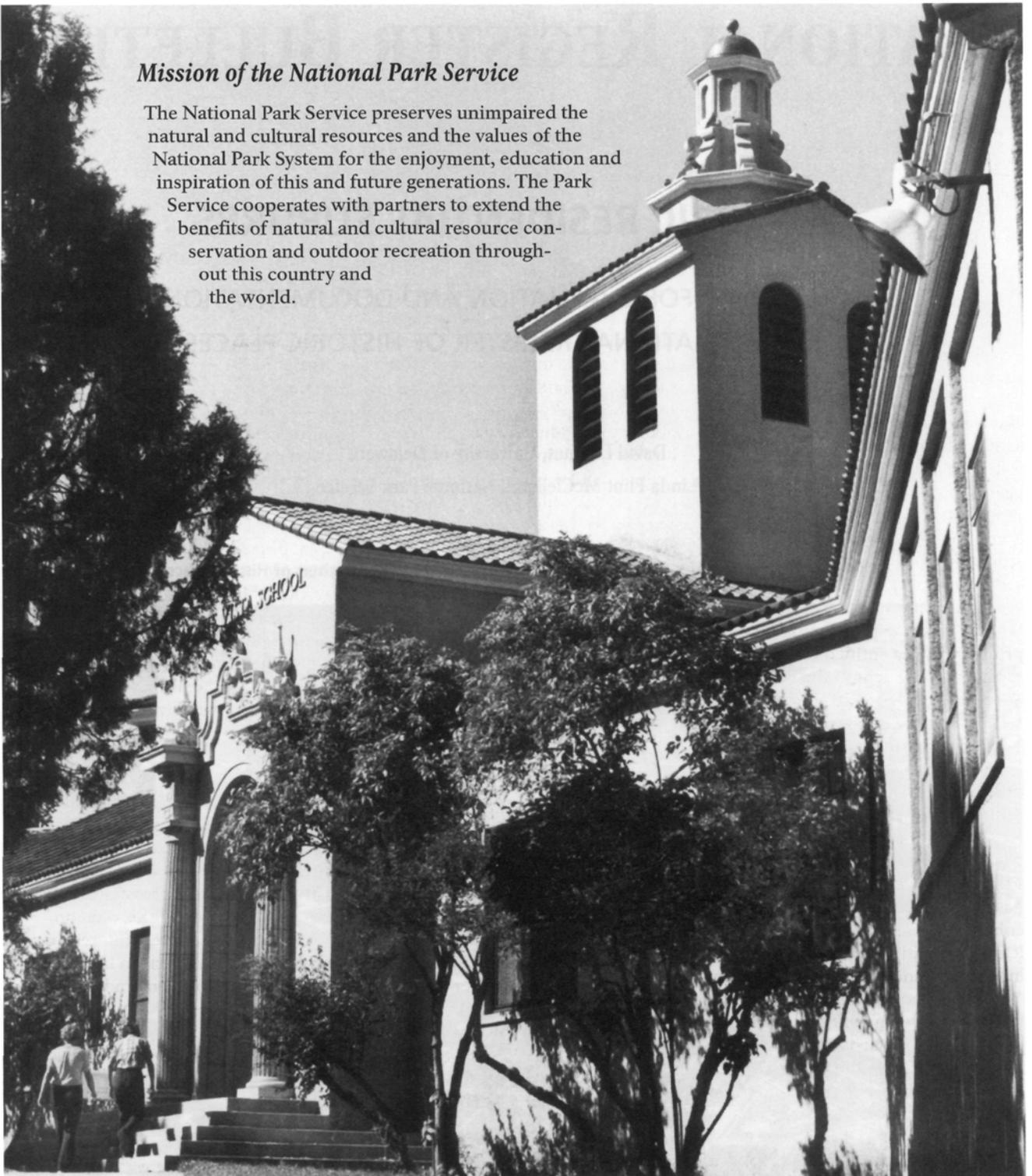
David L. Ames, University of Delaware
Linda Flint McClelland, National Park Service

September 2002
U.S. Department of the Interior, National Park Service, National Register of Historic Places



Mission of the National Park Service

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

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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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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)

Many 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.¹

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.²

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 developments³

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.⁴

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 interrelationship 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

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



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)

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.

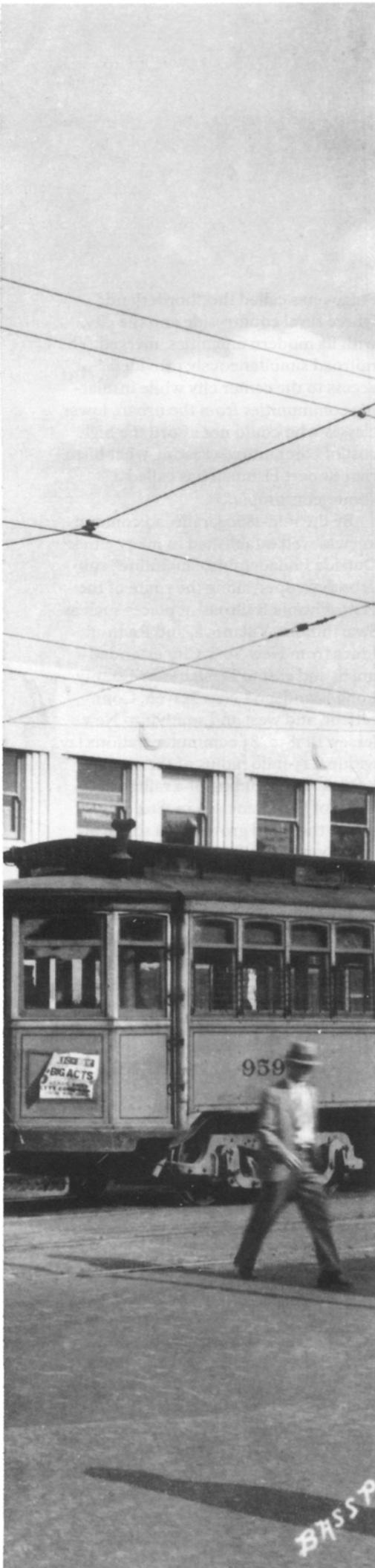
Small-scale Elements

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 Bervyn, 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."⁵

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.⁶

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.⁷

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.⁸

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.⁹

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.¹⁰

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.¹¹

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.¹²

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.¹³

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.¹⁴

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.¹⁵

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 1930.¹⁶

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 streetcar 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.¹⁷

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 1916.¹⁸

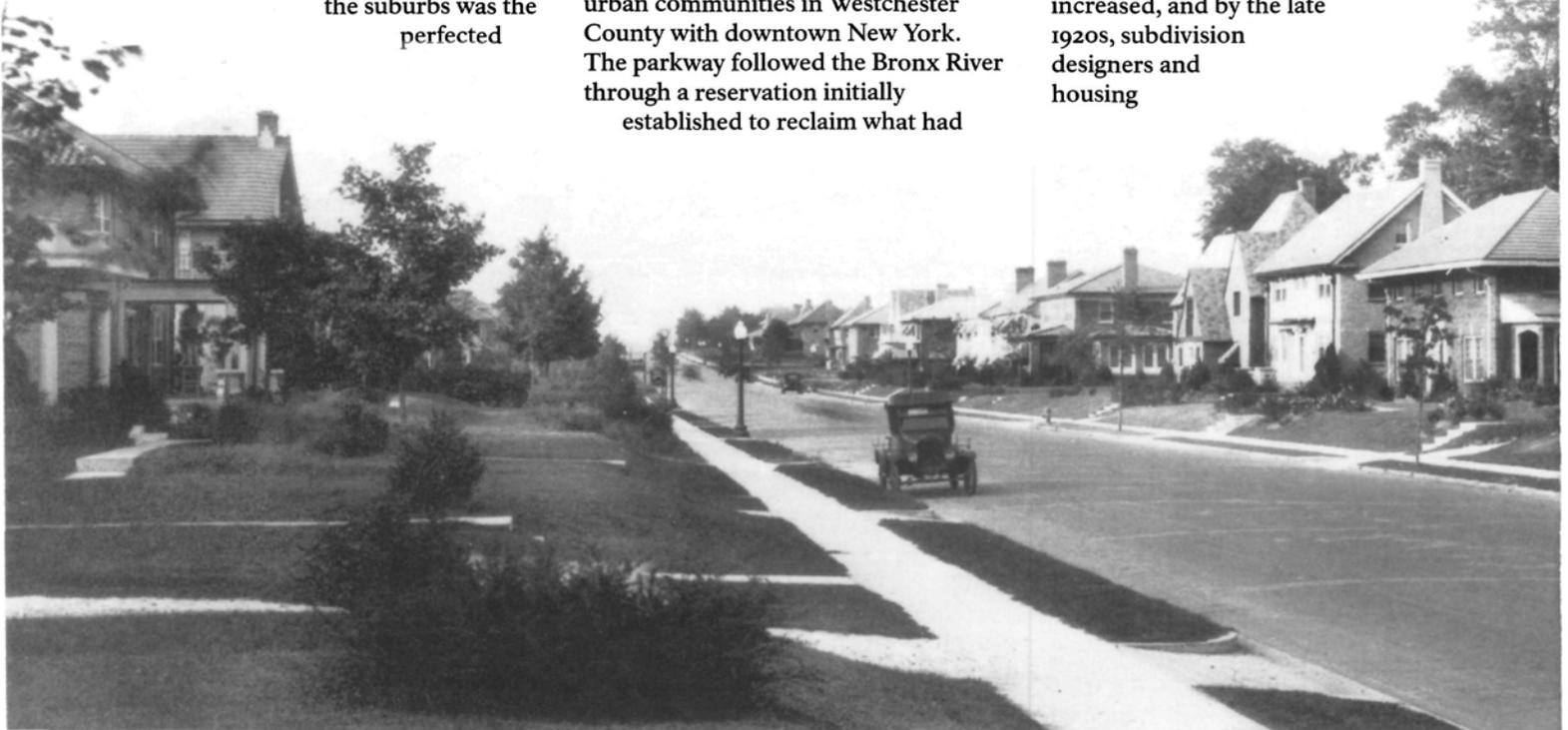
Beginning in the 1890s, the City Beautiful movement spurred advances in city planning and urban design. Transportation planning, as well as the improvement of streets, was recognized as central to the coordinated growth of urban areas. In cities such as Kansas City, Denver, and Memphis, the collaboration 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.¹⁹

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.²⁰

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.²¹

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.²²

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.²³

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.²⁴

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.²⁵

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.²⁶

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.²⁷

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

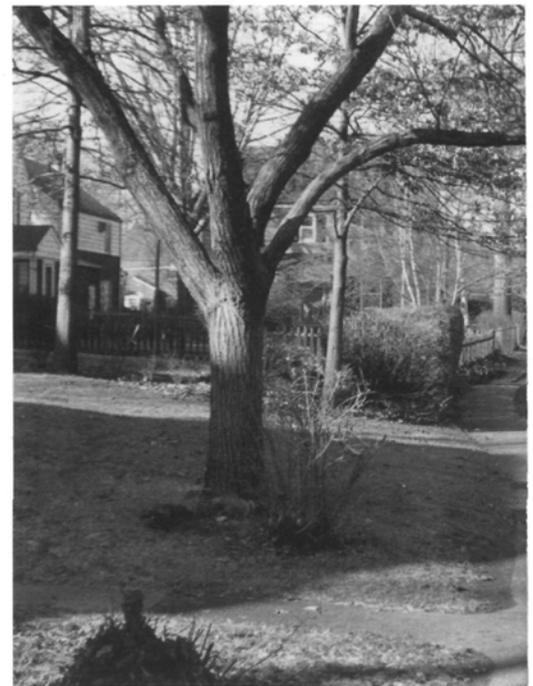
The fourth and most dramatic stage of suburbanization in the United States followed World War II. The postwar housing boom, manifested in the so-called "freeway" or "bedroom" suburbs, was fueled by increased automobile ownership, advances in build-

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.²⁸

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.²⁹

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.³⁰

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.³¹

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.³²

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.³³

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.³⁴

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

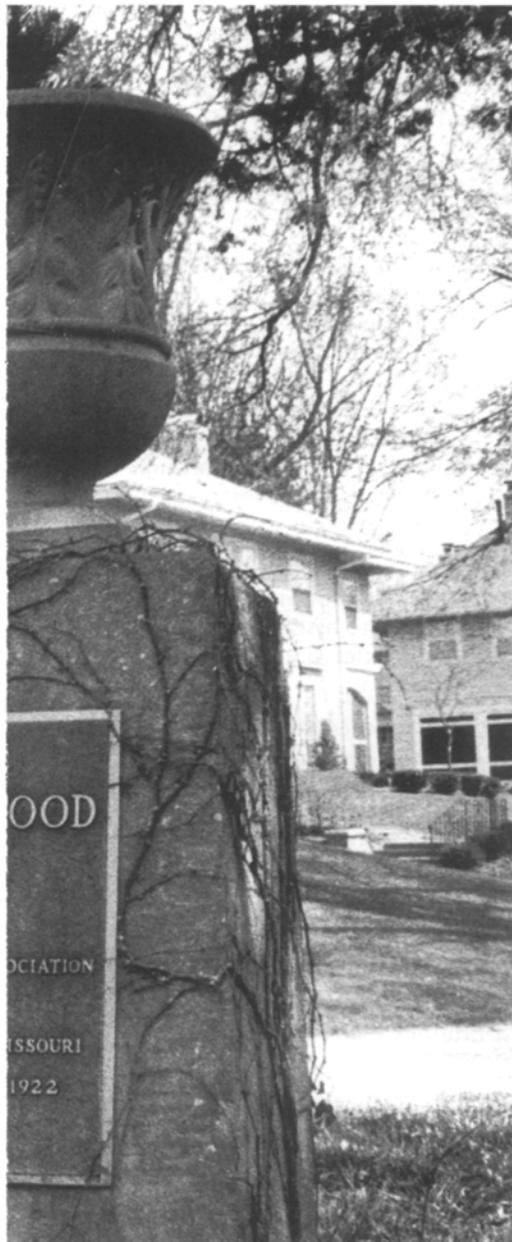
dwellings and apartments. Depression-era economics and the demand for defense-related and veterans' housing which followed encouraged them to apply principles of mass production, standardization, and prefabrication to lower construction costs and increase production time.

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 1944.³⁵



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.³⁶

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.³⁷

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	Federal Home Loan Bank Act (47 Stat. 725) establishes home loan bank system authorizing advances secured by home mortgages to member institutions.	1942	Federal defense housing and home loan programs consolidated in the National Housing Agency under Executive Order 9070.
1933	Home Owners' Loan Act (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	Servicemen's Readjustment Act (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	National Housing Act (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	Veterans' Emergency Housing Act of 1946 (60 Stat. 215) authorizes Federal assistance in housing returning veterans and extends FHA authority to insure mortgages under Title VI.
1938	Amendments to the National Housing Act (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	National Housing Agency renamed Housing and Home Finance Agency (61 Stat. 954).
1941	Amendments to the National Housing Act (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	Housing Act of 1948 (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	Federal Housing Act of 1949 (63 Stat. 413) establishes a national housing directive to provide Federal aid to assist in community development, slum clearance, and redevelopment programs.
		1954	Housing Act of 1954 (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.³⁸

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.³⁹

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.⁴⁰

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.⁴¹

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 1947.⁴²

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.⁴³

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.⁴⁴

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.⁴⁵

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.⁴⁶

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. Forgac, courtesy Ohio Historic Preservation Office)

planner and theorist renowned for work in St. Louis and Des Moines.⁴⁷

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.⁴⁸

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.⁴⁹

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.⁵⁰

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.⁵¹

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.⁵²

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.⁵³

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.⁵⁴

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."⁵⁵

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.⁵⁶

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 Edgemoor 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 & 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.⁵⁷

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."⁵⁸

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.⁵⁹

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.

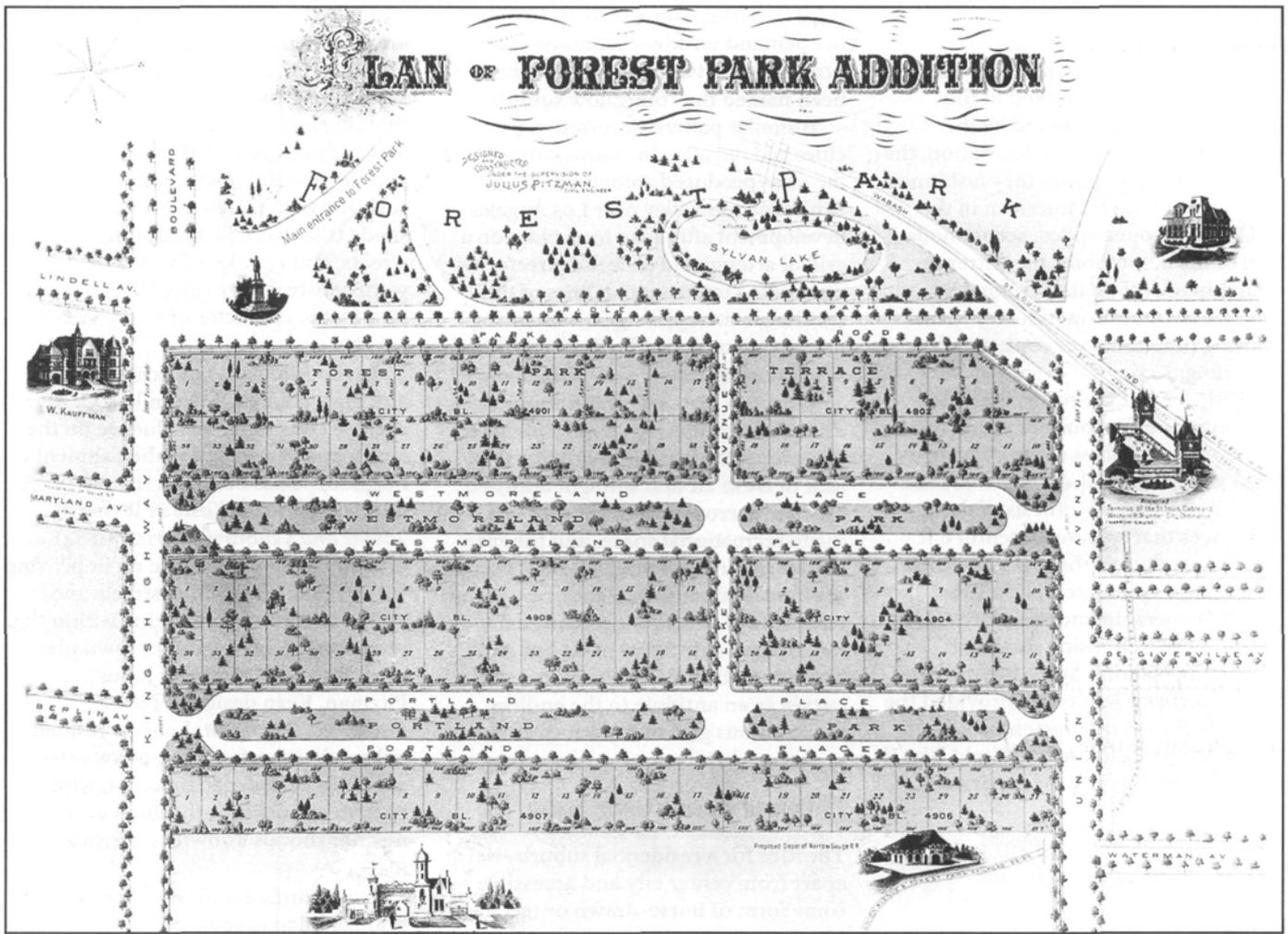
One of the earliest documented residential suburbs is Brooklyn Heights, established in 1819 across the East River from lower Manhattan. Accessible by ferry, the suburb featured a 60-acre plat laid out in a grid with streets 50 feet in width and blocks measuring 200 by 200 feet.⁶⁰

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.⁶¹

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."⁶²

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.⁶³



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*.⁶⁴

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.⁶⁵

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.⁶⁶

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.⁶⁷

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.⁶⁸

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.⁶⁹

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).⁷⁰

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.⁷¹

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.⁷²

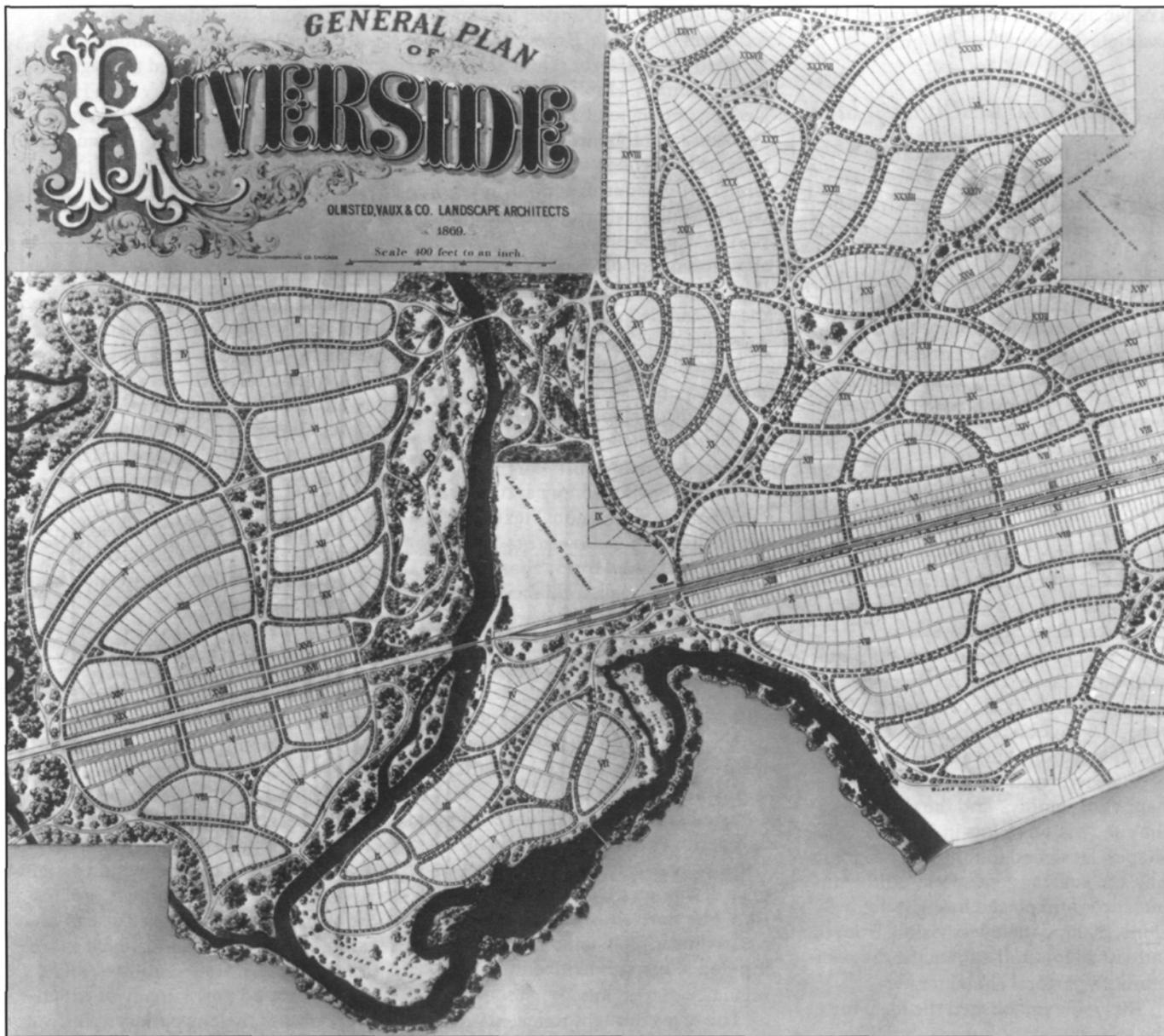
City Beautiful Influences

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.⁷³

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.⁷⁴

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.⁷⁵

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.⁷⁶

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.⁷⁷

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.⁷⁸

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.⁷⁹

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.⁸⁰

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.⁸¹

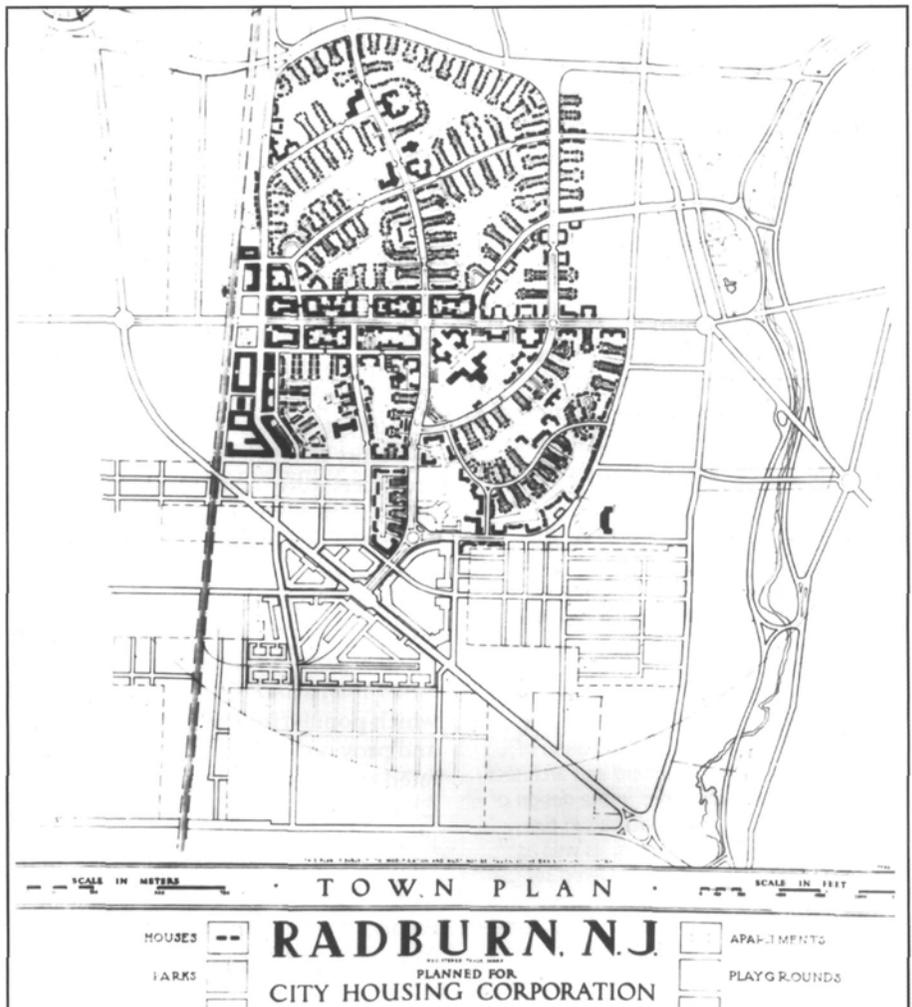
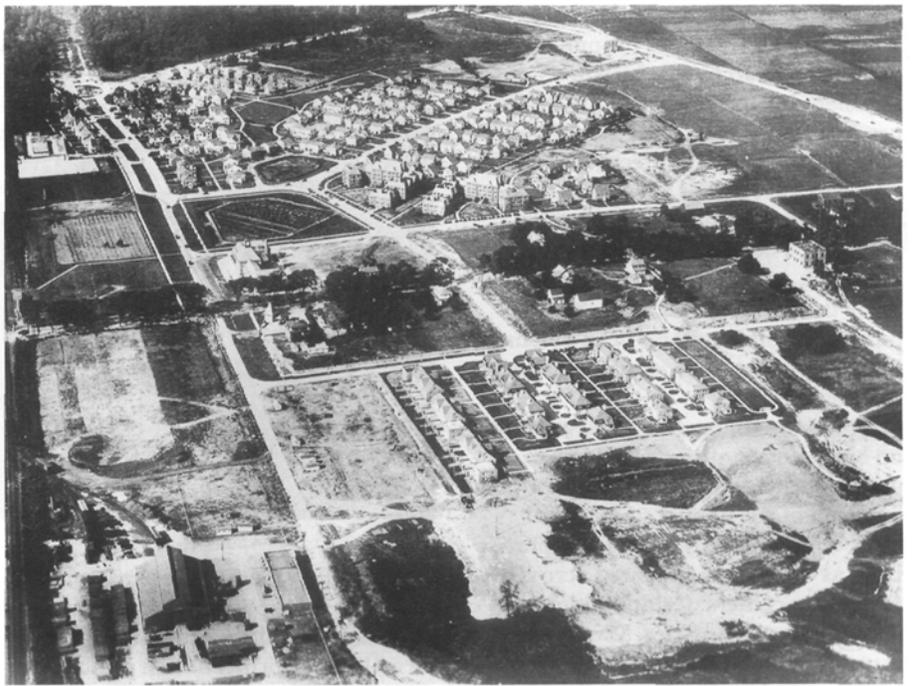
The RPAA and Sunnyside

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.⁸²

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





(far left) **Aerial view (c. 1930) and Town Plan (c. 1928), Radburn, New Jersey.** Designed by RPAA planners Clarence S. Stein and Henry Wright as a satellite Garden City for New York City, Radburn was a radical departure from the typical American suburb. Innovations included the use of superblocks having a central swathe of open park land, the grouping of residences to face gardens and grounds and back on service courts, separate circulation networks for pedestrians and automobiles, and a hierarchy of streets to reduce construction costs and ensure safety. The new town was the embodiment of Clarence Perry's Neighborhood Unit, a model for community planning presented in the Regional Survey of New York and Its Environs (1929) and enthusiastically endorsed by the 1931 President's Conference on Home Building and Home Ownership. (Photo and plan courtesy Division of Rare & Manuscript Collections, Cornell University Library)

neighborhood was to consist of a superblock that was served by a circulation system that separated pedestrian and automobile traffic and instituted a hierarchy of roads to reduce construction costs and promote traffic safety. A variety of house types—detached, semi-detached, row, and apartment—was integrated into the design, as well as schools, recreational facilities, and a shopping center.

Each superblock was carefully designed with an interior park or green, which served as the backbone of the neighborhood with houses fronting on it and pedestrian walks running along its length. The superblocks, merged together to form a continuous swathe of park, and underpasses were to be introduced to allow pedestrians to pass beneath the motor roads, making it possible for children to walk to school without crossing streets. Narrow cul-de-sacs penetrated each superblock from perimeter feeder streets. Houses were oriented so that living rooms and bedrooms faced private gardens and the central green, while kitchens and garages faced cul-de-sacs that provided automobile access and functioned as short service courts. Radburn's hierarchy of roads not only afforded the benefits of safety and convenience, but also

significantly reduced construction costs by limiting the amount of space occupied by streets and enabling the use of smaller water and sewer mains.⁸³

A philanthropic venture of the Buhl Foundation begun in 1929, Chatham Village in Pittsburgh, Pennsylvania, further refined Garden City principles and made important aesthetic and functional advances in the design of low-to-moderate income, multiple family housing. The design resulted from the collaboration of Stein and Wright, who acted as site planners and project advisors, and a team of local architects, Charles T. Ingham and William T. Boyd, and landscape architects Ralph E. Griswold and Theodore Kohankie. The designers utilized superblock planning, groups of connected dwellings efficiently adjusted to the steeply sloping site, and landscaped garden courts that blended with natural ravines and woodland that surrounded the community on three sides. The project represented the ultimate fusion of Garden City planning and Colonial Revival design and received international acclaim as a highly successful model of Garden City planning. It served as an enduring model for large-scale, FHA-insured rental communities in the 1930s and 1940s.⁸⁴

(left) **Aerial view (1943), Chatham Village, Pittsburgh.** An enduring model of American Garden City planning, Chatham Village (1932-1936) resulted from a careful study of economic conditions and the collaboration of local architects Ingraham and Boyd, landscape architects Griswold and Kohankie, and advisors Stein and Wright. Developed as both a philanthropic venture and financial investment by the Buhl Foundation, the community received high acclaim for its integration of a large number of moderately-priced rental units with spacious grounds and woodland, the artistry of its Colonial Revival styling, and its accommodation of interconnected dwellings within a steeply sloping site. (Photo by Aerial Survey of Pittsburgh Inc., courtesy Pennsylvania Historical and Museum Commission)

The Neighborhood Unit and the 1931 President's Conference

Radburn exemplified the Neighborhood Unit Formula, developed by Clarence Perry of the Russell Sage Foundation, and incorporated in Volume 7, "Neighborhood and Community Planning," of the 1929 *Regional Survey of New York and Its Environs*. Perry's formula called for the creation of communities large enough to support an elementary school, preferably about 160 acres with ten percent reserved for recreation and park space. Interior streets were to be no wider than required for their use with cul-de-sacs and side streets being relatively narrow. Community facilities were to be centrally located, and a shopping

district was to be located on the edge of the community where neighborhood streets joined the main arterials. Perry's concept was overwhelmingly endorsed at the 1931 President's Conference and laid a solid foundation for the development of FHA standards in the 1930s.⁸⁵

The recommendations of the 1931 President's Conference for the design of residential neighborhoods reflected widespread acceptance of the idea of community planning and Perry's concept of the self-contained neighborhood unit. Mention was made of the advances made in the 1920s, and Radburn was praised for "producing desirable homes with ample open spaces at reasonably low cost." Such planning served two purposes—the grouping of homes into "reasonably compact residential neighborhoods with spaciousness for health and recreation," and creating "sub-centers for industry" with the object of "lessening the density of congested centers." The report stated:

Stability of investment in a home is best assured when the subdivision is a community or neighborhood unit, which is amply protected by deed restrictions that supplement the zoning regulations, developed by real estate dealers of proved ability, and in which there is a strong homes association permanently concerned with the welfare of the neighborhood.⁸⁶

Location was to be selected for "good access, good setting, public services, schools, parks and neighborhood unity," and subdivision plats were to be developed by an experienced landscape engineer or site planner and were to follow a "balanced plan" that took advantage of "topography, sunlight, natural features, and all sensible engineering and landscape considerations."⁸⁷

Streets were to be designed for safety and economy and drawn at varying widths depending on the required setbacks, with deeper setbacks allowing for narrower streets. For example, a 60-foot width allowed for a 26-foot roadway and a sidewalk of four to six feet. The size and shape of lots were to be determined by the proposed type of housing, with the width of each lot

depending on the size and character of the buildings, cost of the land, community tradition, and potential home owner. The use of longer blocks with fewer cross streets and the subdivision of land into wide, shallow lots were encouraged, departing from previous practices. Homes were to be "located upon narrow winding streets away from the noise and dangers of traffic" and to have proper orientation for sunlight.⁸⁸

Spaciousness was upheld as a "primary principle in good subdivision layout." The ideal neighborhood was described as one protected by proper zoning regulations, where trees and the natural beauty of the landscape were preserved, and where streets were gently curving and adjusted to the contour of the ground. Open space was viewed as one of the most important considerations for home ownership. It could be achieved in three ways: (1) by subdividing into large lots, (2) by reserving large open areas in the interior of blocks, or (3) by creating parks, playgrounds, or large private spaces nearby.⁸⁹

FHA Principles for Neighborhood Planning

The National Housing Act of 1934 created the Federal Housing Administration to restructure the collapsed private home financing system and stimulate private investment in housing. It called for the development of housing standards, a process for real estate appraisal, and a comprehensive program of review for approving subdivisions for mortgage insurance.

Neighborhoods of Small Houses

FHA's Land Planning Division under Seward H. Mott, an experienced site planner, was responsible for establishing principles for neighborhood planning and for reviewing subdivision plans submitted by developers seeking FHA approval. This approval would not only enable developers to secure private financing but would also make low-cost mortgages available for prospective home owners. Mott's staff translated many of the prevailing ideas about neighborhood design that had

been endorsed by the 1931 President's Conference, including Perry's Neighborhood Unit Formula, into written standards and basic design principles that could be uniformly applied across the Nation to the design of neighborhoods of small houses. Between 1936 and 1940, FHA published standards and recommended designs in a series of circulars, including *Subdivision Development, Planning Neighborhoods for Small Houses, Planning Profitable Neighborhoods*, and *Successful Subdivisions*.⁹⁰

The FHA set forth seven minimum requirements for new subdivisions:

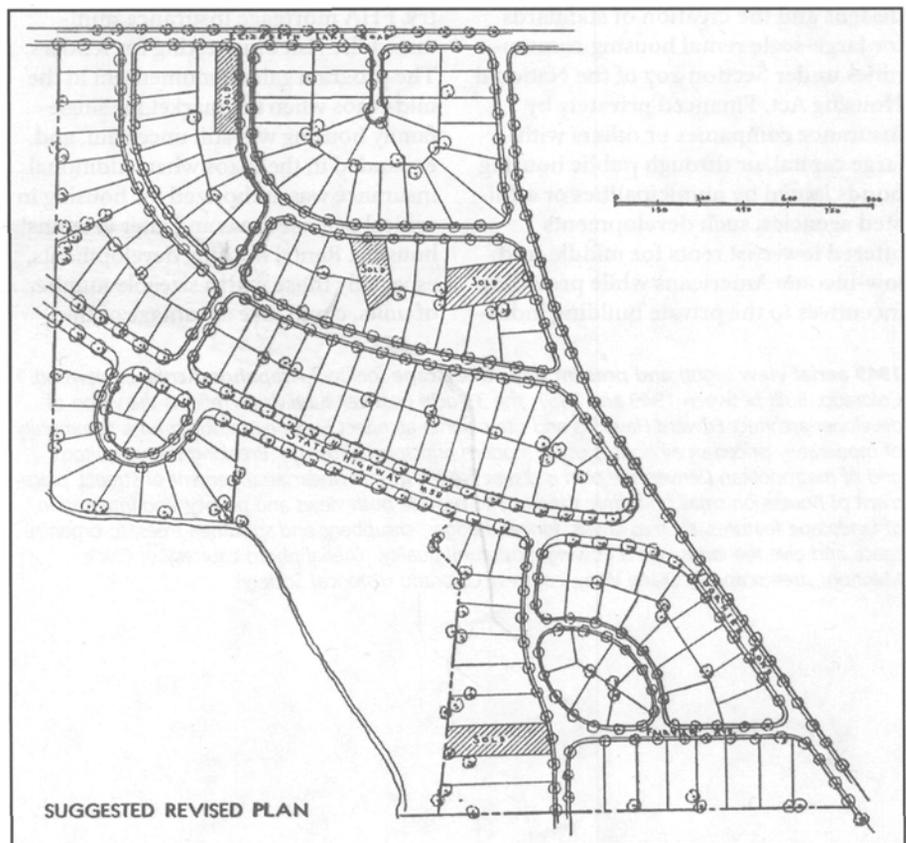
1. Location exhibiting a healthy and active demand for homes.
2. Location possessing a suitable site in terms of topography, soil condition, tree cover, and absence of hazards such as flood, fog, smoke, obnoxious odors, etc.
3. Accessibility by means of public transportation (streetcars and buses) and adequate highways to schools, employment, and shopping centers.
4. Installation of appropriate utilities and street improvements (meeting city or county specifications), and carefully related to needs of the development.
5. Compliance with city, county or regional plans and regulations, particularly local zoning and subdivision regulations to ensure that the neighborhood will become stable (and real estate values as well.)
6. Protection of values through "appropriate" deed restrictions (including setbacks, lot sizes, minimum costs of construction).
7. Guarantee of a sound financial set up, whereby subdividers were financially able to carry through their sales and development program, and where taxes and assessments were in line with the type of development contemplated and likely to remain stable.

In addition, FHA issued a set of “desirable standards,” which, although not strict requirements, were additional factors that influenced the approval of a project.

- Careful adaptation of subdivision layout to topography and to natural features
- Adjustment of street plan and street widths and grades to best meet the traffic needs
- Elimination of sharp corners and dangerous intersections
- Long blocks that eliminated unnecessary streets
- Carefully studied lot plan with generous and well-shaped house sites
- Parks and playgrounds
- Establishment of community organizations of property owners
- Incorporation of features that add to the privacy and attractiveness of the community.⁹¹

In 1936, FHA published *Planning Neighborhoods for Small Houses* as “a subdivision primer” setting forth standards for the design of new subdivisions that provided safe, livable neighborhoods and ensured stable real estate conditions that justified mortgage lending and FHA mortgage insurance. The FHA encouraged large-scale operations, where development was financed and carried out under the direction of an “operative builder” who arranged for the purchase of land, the design of the subdivision plat, and the design and construction of the houses. Such large-scale operations offered a “broader and more profitable use of capital” and permitted the introduction of “industrial methods that resulted in savings in overhead, construction, and merchandising costs.” Developers were able to develop neighborhood plans in a consistent and harmonious manner, and in addition develop “commercial services such as retail stores and gasoline stations necessary to the life of the new community.”⁹²

To Seward Mott, who headed FHA’s Land Planning Division, the legislation’s mandate provided an opportunity to



redirect the design of suburban America and to create conditions that would force public officials and planners alike to adopt planning measures and to abandon the rectilinear grid in favor of plans of curvilinear streets. Curvilinear plans had many advantages when compared to rectilinear gridiron plans: they provided greater privacy and visual interest; could be adapted to greater variations in topography; reduced the cost of utilities and road construction; and, by eliminating the need for dangerous four-way intersections, provided a safer environment for domestic activities.⁹³

The curvilinear layouts recommended by FHA in the 1930s set the standards for the design of post-World War II subdivisions. They evolved from Garden City suburbs such as Seaside Village and Radburn, and the organic curvilinear designs of the nineteenth-century Picturesque suburbs. Highly influential were Olmsted and Vaux’s Riverside, with its spacious plan of undulating and recessed, curvilinear streets, and Roland Park with its careful

FHA redesigned plan for a subdivision near Pontiac, Michigan, from *Planning Profitable Neighborhoods* (1938). FHA’s curvilinear plan featured irregularly shaped blocks of evenly-sized house lots and the integration of long, sweeping feeder streets punctuated by narrow courts, circles, and cul-de-sacs. Such plans discouraged through traffic, eliminated dangerous four-way intersections, and reduced the cost of constructing roads and utilities. (Plan courtesy Library of the U.S. Department of Housing and Urban Development)

subdivision of land based on topography and the development of curvilinear streets that joined at oblique and acute angles and ended in cul-de-sacs in hollows or on hillside knolls. By the 1930s, such principles of design had been absorbed into the mainstream practices of the landscape architectural profession.

FHA-Approved Garden Apartment Communities

Through its Large-Scale Rental Housing Division in the 1930s, FHA became involved in the approval of

designs and the creation of standards for large-scale rental housing communities under Section 207 of the National Housing Act. Financed privately by insurance companies or others with large capital, or through public housing bonds issued by municipalities or affiliated agencies, such developments offered low-cost rents for middle- and low-income Americans while providing incentives to the private building indus-

try. FHA mortgage insurance minimized the risk of investing for lenders. The program gained momentum in the mid-1930s when the market for single-family housing was still uncertain, and expanded in the 1940s when additional insurance was authorized for housing in critical defense areas and later veterans' housing. Rental housing developments, especially those with a sizeable number of units, could take advantage of the

economies of large-scale production and the use of standardized components.

FHA architect Eugene Henry Klaber worked closely with operative builders, many of whom hired architects and landscape architects to ensure that approved projects were efficiently designed cost-wise, had a solid plan for management, and were likely to materialize into sound, long-term investments. Efficiency of design required that each housing community be built at a large enough scale to take advantage of the savings offered by superblock planning and the use of standardized materials and methods. Most of these communities incorporated two- and three-story, multiple family dwellings in a variety of floor plans, often having private entrances and sometimes intermingled

1949 aerial view (right) and present day streetscape (below), Arapahoe Acres, Englewood, Colorado. Built between 1949 and 1957, the 33-acre postwar subdivision reflects the vision of developer-architect Edward Hawkins and site planner-architect Eugene Sternberg for a community of moderately-priced small houses using modern principles of design. Breaking the ubiquitous grid of metropolitan Denver, the plan is distinctive for its curvilinear arrangement of streets, placement of houses on small uniformly sized lots to provide both views and privacy, and integration of landscape features, such as lawns, fences, hedges, shrubbery, and specimen trees, to organize space and give the landscape a flowing, sculptural quality. (Aerial photo courtesy of Clyde Mannon; streetscape by Diane Wray, courtesy Colorado Historical Society)



with rowhouse or duplex units. A suburban location and neighborhood amenities further contributed to the stability of real estate values and protected the investment of lenders. In 1940, the FHA issued a series of "Architectural Bulletins," which provided economical and efficient designs for all aspects of multiple family house design, from the layout of kitchens to the planting of common areas.⁹⁴

Many of the reforms and concerns for safety that the RPAA had introduced at Sunnyside, Radburn, and Chatham Village were carried over into the design of apartment communities. These included: the arrangement of housing units to afford privacy, sunlight, and fresh air; separation of internal pedestrian circulation from perimeter motor traffic; and provision of landscaped gardens and grounds away from the noise and activity of major arterial streets. Housing units in developments such as Colonial Village in Arlington, Virginia, were carefully arranged to fit the existing topography and designed to provide visual appeal, variety, and a village-like atmosphere.⁹⁵

Such designs would provide attractive dwellings at a higher density and lower cost than neighborhoods of single family homes. To achieve the highest standards of safety and quiet, the standards for projects containing several hundred units called for the

development of superblocks with garden courts, ample throughways with pedestrian underpasses and walkways, parking and garage compounds, centralized trash stations, and the elimination of service alleys. Clearance between buildings was carefully considered to provide adequate light, free circulation of air, and privacy. A maximum height of three stories was recommended unless elevators could be provided. Landscaping around foundations, common areas, and the circulation network, was recommended depending on rental costs and project's capitalization. In addition to playgrounds and common areas, larger developments included stores, recreation centers, and medical offices.⁹⁶

The Postwar Curvilinear Subdivision

Through FHA's publication of standards for neighborhood planning and its comprehensive review and revision of subdivisions for mortgage approval, curvilinear subdivision design became the standard of both sound real estate practice and local planning. As FHA-backed mortgages supported more and more new residential development on the edge of American cities, local planning commissions adopted some form of the FHA standards as subdivision regulations. Thus, by the late 1940s, the curvilinear subdivision had evolved

from the Olmsted, City Beautiful, and Garden City models to the FHA-approved standard, which had become the legally required form of new residential development in many localities in the United States. Based on the Garden City idea, the greenbelt communities built by the U.S. government under the Resettlement Administration during the New Deal became models of suburban planning, incorporating not only the Radburn Idea but also the FHA standards for neighborhood design.⁹⁷

The curvilinear subdivision layout was further institutionalized as the building industry came to support national regulations that would standardize local building practices and reduce unexpected development costs. One of the most influential private organizations representing the building industry was the Urban Land Institute (ULI), established in 1936 as an independent nonprofit research organization dedicated to urban planning and land development. Sponsored by the National Association of Real Estate Boards (NAREB) and serving as a consultant to the National Association of Home Builders (NAHB), ULI provided information to developers about community developments that supported land-use planning and promoted the idea of metropolitan-wide coordination as an approach to development.⁹⁸

In 1947 the ULI published its first edition of the *Community Builder's Handbook*. Providing detailed instructions for community development based on the curvilinear subdivision and neighborhood unit approach, it became a basic reference for the community development industry and, by 1990, was in its seventh edition. In 1950 the NAHB, the primary trade organization for the industry, published the *Home Builders' Manual for Land Development*.

Thus, by the late 1940s, the concept of neighborhood planning had become institutionalized in American planning practice. This form of development, in seamless repetition, would create the post-World War II suburban landscape.



HOUSE AND YARD

THE DESIGN OF THE SUBURBAN HOME

The central motivation for the invention of the suburban house was the desire of Americans to own a single-family house in a semi-rural environment away from the city—what would become the American dream. Several factors influenced the evolution of suburban house design:

- The lowering of construction costs, accomplished with the invention of the balloon-frame method of construction in the 1830s and successive stages of standardization, mass production, and prefabrication.
- The translation of the suburban ideal into the form an individual dwelling usually on its own lot in a safe, healthy, and parklike setting.
- The design of an efficient floor plan believed to support and reinforce the ideal family.

The evolution of the American home reflects changing concepts of family life and the ideal suburban landscape. From 1838 to 1960, the design of the single-family, detached suburban home in a landscaped setting evolved in several broad stages from picturesque country villas to sprawling ranch houses on spacious suburban lots.

The Suburban Prerequisite: The Invention of the Balloon Frame

The widespread adoption of the balloon-frame method of construction, invented in Chicago in the 1830s, along with the invention of wire nails and the circular saw, transformed the character of American housing in the mid-nineteenth century. The lightweight balloon frame consisted of narrow wooden studs and larger joists arranged in a box-like configuration capable of absorbing load-bearing stresses. In comparison to traditional post-and-

beam and masonry methods, balloon framing could be quickly assembled at a lower cost with fewer and less experienced workers. Allowing considerable freedom of design in both exterior massing and interior layout, it was well-suited for building homes in the Romantic Revival and Picturesque styles that were coming into vogue in the mid-nineteenth century.⁹⁹

Rural Architecture and Home Grounds, 1838 to 1890

The suburban home first appeared as a rural villa for the fairly well-to-do family in the mid-nineteenth century. Located “on the edge of the city,” it was intentionally designed as a therapeutic refuge from the city, offering tranquility, sunshine, spaciousness, verdure, and closeness to nature—qualities opposite those of city. This ideal was aggressively and persuasively articulated through pattern books, the writings of domestic reformers, and popular magazines. As house designs became adapted for more modest incomes and as advances in transportation lowered the cost of commuting, suburban living became affordable to an increasingly broad spectrum of the population.

Early Pattern Books

Alexander Jackson Davis’s *Rural Residences* (1838) marked the transition from builders’ guides, which focused on techniques of joinery and architectural detailing, to a new generation of pattern books. Pattern books were directed at the prospective home owner and featured plans and elevations for ornamented villas and cottages in a variety of romantic revival styles all set in a semi-rural, village setting. Catharine E. Beecher’s *Treatise on Domestic Economy* (1841) called for domestic reform, promoting the idea that rural living was ideally suited for family life, and offering elevations and floor plans for simple houses designed

for efficiency and family comfort. With the publication of *Cottage Residences* (1842) and *Architecture of Country Houses* (1850), Andrew Jackson Downing soon after popularized a market for pattern books that offered a variety of house types and styles suited for country or village living.

Downing gave detailed architectural expression to the ideal of living in a semi-rural environment, offering designs for villas for the well-to-do and less expensive cottages for lower-income households. Through designs that conformed to a romantic aesthetic for the “beautiful” or the “picturesque,” Downing promoted revival styles described as “Italianate,” “Tudor Revival,” “Bracketed,” “Swiss,” “Gothic Revival,” and “Tuscan.” His books also illustrated decorative architectural elements, such as brackets and vergeboards, that could be crafted by most country builders to embellish the simplest home.¹⁰⁰

Pattern books appeared by a number of architects, including Calvert Vaux, A. J. Bicknell, George E. Woodward, Orson Squire Fowler, William H. Ranlett, and Gervase Wheeler. *Godey’s Lady’s Book*, a popular magazine, also offered its readers designs for rural villas and cottages, thereby establishing the important role of periodicals in fostering domestic reform and affecting popular taste.¹⁰¹

Landscape Gardening for Suburban Homes

Downing’s *Treatise on the Theory and Practice of Landscape Gardening* (1841) was the first American published guide for laying out and planting domestic grounds. A nurseryman by trade, Downing fostered an avid interest in horticulture, encouraging home owners to enhance village streets and domestic grounds with plantings drawn from the vast numbers of native and exotic trees and shrubs becoming available in the United States. His books offered simple layouts, extensive

instructions, and plant lists for landscaping villas and cottages, often on modestly-sized rectangular parcels of land. To Downing, even the smallest domestic yard was a pleasure ground that offered a sense of enclosure and privacy from the outside world and could be developed with curvilinear paths, lawns, overlooks, tree plantations, specimen trees, and a variety of gardens.

Instructions and site plans for embellishing the grounds of suburban homes appeared regularly in a number of periodicals, including *The Horticulturalist*, *Hovey's Magazine of Horticulture*, and *Garden and Forest*. Between

1856 and 1870, plan books appeared by a number of other landscape gardeners, including Henry W. Cleaveland, Robert Morris Copeland, George E. and F. W. Woodward, and Jacob Weidenmann.¹⁰²

Frank J. Scott was among the first to recognize that the new homes being built outside cities formed neighborhoods that were suburban, not rural, in character. His comprehensive landscape manual, *Art of Beautifying Suburban Home Grounds of Small Extent* (1870), was intended to help the middle-class home owner achieve beautiful landscape effects that were low in cost and easy to maintain, including graded lawns, ornamental trees and shrubs,

and foundation plantings. His influence was extensive, and by the 1870s, suburban streets began to take on a unified landscape character with paved roads, shade trees, entry walks, fences, and stairways, giving definition to the ideal suburban landscape.¹⁰³

Queen Anne cottage (1904) in the Harrison Boulevard Historic District, Boise, Idaho, represents one of the city's modest "home-dwellings," typically built by local builders. The imaginative treatment of houses to face street corners and the presence of mature street trees reflect a vernacular expression of landscape design. (Photo by Duane Garrett, courtesy Idaho State Historic Preservation Office)



Eclectic House Designs and Mail Order Plans

After the Civil War, a new generation of pattern books appeared offering greater variety and complexity in house design and plans well-suited to suburban house lots. Henry Hudson Holly's *Modern Dwellings in Town and Country, Adapted to American Wants and Climate* (1878) was among the first to advocate architectural eclecticism in which visual and artistic effects—in the design of chimneys, gables, and porches, for example—became important aspects of

stylistic appeal. Such books popularized late nineteenth-century styles including the Shingle, Stick, Eastlake, Second Empire, and Queen Anne Revival styles.¹⁰⁴

Mail order services further democratized home building and added variety and complexity to Victorian-era house design. *Model Homes for the People, A Complete Guide to the Proper and Economical Erection of Buildings* (1876) was the first in a series of best-selling, inexpensive catalogs by George and Charles Palliser which offered detailed architectural plans by mail for

a small fee. The *Ladies' Home Journal*, under the editorship of Edward Bok beginning in 1889, and a host of catalogs by architects George F. Barber, Robert W. Shoppell, William A. Radford, and others similarly made available architect-designed plans for a nominal cost. This practice continued in the twentieth century, carried on by architect-sponsored small house service bureaus and stock plan companies, such as Garlinghouse of Topeka, Kansas.¹⁰⁵



The Homestead Temple-House

Working-class families sought separation from the city and privacy from neighbors in modest, detached homes on the narrow, rectangular lots of grid-iron subdivisions. By the 1860s, a free-standing house type, the “homestead temple-house,” gained popularity in the rapidly growing industrial cities of the Northeast and Midwest. Derived from the earlier Greek Revival house and typically adorned by a stylish doorway or colonnaded porch, the house was turned so that the gabled end faced the



(above) **A regional expression of the “homestead temple-house,”** the simple one-story shotgun houses (c. 1925) in the Rocksprings Shotgun Row Historic District were built to house African American laborers who settled in Athens, Georgia, following World War I. (Photo by James R. Lockhart, courtesy Georgia Department of Natural Resources)



(far left) **Gothic Revival house designed by James H. McGill** for LeDroit Park in Washington, DC, exemplifies the romantic revival designs promoted by mid-nineteenth-century pattern books, such as Andrew Jackson Downing’s *Cottage Residences* (1842) and *The Architecture of Country Houses* (1850). Developed between 1873 and 1877, LeDroit Park was originally planned as an architecturally unified subdivision of detached and semi-detached houses, many designed by McGill, an enterprising architect who advertised his services through the publication of *LeDroit Park Illustrated* (1877) and *Architectural Advertiser* (1879). (Photo by Jack E. Boucher, courtesy Historic American Buildings Survey)

(left) **Brick row houses** (c. 1882) in Queen Anne style designed for working-class families (many immigrants from Germany and Ireland) in the William D. Bishop Cottage Development (c. 1840-1894), Bridgeport, Connecticut. Attributed to George and Charles Palliser, houses exhibit the eclecticism and complexity of design for which the architects became known through a series of inexpensive catalogs, such as *Model Homes for the People* (1876), which offered detailed architectural drawings that could be purchased by mail for a small fee. (Photo by D. Palmquist, courtesy Connecticut Historical Commission)

street and the floor plan extended deeply into the lot.¹⁰⁶

The popularity of this house type persisted throughout the nineteenth century, allowing working-class families to live in suburban neighborhoods close to railroad stations and later along streetcar routes. It appeared in several forms from a simple one-story, “shotgun” home in the South to the double- and triple-decker multiple family dwellings of the Northeast, this type assumed a variety of architectural styles ranging from Classical and Gothic Revivals to Italianate and Queen Anne Revival. The crowded and repetitious character of such neighborhoods would attract the criticism of twentieth-century reformers.

The Practical Suburban House, 1890 to 1920

The expansion of streetcar transportation in American cities coincided with fundamental changes in the perception of the ideal family and a revision of what constituted the best suburban home. Progressive ideals emphasizing simplicity and efficiency called for house designs that reflected less hierarchical relationships, technological innovations, and a more informal and relaxed lifestyle.¹⁰⁷

New subdivisions provided utilities and amenities not available elsewhere. In many places, they benefitted from the street improvements, park and boulevard systems, and public utility systems that resulted from the City Beautiful movement and an emerging interest in city planning as the means for Progressive reform.

Technological innovations introduced to improve household life—central heating, gas hot water heaters, indoor plumbing, and electricity—entailed expensive mechanical systems that increased the cost of construction. The reduction of floor space and the use of standardized plans helped offset the rising cost of home construction and put home ownership within reach of more Americans. First appearing in the 1890s, the bungalow reflected the desire for an affordable single-family house for households without servants.

These houses, and a somewhat large type known as the foursquare, were sold by catalog and became the first mass-produced houses in the United States.¹⁰⁸

The Open Plan Bungalow

By 1910, the bungalow had become the ideal suburban home and was being built by the thousands, giving rise to what has been called the “bungalow suburb.” The typical bungalow was a one- or one-and-a-half-story house having a wide, shallow-pitched roof with broad overhanging eaves. The interior featured an open floor plan for family activities at the front of the house and private bedrooms at the back or upstairs. The wide open front porch, a distinctive feature of the ideal bungalow, provided a transition between interior and outdoors.¹⁰⁹

The design of the bungalow was influenced by the Prairie School movement of the Midwest, the California Arts and Crafts movement, and a number of vernacular housing types. Part of the bungalow’s appeal was its adaptation of these and other architectural influences in the form of a small comfortable house. The suburban bungalow—in styles ranging from English Cottage styles to the Mission Revival style of the Southwest—was popularized nationwide by periodicals such as *Western Architect*, *Ladies’ Home Journal*, *Craftsman*, and *Bungalow Magazine*. Numerous catalogs and books appeared, many in multiple editions, including William A. Radford’s *Artistic Bungalows* (1908), Henry L. Wilson’s *Bungalow Book* (1910), Henry H. Saylor’s *Bungalow Book* (1911), H. V. Von Holst’s *Modern American Homes* (1913), Gustav Stickley’s *Craftsman Homes* (1909) and *More Craftsman Homes* (1912), and Charles E. White’s *Bungalow Book* (1923).

The American Foursquare

The American foursquare made its appearance in the 1890s, and by the 1930s, was a fixture of American neighborhoods. A typical foursquare was a two-and-one-half-story house having a raised basement, one-story porch across the front, and plan of four

evenly sized rooms on each floor. Often crowned with a pyramidal roof and dormers, the foursquare appeared in a variety of architectural styles, the most popular being the Colonial Revival.¹¹⁰

Factory Cut, Mail Order Houses

The availability of complete, factory cut homes, which could be ordered by mail from illustrated catalogs, was largely responsible for the widespread popularity of the bungalow and foursquare. The Hodgson Company of Dover, Massachusetts, was one of the first to market factory cut dwellings, sheds, and cottages. During the first decade of the twentieth century, several companies—Aladdin of Bay City, Michigan; Sears and Roebuck; and Montgomery Ward—began to market pre-cut homes that could be shipped by railroad and assembled on site. This trend grew in popularity and at the height of its popularity in the 1920s the industry included a host of other companies, including the Gordon-Van Tine Company of Davenport, Iowa, and Pacific Ready-Cut of Los Angeles.

The success of mail order home building depended on inexpensive transportation, vast selection of housing types and prices, financial arrangements where home owners could pay in installments, and marketing programs whereby designs were constantly being revised and retired as new ones reflecting changing popular taste were introduced. Thousands of pre-cut houses were sold and shipped annually. Sears alone offered approximately 450 ready-to-build designs ranging in style, type, and size from small bungalows to multiple family apartment houses. Sears’s sales reached 30,000 by 1925 and nearly 50,000 by 1930.¹¹¹

Introduction of the Garage

Shelter for the automobile became an increasingly important consideration after 1900. Driveways were readily accommodated in the progressive design of new neighborhoods having road improvements such as paved surfaces, gutters and curbs, and sidewalks. The earliest garages were placed behind the house at the end of a long driveway that often consisted of little more than

a double tract of pavement. By the end of the 1920s, attached and underground garages began to appear in stock plans for small homes as well as factory-built houses. Among the earliest homes with built-in garages were the detached and semi-detached models designed by architect Frederick Ackerman in 1928-1929 for Radburn, New Jersey. The design of an expandable two-story house with a built-in garage and additional upper-story bedroom was introduced by the FHA in 1940. By the 1950s, garages or carports were integrated into the design of many homes.¹¹²

Keith's Magazine, Carpentry and Building, Building Age, and American Carpenter and Builder were among the first magazines to offer instructions for building garages. William A. Radford is credited with popularizing the term "garage" and introducing the first catalog devoted to the type in 1910. Manufacturers of pre-cut homes, such as Aladdin Homes, began to offer a variety of mail order garages, often matching the materials and styles of popular house types.¹¹³

Home Gardening and the Arts and Crafts Movement

The American Arts and Crafts movement spurred an avid interest among homeowners in gardening and a desire to integrate a home's interior space with its outdoor surroundings. To unify house and garden and integrate indoor and outdoor living, many bungalow designers used natural construction materials, incorporated porches and courtyards into their designs, and encouraged the arrangement of yards with simple terraces, rustic paths, and garden rooms. Periodicals such as *The Craftsman* featured articles for embellishing the grounds of bungalows with patios, gates, fountains, pools, arbors, pergolas, and rockery. Features such as hanging vines, water gardens, and creeping ground covers added to the variety and rich textures of the Arts and Crafts garden.

Books by landscape architects educated home owners about domestic yard design; these included Ruth B. Dean's *The Liveable House, Its Garden* (1917), Herbert J. Kellaway's *How to Lay*

Out Suburban Home Grounds (1907 and 1915), Elsa Rehmann's *The Small Place: Its Landscape Architecture* (1918), and Grace Tabor's *Gardening Book* (1911), *Making the Grounds Attractive with Shrubbery* (1912), *Suburban Gardens* (1913), and *Planting Around the Bungalow* (1914). Plan books such as Eugene O. Murrmann's *California Gardening* (1914) provided gardening advice, planting plans, and plant lists for home owners according to local climate and growing conditions.

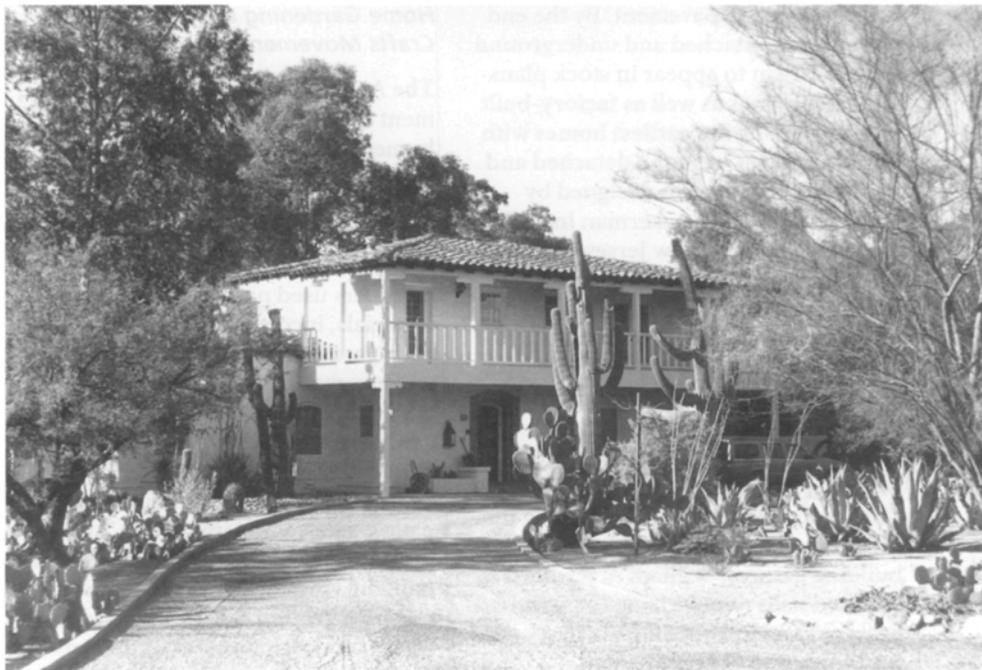
Garden writing flourished in popular magazines, such as *Ladies' Home Journal, House and Garden, Country Life in America, House Beautiful, Garden Magazine, and Woman's Home Companion*. Garden columns—by Frances Duncan, Wilhelm T. Miller, and Grace

Compound garages flanking a central service court accommodated automobiles in Greenbelt, Maryland, one of three planned Garden City communities built by the Federal Resettlement Administration during the New Deal. (Photo by Elizabeth Jo Lampi, courtesy National Historic Landmarks Survey, NPS)



(right) A Monterey Revival house with garden of desert plants in Tucson's Colonia Solana Historic District, which was platted in 1927 and developed with the expertise of landscape architect Stephen Child. Inspired by the native landscape, Child used naturalistically curving lines and native plants in his designs for both individual home grounds and neighborhood streets. (Photo by Larry Wilson, courtesy Arizona Office of Historic Preservation)

(bottom) Present day view across one of Radburn's interior parks illustrates mature plantings of native trees and shrubs designed in the late 1920s by landscape architect Marjorie Sewell Cautley and homes in the popular revival styles of the period by "small house" architect Frederick Ackerman. Stein and Wright's vision for a garden city called for the integration of landscape and architecture into a unified design and required the collaboration of designers having special areas of expertise. (Photo by Paula Reed, courtesy National Historic Landmarks Survey, NPS)



Tabor—and articles by noted designers, nursery keepers, and amateur gardeners, showcased successful gardens, provided horticultural information, and offered gardening advice.¹¹⁴

Horticulturalist Liberty Hyde Bailey of Cornell University bridged the gap between science and practical landscape gardening. As editor of *Country Life in America* and author of *Garden-Making: Suggestions for the Utilizing of Home Grounds* (1898) and *The Practical Garden Book* (1904), he translated his extensive botanical knowledge into simple principles for suburban gardeners.¹¹⁵

With the publication of Helena Rutherford Ely's *A Woman's Hardy Garden* in 1903, Victorian practices of carpet bedding and lush displays of exotic plantings gave way to simpler gardens featuring harmonies of color, seasonal changes, and perennial displays. Numerous books by successful amateur gardeners followed including, Louise Shelton's *The Seasons in a Flower Garden* (1906), Louise Beebe Wilder's *Colour in My Garden* (1918), and Nellie Doubleday's *American Flower Garden* (1909) written under the pseudonym Neltje Blanchan.¹¹⁶

Better Homes and the Small House Movement, 1919 to 1945

After World War I, improving the quality of American domestic life took on special importance. Alliances formed among architects, real estate developers, builders, social reformers, manufacturers, and public officials—at both national and local levels—to encourage home ownership, standardized home building practices, and neighborhood improvements.

The Better Homes Campaign

Better Homes in America, Inc., a private organization founded in 1922, spearheaded a national campaign for domestic reform focused on educating homeowners about quality design and construction. Promoted by *The Delin-eator*, a popular Butterick publication for women, the organization gained the support of U.S. Secretary of Commerce Herbert Hoover and formed a nation-

wide network of local committees that encouraged both the construction of new homes and home remodeling projects. A national demonstration home, “Home Sweet Home,” a modernized version of songwriter John Howard Paynes’s Long Island birthplace, was constructed on the National Mall in 1923, and “Better Homes Week” activities and competitions were held nationwide. Annual competitions recognized the work of architects, such as Royal Barry Wills of Boston and William W. Wurster of San Francisco, whose small house designs would influence popular taste nationwide for homes described as New England Colonial or Monterey Revival.¹¹⁷

Architect-Designed Small Houses

The Small House Architects’ Service Bureau was established in Minneapolis in 1919 with the purpose of providing architect-designed plans and technical specifications to builders of small houses. A “small house” was defined as one having no more than six rooms. Sponsored by the AIA, the bureau was a nonprofit organization made up of architects from all parts of the country devoted to the problem of designing small homes in a variety of popular forms and styles. Home builders could order complete working drawings from *The Small House*, a periodical, or plan catalogs such as *Small Homes of Architectural Distinction* (1929). The bureau endeavored to raise the public’s awareness of the value of professional design and encouraged homeowners and builders to secure a local architect to supervise construction.¹¹⁸

In New York, the Home Owners Service Institute, headed by architect Henry Atterbury Smith in the 1920s, ran the weekly “Small House Page” of the Sunday *New York Tribune*, sponsored local design competitions and model home demonstrations, and published *The Books of A Thousand Homes* (1923). The institute raised the variety and quality of American homes by disseminating a large number of working drawings and plans nationwide—all the work of professional architects such as Frederick L. Ackerman and Whitman S. Wick—and forming alliances with

private trade groups and manufacturers, including the American Face Brick Association, Curtis Woodwork Company, and National Lumber Manufacturers Association.¹¹⁹

Popular magazines—including *Better Homes and Gardens*, *American Home*, *House and Garden*, *Garden and Home Builder*, *McCall’s*, and *Sunset*—reflected the growing interest in home improvement and appealed increasingly to owners of small homes. They carried articles on new house designs, interior decoration, and gardening, as well as advertisements for the latest innovations in manufactured products. Trade pamphlets such as Richard Requa’s *Old World Inspiration for American Architecture* by the Monolith Portland Cement Company of Los Angeles reflected emerging alliances between the building industry and designers interested in promoting regional trends.

The small house of the 1920s appeared in many forms and a variety of bungalow and period revival styles, the most popular being drawn from the English Tudor Revival and a host of American Colonial influences, including Dutch, English, French, and Spanish. The movement resulted in a great diversity of architectural styles and types nationwide as regional forms and the work of regional architects attracted the interest of an increasingly educated audience of prospective home owners.

Federal Home Building Service Plan

Although the demand for architect designed small houses was seriously curtailed during the Great Depression, AIA-sponsored service bureaus continued to operate in a number of major cities across the United States, including Boston, New York, Memphis, Houston, and Los Angeles, where they found support from local savings and loan associations interested in ensuring that the homes they mortgaged were a sound investment. In 1938, the Federal Home Loan Bank Board, Producers Council of the NAREB, and the AIA joined together to sponsor the Federal Home Building Service Plan, a program of certification which, during the next

decade, helped make home financing available to home owners who used service bureau plans and retained the services of registered architects to supervise construction. Although regionally-inspired Colonial Revival designs dominated, new forms such as the California Ranch house, appeared in the portfolios of approved architect-designed plans.

Landscape Design for Small House Grounds

By the late 1920s, professional landscape architects, such as Stephen Child and Sidney and S. Herbert Hare, had well established reputations for subdivision design and small residential projects in upper-income planned suburbs, such as Tucson's Colonia Solana and Kansas City's Country Club District. In 1923, the Home Owners Service Institute drew attention to the value of using the services of a professional landscape architect to arrange dwellings on site, lay out home grounds, and develop planting schemes in neighborhoods of small suburban homes. Garden City planners Stein and Wright recognized the profession's role in creating moderate-income neighborhoods when they hired Marjorie Sewell Cautley to assist their work at Sunnyside and Radburn, and encouraged the Buhl Foundation in Pittsburgh to hire Ralph E. Griswold to assist with the layout and planting of Chatham Village.¹²⁰

Mrs. Francis King (Louise Yeomans King), a leader in the garden club movement, introduced the "Little Garden Series" in 1921, marking an increasing interest in the design of the small suburban lot. The series, which included Fletcher Steele's *Design in the Little Garden* (1924), brought home owners practical and aesthetic advice from professional landscape architects and successful gardeners. Other books by landscape architects reflecting this trend included Myrl E. Bottomley's *Design of Small Properties* (1926), Cautley's *Garden Design* (1935), Frank A. Waugh's *Everybody's Garden* (1930). Helen Morgenthau Fox's *Patio Gardens* (1929) and Richard Requa's *Architectural Details of Spain and the Mediterranean* (1927), both featuring Spanish



House A elevations and plan from *Principles of Planning Small Houses* (1936). Measuring 534 square feet, House A was the simplest FHA design and became known in the home building industry as the "FHA minimum house." The basic two-bedroom model could be varied by using different building materials, adding stylistic ornamentation, or by turning the house so that the gable faced the street. (Courtesy Library of the U.S. Department of Housing and Urban Development)

and Mediterranean influences, encouraged the development of regional gardening forms that corresponded to emerging trends in house design and were suited to the warmer climates of California and Florida.¹²¹

Public and Private Initiatives: The Efficient Low-Cost Home, 1931-1948

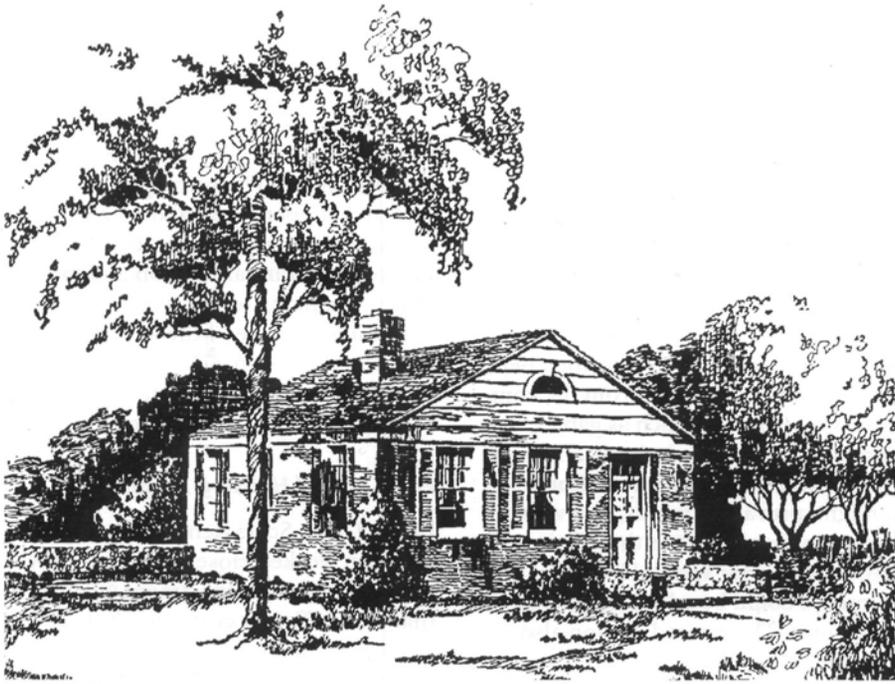
As the Great Depression deepened, housing starts declined precipitously, coming almost to a standstill. Discussion of the ideal small house took on new urgency with the collapse of the home building industry and the rising rate of mortgage foreclosures.

Findings of the 1931 President's Conference

With the recommendations of the Nation's leading experts, the 1931 conference endorsed the objective of reforming the Nation's system of home

financing, improving the quality of housing for moderate and lower-income groups, and stimulating the building industry. For house design, these measures meant improving the design and efficiency of the American home while lowering its cost. Through a combination of private and public efforts, the design of efficient, low-cost housing—in the of form single, two-family, and multiple family dwellings—became a national priority, reflecting to a large extent the recommendations made by the conference committees.

The Committee on Design brought together experienced architects and developers who called for improvements in small house design such as building houses in well planned groups to avoid the monotony created by the repetition of uniform houses on narrow lots and siting houses to benefit from sunlight, air, and outdoor space. Representatives from trade organizations, building associations, and materials manufacturers formed the Committee on Construction, which



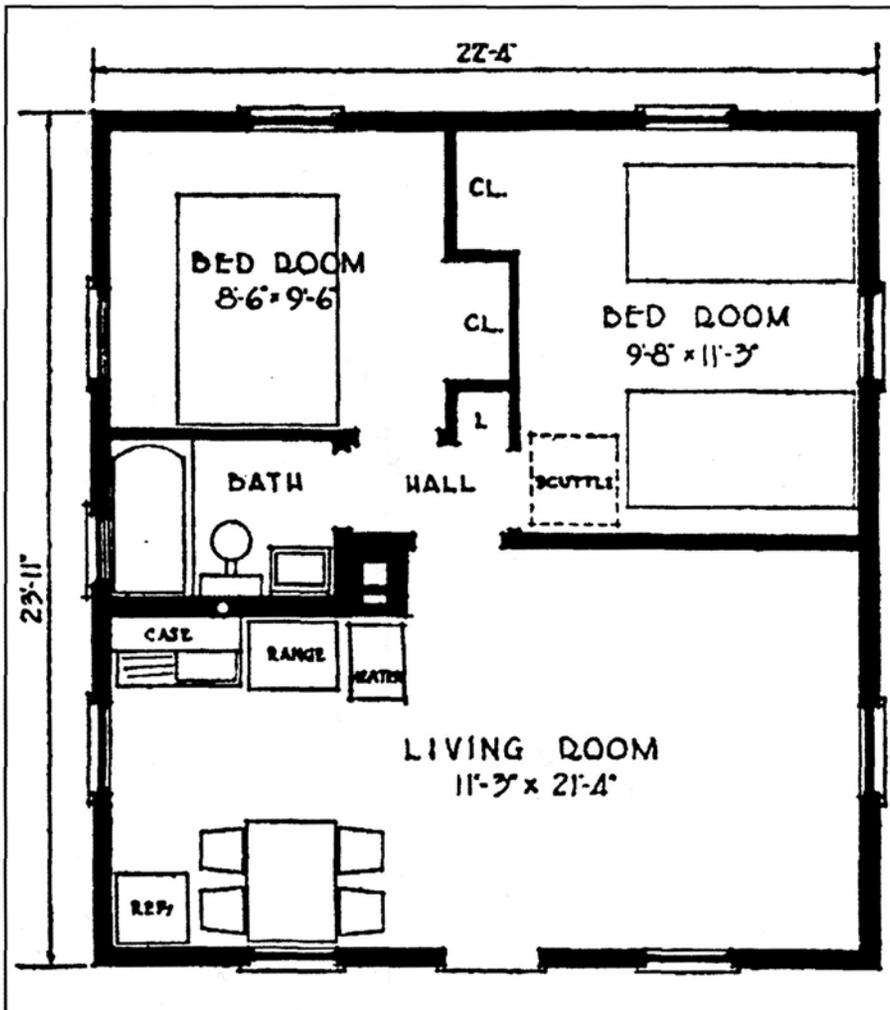
upheld the need for labor and time conserving methods, standard building codes, improved standards of workmanship, education and research by trade associations, and economies of prefabrication. Another committee examined the affordability of heating, ventilating, and air conditioning, and set basic requirements for plumbing and sanitation, electric wiring, and refrigeration.¹²²

The Committee on Landscape Planning and Planting, which brought together landscape architects experienced in residential design and representatives of the organizations such as the Garden Club of America and National Council of State Garden Club Federations, upheld the importance of attractive yard design and landscape plantings to enhance a home owner's comfort and enjoyment as well as increase property values.¹²³

FHA's Minimum House and Small House Program

Through its approval of properties for mortgage insurance and the publication of housing and subdivision standards, the FHA instituted a national program that would regulate home building practices for many decades. House designs, first published in FHA's *Principles of Planning Small Houses* (1936), were updated periodically. Circulars, such as *Property Standards*, *Recent Developments in Building Construction*, and *Modern Housing*, addressed issues of prefabrication methods and materials, housing standards, and principles of design.

The five FHA house types that appeared in *Planning Small Houses* in 1936 offered "a range in comfort of living," and in succession a "slightly increasing accommodation." Illustrated by floor plans and simple elevations, each type was void of nonessential spaces, picturesque features, and unnecessary items that would add to their cost, following FHA's principle for "providing a maximum accommodation within a minimum of means." Houses could be built in a variety of materials, including wood, brick, concrete block, shingles, stucco, or stone. To increase domestic efficiency,



new labor saving technologies were introduced: kitchens were equipped with modern appliances, and the utility room's integrated mechanical system replaced the basement furnace of earlier homes.¹²⁴

The simplest FHA design became known in the home building industry as the "FHA minimum house." Measuring 534 square feet and having no basement, House A was a one-story, two-bedroom house designed for a family of three adults or two adults and two children. A small kitchen and larger multipurpose living room extended across the front of the house, while two bedrooms and a bathroom were located off a small hallway at the back of the house. The slightly larger House B provided 624 square feet of living space and had more lasting appeal.¹²⁵

Houses C and D were two-story homes, having two upstairs bedrooms, with the latter offering a simple attached garage. House E, a compact two-story, three-bedroom house, was the largest and most elaborate of FHA's early designs. Illustrated with a classically inspired doorway and semi-circular light in the street-facing gable, it demonstrated that a house could be

"attractively designed without excessive ornamentation."¹²⁶

FHA's 1940 edition of *Planning Small Homes* introduced a dramatically different, flexible system of house design based on the principles of expandability, standardization, and variability. Praised for its livability, the simple one-story "minimum" house became the starting point from which many variations arose as rooms were added or extended to increase interior space, often forming an L-shaped plan. Exterior design resulted from the combination of features such as gables, porches, materials, windows, and roof types. Factors such as orientation to sunlight, prevailing winds, and view became as important as the efficient layout of interior space. Fireplaces and chimneys could be added, as well as basements. The revised edition also included designs for two-bedroom, two-story houses having central-hall and sidewall-stair plans, some offering built-in garages and additional bedrooms.¹²⁷

The new FHA principles provided instructions for grouping similarly designed houses in cul-de-sacs and along streetscapes by varying the ele-

ments of exterior design in ways that avoided repetition and gave the neighborhood an interesting and pleasing character, for example, by varying the placement of each house on its lot and introducing a variety of wall materials and roof types. The principles were directed at operative builders who, taking advantage of the cost-reducing practices of standardization and more liberal financing terms, were becoming increasingly aware of the advantages of building homes on a large scale and, for the first time, were creating what has become known as "tract" housing.¹²⁸

FHA's Rental Housing Program

FHA's Large-Scale Rental Housing Division worked closely with operative builders to design apartment villages that were efficient cost-wise, but also attractive and desirable places for moderate-income renters. Utilizing superbloc planning and incorporating garden courts and common greens, they were strongly influenced by Stein and Wright's Garden City projects at Sunnyside Gardens, Radburn, and Chatham Village, as well as the highly recognized World War I defense hous-



ing communities of Seaside Village at Bridgeport, Connecticut, and Yorkshp Village at Camden, New Jersey.

The overall aesthetic effect of garden apartment villages relied on the varied and irregular massing of units within a superblock, separation from automobile traffic, an interlocking arrangement of housing units to fit a site's topography which avoided the appearance of either rowhouses or large apartment blocks, and the provision of landscaped walkways, gardens, and recessed entry courts. Staggered roof lines and unifying cornices, fascia, and dentil friezes, and the repetition of modest and similar architectural embellishments—doorways, transoms, mouldings, window surrounds, roof designs—unified each complex's overall design.

Economies of scale and the use of standardized building components dictated the design of communities such as Buckingham in Arlington, Virginia. Functional efficiency and cost reduction relied on the use of standardized components and appliances, the development of consolidated mechanical systems, and an efficient arrangement of rooms within each apartment, and of

apartments within each dwelling unit. Influenced by Henry Wright, who had advised on the design of Buckingham and whose *Rehousing Urban America* was published in 1935, FHA architect Eugene H. Klaber developed a series of efficient "unit plans," which published in FHA's monthly *Architectural Bulletin* (1940), guided much market-rate rental housing construction through World War II.¹²⁹

Prefabricated Houses

The 1930s became a decade of experimentation. A number of private organizations assumed the role of "scientific housers" with the purpose of creating a house that a majority of American wage earners could afford. Others explored the principles of mass production and prefabrication to reduce the cost of building materials and housing.¹³⁰

Bemis Industries, Inc., under the direction of Albert Farwell Bemis, experimented with prefabricated modular systems using a variety of materials including steel, gypsum-based blocks and slabs, and composition board and steel panels to create a series of model homes; this work established the prin-

ciples for Bemis's three-volume *The Evolving House* (1936), which became a standard reference work on prefabrication. Bemis pursued a three-fold strategy: first, simplify the house by eliminating seldomly used space; second, streamline the construction

Tract housing had its origins in the late 1930s as builders sought ways to reduce the cost of construction, capture the growing market of FHA-qualified home buyers, and take advantage of the time and cost saving benefits of building homes on a large scale. By moving the entrance to one side and using newly-available asbestos shingles and steel casement windows, local architects Schreier & Patterson adapted FHA's House E (far left), a popular two-story design, for houses in a new neighborhood (middle) in metropolitan Washington, D.C. (Illustration courtesy Library of the U.S. Department of Housing and Urban Development; historic photo courtesy Library of Congress, Theodor Horydczak Collection, neg. LC-H814-T-2387-016 DLC)

Built in 1936 by newspaper publisher Charles A. Mitten, the Mesa Journal-Tribune FHA Demonstration House in Mesa, Arizona, sparked great local interest in home ownership and stimulated a local boom in FHA-approved construction in the late 1930s. (Photo by Shirley Kehoe, courtesy Arizona Historic Preservation Office)





(above) **Samester Parkway Apartments** (1939) in Baltimore, Maryland. A central garden court sheltered from nearby streets and a series of attractive entrances demonstrate the value of superb block planning and use of standardized unit-plans in the design of large-scale, FHA-approved rental communities. Sun-filled stairwells with glass-block sidelights, porthole windows, and streamlined aluminum railings illustrate FHA's practical concerns for creating a healthy, well-organized environment, as well as the aesthetic influences of European Modernism and the Art Moderne style. (Photos by Betty Bird, courtesy Maryland Department of Housing and Community Development)

(far right) **House made of prefabricated "Cemesto" panels** at the U.S. nuclear research facility in Oak Ridge, Tennessee. This system of prefabrication was originally developed by the John B. Pierce Foundation and Celotex Corporation for employee housing at the Glenn L. Martin Aircraft Company near Baltimore, Maryland. During World War II, it was adapted on a large-scale for both single- and multiple family dwellings to house defense workers and their families. (Photo by Kimberley A. Murphy, courtesy Tennessee Historical Commission)



process by using time and labor-saving equipment, materials, and techniques; third, apply principles of modern industrial management for production based on economies of scale and the sequential production of components.¹³¹

The John B. Pierce Foundation of New York City examined the American home from the standpoint of efficiency. Through space-and-motion studies of family living habits, the foundation developed the prototype for a 24 by 28 foot house, having four rooms and a bath which became a community building standard. The foundation developed a number of models, including a demonstration village at its laboratory in Highbridge, New Jersey, and worked with manufacturers to develop small marketable dwellings using innovative materials and prefabricated components, which were manufactured on a large scale and purchased by the U.S. government during World War II.¹³²

In 1935, the Forest Products Laboratory of the U.S. Department of

Agriculture developed a "stress-skin" plywood house, which spurred a series of efforts to develop insulated, prefabricated wood panels that could be manufactured on a large scale and shipped for easy assembly onsite. Such prefabricated systems were adopted by a number of manufacturers, including the Celotex Company of Chicago and Homasote Company of Trenton, New Jersey, which would both become leading manufacturers of housing for defense workers during World War II.¹³³

In its annual revision of *Recent Developments in Building Construction*, FHA reported on new developments and provided a list of the materials and methods approved by the U.S. Bureau of Standards. In 1940 the list included methods ranging from a system of steel panel construction manufactured by Steel Buildings, Inc., of Ohio to concrete construction methods promoted by the Portland Cement Association.¹³⁴

Prefabricated methods took on increasing importance with the onset of World War II as the construction of both temporary and permanent housing in places determined critical for defense production became a national priority. The need to speed production and lower construction costs guided these efforts, many of which were funded under the Lanham Act and public housing programs. After the war, manufacturers continued to shape the suburban landscape based on principles of mass production and prefabrication. Federal loans for the construction of manufacturing plants through the Reconstruction Finance Corporation made it possible for manufacturers such as Carl Strandlund of Chicago and Harvey Kaiser in California to fund large-scale efforts to produce housing components that could be shipped and assembled onsite to provide housing for the families of returning veterans.¹³⁵

Many attempts to produce factory-made prefabricated dwellings experienced limited success and failed, including the demountable Acorn houses introduced in 1945 by Carl Koch and John Bemis of Massachusetts and the porcelain-enamel steel Lustron House, manufactured from 1947 to 1950, the invention of manufacturer

Carl Strandlund and architect Morris Beckman.

To architects such as William Wurster and Walter Gropius, prefabrication promised a solution to housing America's lower-income families. During the 1940s, Gropius worked closely with Konrad Wachsmann and the General Panel Corporation to develop a system of prefabrication that would markedly reduce the cost of housing. Although the final model called "the Packaged House" was technically a success, the company's efforts to market the system and remain financially solvent failed.¹³⁶

More successful were house manufacturers such as National Homes Corporation of Lafayette, Indiana, and Gunnison Homes of New Albany, Indiana, which readily adapted their factory operations to postwar conditions and offered a number of designs suited to the needs, incomes, and tastes of postwar middle-income home buyers. These companies engaged the services of well-known architects, including Royal Barry Wills and Charles M. Goodman, and offered expanding portfolios with the latest in interior and exterior features, such as heat-insulated windows and exposed redwood ceilings.¹³⁷

Postwar Suburban House and Yard, 1945-1960

By 1945, several factors—the lack of new housing, continued population growth, and six million returning veterans eager to start families—combined to produce the largest building boom in the Nation's history, almost all of it concentrated in the suburbs. From 1944 to 1946, single-family housing starts increased eight-fold from 114,000 to 937,000. Spurred by the builders' credits and liberalized terms for VA- and FHA-approved mortgages by the end of the 1940s, home building proceeded on an unprecedented scale reaching a record high in 1950 with the construction of 1,692,000 new single-family houses.¹³⁸

The experience of World War II demonstrated the possibilities offered by large-scale production, prefabrication methods and materials, and streamlined assembly methods. In 1947 developer William Levitt began to apply these principles to home building in a dramatically new way, creating his first large-scale suburb, Levittown on Long Island, which would eventually accommodate 82,000 residents in more than 17,500 houses.¹³⁹



Levitt's idea was to lower construction costs by simplifying the house, assembling many components off-site, and turning the construction site into a streamlined assembly line. The economy of using factory produced building components, such as pre-cut wall panels and standardized mechanical systems, significantly lowered the cost of construction. By adapting assembly line methods for horizontal or serial production, Levitt and Sons was able to systematically and efficiently assemble the components on site. The construction process was divided into 27 steps, each performed in sequence by a specialized crew. The tasks, skills, and manpower to complete each step were precisely defined and each member was trained to perform a set of repetitive tasks, enabling work crews to move efficiently and quickly through each site, thus establishing the firm's reputation for completing a house every 15 minutes.¹⁴⁰

The vast subdivisions of Cape Cods and later Ranch homes, mocked by critics as suburban wastelands, represent not only an unprecedented building boom, but the concerted and organized effort by many groups, including the Federal government, to create a single-family house that a majority of Americans could afford. Levitt actually perfected a construction process that had been in the making for more than two decades. Other developers did the same, including Harvey Kaiser at Panorama City, near Los Angeles, and Philip M. Klutznick of American Community Builders, Inc., at Park Forest, Illinois. The success of Levitt and others resulted in the emergence of large-scale developers, called "merchant builders," who would apply their successful formulas for building large communities in one location after another, often accommodating changing tastes, economics, and consumer demand in new and improved house designs.¹⁴¹

From the FHA Minimum House to the Cape Cod

The Cape Cod provided most of the low-cost suburban housing immediately following the war and was built in

groups of varying sizes, sometimes numbering the hundreds. Often located on curvilinear streets and cul-de-sacs that reflected the FHA guidelines for neighborhood planning, Cape Cods appeared in a variety of materials, including sheets of insulated asbestos shingles available after the war in an increasing assortment of colors.

The Cape Cod that eager prospective renters lined up to inspect in the first Levittown in June 1947, was one-and-a-half stories and built on a concrete slab. Its 750 square feet of living space was divided into a living room, a kitchen, two bedrooms, and a bath. Set on a lot of 6,000 square feet, the exterior of the house—with a steeply pitched gable roof pierced by two dormers above a clapboarded first story—was a variation on a Cape Cod cottage and was a somewhat larger version of the FHA minimum house, which had been improved and expanded in FHA's 1940 *Principles for Planning Small Houses*.¹⁴²

Large-scale subdivisions not only took form on the periphery of the Nation's largest metropolitan areas, but also around many smaller cities. For middle- and upper-middle-income families, especially in the East, simplified versions of pre-war "small house" designs such as brick or clapboarded Cape Cod and other Colonial Revival forms continued in popularity, in large part due to architect Royal Barry Wills, who published numerous plan books, including *Houses for Good Living* (1940), *Better Homes for Budgeteers* (1941), *Houses for Homemakers* (1945), and *Living on the Level* (1955).¹⁴³

The Suburban Ranch House

The suburban Ranch house of the 1950s reflected modern consumer preferences and growing incomes. With its low, horizontal silhouette and rambling floor plan, the house type reflected the nation's growing fascination with the informal lifestyle of the West Coast and the changing functional needs of families.¹⁴⁴

In the 1930s California architects Cliff May, H. Roy Kelley, William W. Wurster, and others adapted the traditional housing of Southwest ranches and *haciendas* and Spanish Colonial

revival styles to a suburban house type suited for middle-income families. The house was typically built of natural materials such as adobe or redwood and was oriented to an outdoor patio and gardens that ensured privacy and intimacy with nature. Promoted by *Sunset Magazine* between 1946 and 1958 and featured in portfolios such as *Western Ranch Houses* (1946) and *Western Ranch Houses* by Cliff May (1958), May's work gained considerable attention in the Southwest and across the nation.¹⁴⁵

In the late 1940s popular magazine surveys indicated the postwar family's preference for the informal Ranch house as well as a desire to have all their living space on one floor with a basement for laundry and other utilities and a multipurpose room for hobbies and recreation. Builders of middle and upper-income homes mimicked the architect-designed homes of the Southwest, offering innovations such as sliding glass doors, picture windows, carports, screens of decorative blocks, and exposed timbers and beams, which derived as much from modernistic influences as those of traditional Southwestern design.¹⁴⁶

Builders of low-cost homes, however, sought ways to give the basic form of FHA-approved houses a Ranch-like appearance. By late 1949, Levitt & Sons had modified the Cape Cod into a Ranch-like house called "The Forty-Niner," by leaving the floor plan intact and giving the house an asymmetrical facade and horizontal emphasis by placing shingles on the lower half of the front elevation and fitting horizontal sliding windows just below the eaves. Picture windows, broad chimneys, horizontal bands of windows, basement recreational rooms, and exterior terraces or patios became distinguishing features of the forward-looking yet lower-cost suburban home.¹⁴⁷

In the 1950s, as families grew larger and children became teenagers, households moved up to larger Ranch houses, offering more space and privacy. With the introduction of television and inexpensive, high-fidelity phonographs, increasing noise levels created a demand for greater separation of activ-

ities and soundproof zones. The split-level house provided increased privacy through the location of bedrooms on an upper level a half-story above the main living area and an all-purpose, recreation room on a lower level. The Ranch house in various configurations, including the split level, continued as the dominant suburban house well into the 1960s.

The Contemporary House

The influence of Frank Lloyd Wright, Walter Gropius, Marcel Breuer, Richard J. Neutra, Mies van der Rohe, and other modernists inspired many architects to look to new solutions for liveable homes using modern materials of glass, steel, and concrete, and principles of organic design that utilized cantilevered forms, glass curtain walls, and post-and-beam construction. The contemporary home featured the integration of indoor and outdoor living area and open floor plans, which allowed a sense of flowing space. Characteristics such as masonry hearth walls, patios and terraces, carports, and transparent walls in the form of sliding glass doors and floor-to-ceiling windows became

hallmarks of the contemporary residential design.¹⁴⁸

The principles of European modernism expressed in the International Style had been introduced to the American public in the 1932 Museum of Modern Art exhibition. The Century of Progress World's Fair at Chicago in 1933 introduced Americans to a number of modern houses, including the House of Tomorrow by George Fred Keck, noted for its polygonal form, innovative use of glass, and showcase of modern building materials.¹⁴⁹

James and Katherine Ford's *Modern House in America* (1940) and professional magazines, such as the *Architectural Record*, *Progressive Architecture*, and *Architectural Forum*, promoted modernistic architect-built homes and featured the work of a rising generation of modernists including Edward D. Stone, Paul Thiry, William Lescaze, George Howe, Alden B. Dow, Pietro Belluschi, and Gregory Ain. Under the editorship of John Entenza, the "case study series" in *Arts and Architecture* from 1945 and 1966 included designs for 36 houses that reflected new approaches to domestic design and featured mass production techniques, innovative

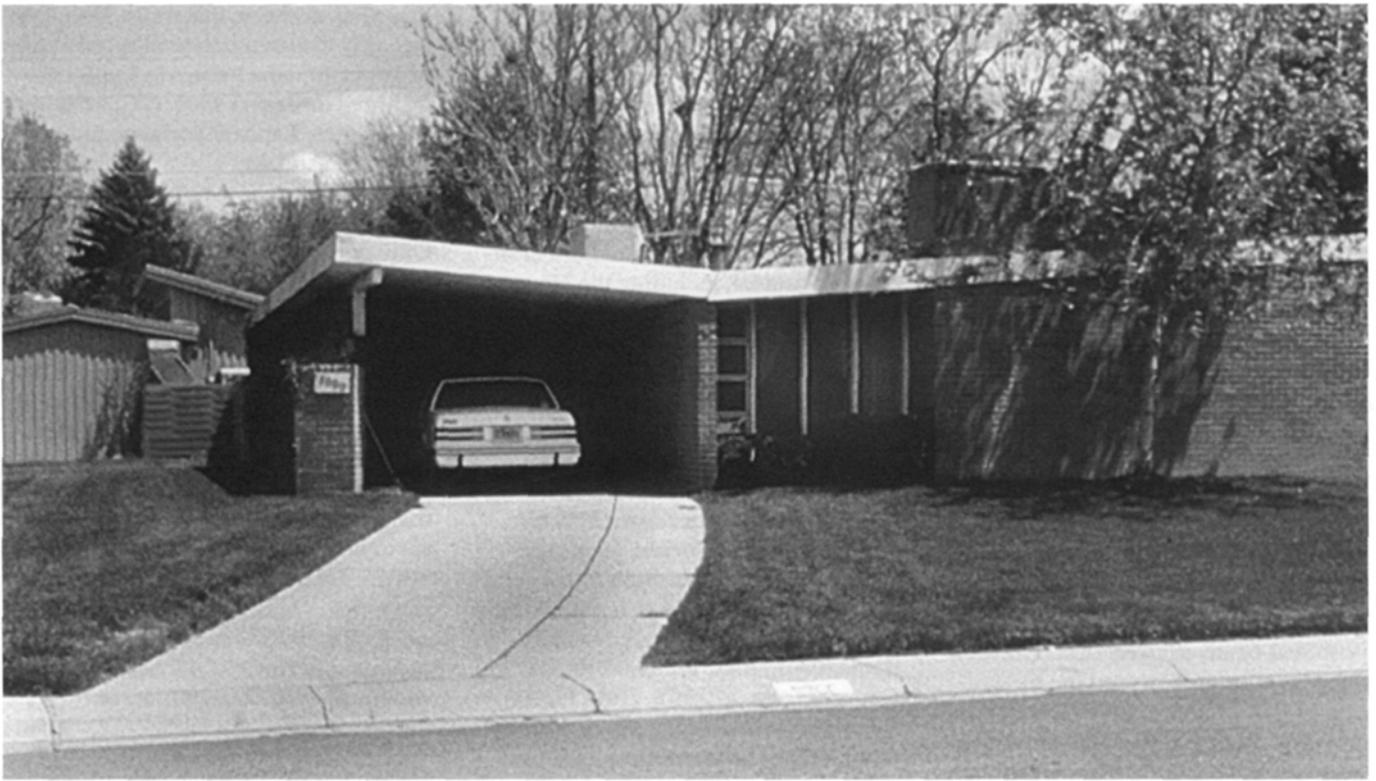
planning, and new materials. The series not only featured outstanding examples of upper-income homes in California by noted designers such as Charles and Ray Eames, Raphael Soriano, and Ralph Rapson, but also a proposed but never-executed 260-home subdivision in San Fernando Valley, designed by A. Quincy Jones, Jr., and Frederick E. Emmons and co-sponsored by merchant builder Joseph Eichler and the Producers' Council.¹⁵⁰

Architects and others promoted the development of smaller houses reflecting modernistic design principles to meet the postwar housing shortage through plan books and detailed instructions that pointed out the construction and space efficiencies offered by modern design. Such books included *The Small*

Ranch house (1952) in the Denver Court Historic District, Galveston, Texas.

Developed by West Coast architects in the 1930s and promoted by Sunset Magazine in books such as architect Cliff May's Western Ranch Houses (1946), the sprawling Ranch house attained great popularity and appeared nationwide in the 1950s, often on the unbuilt lots of early subdivisions. (Photo by Lesley Sommer, courtesy Texas Historical Commission)





Contemporary house (1951) with innovative “butterfly” roof and carport by architect-planner Eugene Sternberg for Arapahoe Acres, a postwar suburb in Englewood, Colorado. The contemporary house of the 1950s offered families informal floor plans, window walls that merged interior and exterior spaces, and patios and terraces that provided outdoor rooms. Private organizations, including the Revere Quality House Institute and the Southwest Research Institute, recognized the value of such homes for their efficient arrangement of space, the low cost of construction, and pleasing modernistic design. (Photo by Diane Wray, courtesy of Colorado Historical Society)

House of Tomorrow (1945) by Los Angeles architect Paul R. Williams; *Tomorrow’s House: How to Plan Your Post-War Home Now* (1945) by designers George Nelson and Henry N. Wright; and the Museum of Modern Art’s *If You Want to Build a House* (1946) by Elizabeth B. Mock.¹⁵¹

Frank Lloyd Wright’s Usonian houses of the 1930s were forward looking with their horizontal emphasis, flat and sloping roofs, large windows, corner windows, and combination of natural wood and masonry materials. Wright

continued to explore the problem of the small home, designing in 1938 an interesting group of quadraplexes, the Suntop Houses, at Ardmore, Pennsylvania. He gave new form to the Usonian house in the 1950s, and published *The Natural House* (1954), where he elaborated on his principles of organic design to create livable dwellings that integrated home and site.

Private organizations, such as the Revere Quality House Institute, Southwest Research Institute, and John D. Pierce Foundation, promoted the use of modern principles of design by sponsoring award programs and offering seals of approval for successful innovative designs. These programs encouraged the collaboration of developers and modernist architects and recognized the broadening array of new and innovative home building materials and prefabricated methods of construction.¹⁵²

John Hancock Callender’s *Before You Buy a House* (1953), a joint publication of the Southwest Research Institute and the Architectural League of New York, was designed to educate prospective home buyers about the effi-

ciency, livability, and low-cost afforded by the “contemporary residential style.” The book showcased dozens of communities of small homes from all parts of the country, including Arapahoe Acres in Englewood, Colorado; and many of merchant builder Joseph Eichler’s subdivisions in California.¹⁵³

In the 1950s AIA sponsored a Homes for Better Living award program in conjunction with *House and Home*, *Better Homes and Gardens*, and the National Broadcasting Corporation. This program recognized successful merchant-built communities such as Hollin Hills in Alexandria, Virginia, which featured the innovative domestic architecture of Charles M. Goodman.¹⁵⁴

Appealing to an increasingly well-educated and prosperous audience, popular magazines heralded innovations in contemporary house design. The distinction between the Ranch and contemporary house became blurred as each type made use of transparent walls, privacy screens of design concrete blocks, innovations in open space planning, and the interplay of interior and exterior space. *House Beautiful* promoted Wright’s designs as well as

other upper-income homes in the modernistic styles. *Better Homes* promoted designs to meet the incomes of a wider range of families and showcased successful owner-built designs alongside those of established architects, such as architect Chester Nagel's home in Lexington, Massachusetts. In the late 1940s *Better Homes* began to recognize outstanding examples, which were showcased as "Five Star Homes." Other magazines offered similar awards, including *Parents' Magazine*, which sponsored the "Best Home for Family Living" competition.¹⁵⁵

Exploring the possibilities inherent in combining modern design and prefabrication methods, architect Carl Koch and John Bemis introduced the popular, mass-produced Tech-built house in the early 1950s. From 1952 to 1956, the U.S. Gypsum Corporation sponsored a well-publicized demonstration project at Barrington Woods, Illinois, which featured model homes by a number of leading designers. In addition, sources such as Koch's *At Home with Tomorrow* (1958) and Jones and Emmons's *Builder's Homes for Better Living* (1957) spurred a whole series of contemporary homes, whose facades by the end of the 1950s were dominated by overhanging eaves, broad gables, transparent walls, and above-ground balconies.

Postwar Suburban Apartment Houses

Modernism was embraced as the rental housing market expanded in the suburbs of large cities. Title 608 of the National Housing Act, which guaranteed builders 90 percent-mortgages on multiple family projects conforming to FHA standards, continued until the mid-1950s. Publication of Clarence Stein's *Toward New Towns* (1951) revived models for low- and mid-rise apartment villages, such as the Phipps Apartments at Sunnyside Gardens and the modernistic Baldwin Hills in Los Angeles. *Housing Design* (1954) by Columbia University professor Eugene Klaber set forth principles of unit-planning similar to those Klaber had developed for the FHA two decades earlier. FHA began to provide mortgage insurance for apartment buildings having

elevators in the late 1940s. By the 1950s apartment buildings were equipped with improved mechanical systems, elevators, up-to-date appliances, central air conditioning, outdoor balconies, and newly available prefabricated components such as steelframed windows and sliding glass doors.¹⁵⁶

Unlike their urban counterparts built on the site of cleared slums, high-rise suburban developments, which became increasingly popular in the late 1950s, were modeled after Le Corbusier's vision for the "radiant city" and luxury high-rise apartment houses in American cities, including Mies van der Rohe's Promontory Apartments (1949) and Lake Shore Drive Apartments (1951) in Chicago; Frank Lloyd Wright's Price Company Tower (1952) in Bartlesville, Oklahoma; and 100 Memorial Drive (1950) in Cambridge, Massachusetts, by the firm of Kennedy, Koch, DeMars, Rapson, and Brown. Their location along major expressways leading from the center city was motivated by convenience of location as well as advances in air conditioning, elevator design, mechanical systems, and structural design.¹⁵⁷

Contemporary Landscape Design

New directions in landscape design accompanied the development of the Ranch house and contemporary residence in California. Emphasis on the integration of indoor and outdoor living encouraged the arrangement of features such as the patios and terraces, sunshades and trellises, swimming pools, and privacy screens. Several of the Case Study houses in *Arts and Architecture* featured the landscape work of Garrett Eckbo. Architects such as Paul Williams designed houses "with the living side facing a private garden." *Sunset* magazine publicized western gardens by Doug Baylis, Thomas Church, and Eckbo, a number of which formed the grounds of Ranch houses designed by Cliff May, and published *Landscape for Western Living* (1956). In addition, Thomas Church's *Gardens Are for People: How to Plan for Outdoor Living* (1955), and Garrett Eckbo's *Landscape for Living* (1950) and *Art of Home Landscaping* (1956) brought to a

national audience simple principles for organizing the domestic yard into dignified lawns, private patios, informal garden rooms, and activity areas with simple, easy-to-maintain plants and shrubbery.¹⁵⁸

The modern style sought to achieve an integration of interior and exterior space by creating lines of vision through transparent windows and doors to patios, intimate garden spaces, zones designed for special uses, and distant vistas. Hedges, freestanding shrubbery, and beds of low growing plants, arranged to form abstract geometrical patterns, reinforced the horizontal and vertical planes of the modern suburban house.¹⁵⁹

Developers of contemporary subdivisions often secured the services of landscape architects as site planners to lay out their subdivisions and advise on the layout and planting of common areas, street corners, streets, and sidewalks. Others urged home owners to consult with landscape architects on the design of their suburban yards. The Southwest Research Institute encouraged such collaboration and recognized its achievement in suburban neighborhoods of contemporary homes, such as Hollin Hills in Alexandria, Virginia, where several landscape architects, including Dan Kiley, drew up planting plans for home owners and advised the developer on the planting of common areas.¹⁶⁰

Figure 4.

Suburban Architecture and Landscape Gardening, 1832 to 1960

1832	Balloon frame construction invented in Chicago.	1922-23	Country Club Plaza, Kansas City, Missouri, first automobile-oriented regional shopping center, developed by J. C. Nichols.
1838	<i>Rural Residences</i> by Alexander Jackson Davis published.	1923	Home Owners Service Institute sponsors "Home Sweet Home," the official demonstration house for the Better Homes in America movement and publishes <i>Books of A Thousand Homes</i> , edited by Henry Atterbury Smith.
1841	Publication of <i>Treatise on Domestic Economy</i> , by Catharine E. Beecher and <i>Treatise on the Theory and Practice of Landscape Gardening</i> by Andrew Jackson Downing.	1926	Publication of Myrl E. Bottomley's <i>The Design of Small Properties</i> .
1842-1850	<i>Cottage Residences and Architecture of Country Houses</i> by Downing published.	1928-1932	Variety of moderately priced small houses built at Radburn; grounds and plantings by Marjorie Sewell Cautley
1869	<i>The American Woman's Home</i> by Catharine E. Beecher and Harriet Beecher Stowe published.	1929	Architects' Small House Service Bureau, Inc., publishes <i>Small Homes of Architectural Distinction</i> , edited by Robert T. Jones.
1870	<i>Art of Beautifying Suburban Home Grounds</i> by Frank J. Scott published.	1930	Park-and-Shop, Cleveland Park, Washington, D.C., designed by Arthur Heaton for Shannon and Luchs Real Estate.
1876	<i>Model Homes for the People: A Complete Guide to the Proper and Economical Erection of Buildings</i> , the first of a series of mail order plan catalogs by George and Charles Palliser, published.	1931	President's Conference on Home Building and Home Ownership.
1878	<i>Modern Dwellings in Town and Country Adapted to American Wants and Climate</i> by Henry Hudson Holly published.	1932	Museum of Modern Art, New York, mounts exhibition entitled, "The International Style: Architecture Since 1922."
1907-1908	<i>How to Lay Out Suburban Home Grounds</i> by Herbert J. Kellaway and <i>Artistic Bungalows</i> by William Radford published. Sears and Roebuck begins pre-cut, mail order house catalog sales.	1932-36	Chatham Village, at Pittsburgh, developed by the Buhl Foundation and designed by architects Ingham and Boyd and landscape architect Ralph E. Griswold.
1913-14	<i>Suburban Gardens and Planting Around the Bungalow</i> by Grace Tabor published.	1933-34	Century of Progress International Exhibition, Chicago, features "House of Tomorrow."
1916	Frank Lloyd Wright's American System Ready-Cut method of prefabrication used in the Richard's Small House and Duplexes, Milwaukee, Wisconsin.	1934	Federal Housing Administration establishes programs for insuring mortgages on small homes and large-scale rental housing.
1918	<i>The Small Place: Its Landscape Architecture</i> by Elsa Rehmann published.	1935	<i>Rehousing Urban America</i> by Henry Wright and <i>Garden Design</i> by Marjorie Sewell Cautley published.
1919	Architects' Small House Service Bureau founded in Minneapolis.		Demonstration of prefabrication at Purdue Research Village, Lafayette, Indiana.
1921	<i>The Little Garden</i> published, introducing "The Little Garden Series," edited by Mrs. Francis King (Louise Yeomans King).		Forest Products Laboratory of the U.S. Department of Agriculture introduces house made of "stress-skin" plywood panels.
1922	Better Homes movement founded by the Butterick Company and endorsed by Secretary of Commerce Herbert Hoover.	1936	Bemis Industries publishes three-volume <i>The Evolving House</i> , which outlines principles of prefabrication.

	Federal Housing Administration publishes first standards for insurable neighborhoods and introduces the FHA minimum house.		1946 (60 Stat. 215) extends FHA authority to insure mortgages under Title VI. Elevator structures determined acceptable for FHA rental housing.
1936-39	Buckingham Community, Arlington, Virginia, developed by Paramount Motors Company using the principles of economies of large-scale construction and standardization of building components.	1947	Legislation to encourage private development of housing for veterans based on pre-fabrication methods in the form of short-term loans to housing manufacturers.
1938	Federal Home Loan Bank Board, Producers Council, and AIA jointly introduce Federal Home Building Service Plan, encouraging home builders to use the services of registered architects to carry out construction according to architect-designed small house plans.		Levitt and Sons builds first houses at Hempstead on Long Island, New York; Philip Klutznick forms American Community Builders to develop Park Forest, Illinois (planner Elbert Peets).
1940	Construction of Crow Island School, Winnetka, Illinois, by architects Eliel and Eero Saarinen and Perkins, Wheeler, and Will.	1947-50	Prefabricated homes made of porcelain-enameled steel panels manufactured by the Lustron Corporation (Carl Strandlund, manufacturer).
	Publication of <i>Modern House in America</i> by James Ford and Katherine Morrow Ford.	1948	Cameron Village Shopping Center, Raleigh, North Carolina, first large retail shopping center, planned by developer Wilke York, and site planner, Seward H. Mott.
	FHA introduces new standards and an efficient, flexible system of house design and construction; issues "Architectural Bulletins" with unit plans for large-scale housing.	1950	<i>Landscape for Living</i> by landscape architect Garrett Eckbo, published by <i>Architectural Record</i> .
	John Pierce Foundation with the Celotex Company of Chicago, Illinois, introduces cemesto boards in the construction of pre-fabricated houses for Glenn Martin Aircraft near Baltimore, Maryland.	1952-54	Northland Shopping Center, Detroit, Michigan, planned by Victor Gruen and Associates.
1940-41	Royal Barry Wills publishes <i>Houses for Good Living</i> and <i>Better Houses for Budgeteers</i> .	1953	Southdale Shopping Center, Minneapolis, Minnesota, first enclosed, climate-controlled mall designed by Victor Gruen.
1942	Skidmore, Owings and Merrill plans defense-worker community at Oak Ridge, Tennessee.	1952-56	U.S. Gypsum Research Village in Barrington Woods, Illinois, showcases contemporary house designs.
1945-46	Publication of <i>Tomorrow's House: How to Build Your Post-War Home Now</i> , by George Nelson and Henry Wright; <i>The Small House of Tomorrow</i> by Paul R. Williams; <i>If You Want to Build a House</i> by Elizabeth B. Mock.	1953	<i>Before You Buy A House</i> published by New York Architectural League and Southwest Research Institute, promoting modern principles of house design and the collaboration of architects and developers.
1945-66	<i>Arts & Architecture</i> publishes Case Study House series.	1955-56	Publication of Thomas Church's <i>Gardens Are for People: How to Plan for Outdoor Living</i> ; Garrett Eckbo's <i>Art of Home Landscaping</i> ; and <i>Sunset Magazine's Landscape for Western Living</i> .
1946	<i>Sunset Magazine</i> publishes <i>Western Ranch Houses</i> featuring work of Cliff May, Doug Baylis and others.	1957	Hollin Hills, Alexandria, Virginia, selected as one of the "Ten Buildings in America's Future" in AIA Centennial Exhibition.
	Movement to provide veterans' housing gains momentum especially in rental housing; Veterans' Emergency Housing Act of	1957-58	Publication of A. Quincy Jones Jr., and Frederick E. Emmons's <i>Builders' Homes for Better Living</i> and Carl Koch's <i>At Home with Tomorrow</i> .

IDENTIFICATION, EVALUATION, DOCUMENTATION, AND REGISTRATION



Historic View (c. 1910) of the Prospect Park Subdivision, Pasadena, California, shows how pioneers in California's Arts and Crafts movement transformed the dry and barren site along the Arroyo Seco into one of the region's earliest and most attractive planned suburbs. Historic photographs shape our understanding of past time and place. They enable surveyors to trace the evolution of a particular historic neighborhood, as well as visualize the ways that demographic trends, modes of transportation, and changing ideas about subdivision planning, house design, and gardening defined distinct stages of suburban growth and, in many places, have contributed to regional character. (Photo courtesy Pasadena Historical Society)

IDENTIFICATION

Identification activities are designed to recognize properties associated with historic patterns of suburbanization and to gather information to determine the National Register eligibility of historic subdivisions and neighborhoods. The identification process calls for the development of a historic context at the local or metropolitan level and the documentation of associated properties using historical research methods and field survey techniques.

Contextual information on local patterns of suburbanization can guide survey work by providing a link between historic events and the physical evolution of communities. In turn, survey information expands the understanding of local patterns, adding to the local context information about the location, character, and condition of representative subdivisions and neighborhoods.

Information previously gathered through the statewide comprehensive survey and other historic contexts (local or state) should be supplemented by new research and field surveys that extend not only the geographical area covered by earlier surveys but also the chronological period considered historic. Keep in mind that the findings of earlier surveys and context statements may need to be reevaluated and updated according to new contextual information about historic patterns of suburbanization.

Publicly recorded plats provide an abundance of information about local patterns of subdivision design and real estate practices. Designed by William H. Schuchardt in 1922 as an experimental housing cooperative of detached and semi-detached homes to ease Milwaukee's housing shortage, the Garden Homes Subdivision was replatted with subdivided lots in 1934 so that homes could be sold to tenants and stockholders when the cooperative was dissolved. (Historic plat by H. L. Lockhart, courtesy Wisconsin State Historical Society)

DEVELOPING A LOCAL HISTORIC CONTEXT

The nationwide context, "The Suburbanization of Metropolitan Areas of the United States, 1830 to 1960," can be applied to the study of suburbanization on a local or metropolitan scale. In addition, a number of states have developed historic contexts and multiple property submissions that address various aspects of suburbanization (See Recommended Reading on pages 133-134 for a list of associated multiple property listings). Through historical research and field surveys, documentation is gathered to form a written statement of historic context, a master list of residential subdivisions, and one or a series of maps charting suburban growth of an entire metropolitan area or a single or small group of local communities within it.

Conducting Historical Research

Initially historical research is directed at gathering general information about metropolitan or local patterns of development, most importantly 1) demographic trends, 2) transportation systems and routes, 3) patterns of land development and subdivision design, and 4) trends in suburban housing and landscape design. Later, additional research in conjunction with field surveys may examine the history of specific neighborhoods.

Primary and secondary source materials—often available in local libraries, historical collections, and government offices—yield a wealth of information about local patterns of suburbanization as well as the history and development of local neighborhoods. Historic maps and subdivision plats should be identified early in the study. For a summary of source materials useful for developing contexts on suburbanization and documenting suburban neighborhoods, see Historical

Sources for Researching Local Patterns of Suburbanization on pages 79-81.

Determining Geographical Scale and Chronological Periods

Demographic trends can help document the approximate growth and extent of local suburbanization and establish the periods of development associated with particular methods of transportation. From this data, predictions can be made about the types of suburbs likely to exist. For example, metropolitan areas in the eastern United States, which experienced rapid growth due to industrialization during the nineteenth century, likely contain the full spectrum of suburban properties. Those in the Midwest, which began to experience significant growth in the 1880s, would probably include streetcar, early automobile, and freeway suburbs; and western cities, which didn't expand until the twentieth century, can be expected to contain early automobile and postwar or freeway suburbs.

Using the date of legal incorporation for the central city as a starting point, researchers can make an initial estimate of the period of historic suburbanization by plotting a graph that compares the population growth of the central city to that of adjacent counties (or smaller jurisdictions if the data is available for them) in ten-year intervals through 1960, using data from the U.S. Census. Such a graph will indicate not only when and where suburbanization likely occurred but also the extent to which local patterns correspond to the broad chronological periods identified in the national context.

The metropolitan area is the most appropriate scale for studying patterns of suburbanization and establishing a local historic context. However, limitations of time and funding, as well as the difficulty of coordinating efforts among multiple governing jurisdictions (sometimes located in several states), may

make this approach impractical and make it necessary to establish a context for a single or small group of localities within the larger metropolitan area. In such cases, sufficient information should be gathered about metropolitan trends to explain how the history and development of the local community reflected patterns of suburbanization that shaped the metropolitan area as a whole.

For research and survey purposes, a set of historic chronological periods should be defined that correspond to local events and stages of suburbanization. This can be done by dividing the history of local historic development into chronological periods that generally correspond to those outlined on pages 16-25, and assigning each period a set of dates based on local events, such as the introduction of the streetcar or the subdivision of the first automobile suburb. By comparing local

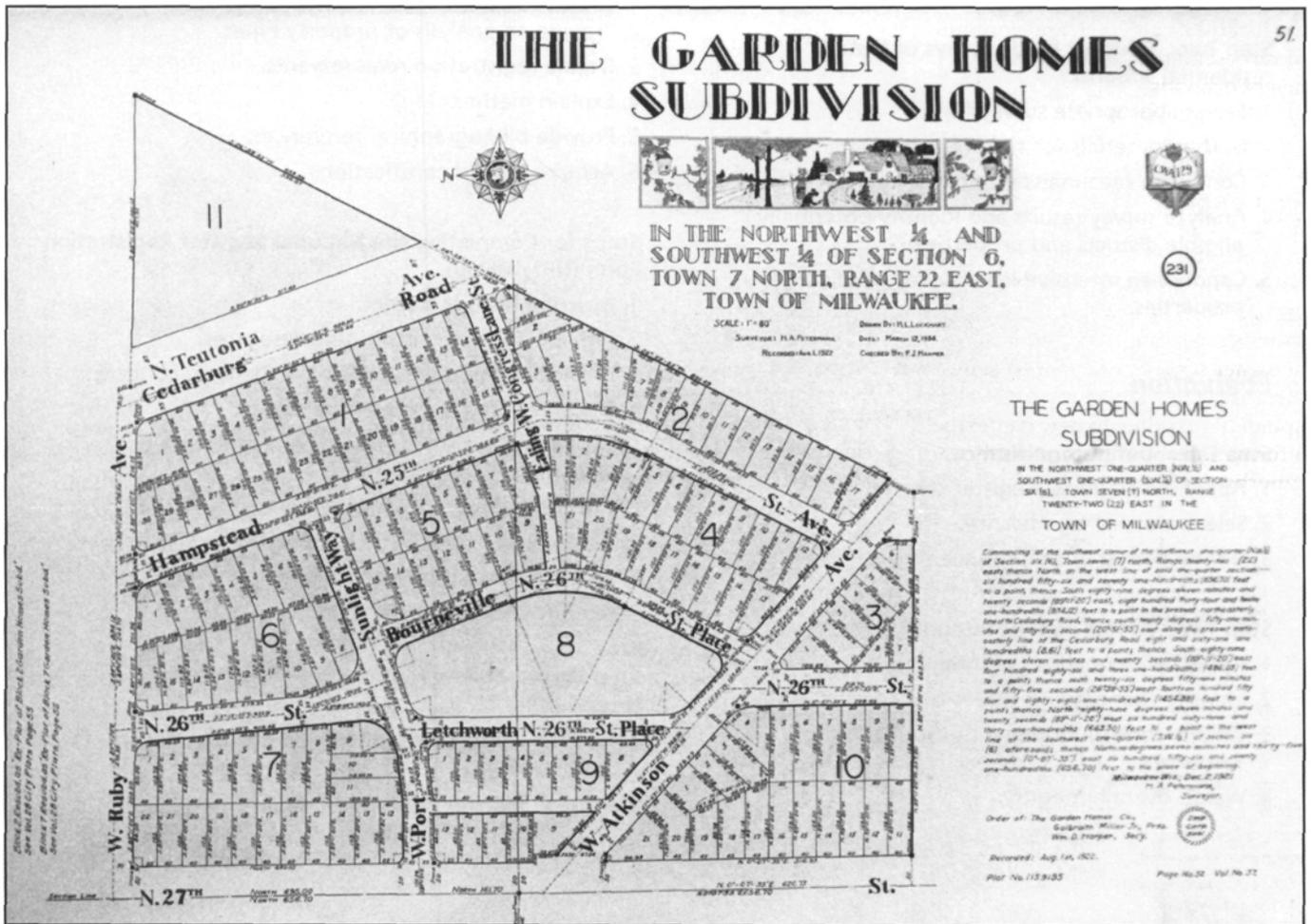
trends in transportation, subdivision design, and housing design and construction to general national trends, researchers can make predictions about the types of subdivisions and suburban housing likely to be present in the local study area, as well as identify distinctive regional patterns.

Suburbanization has been an ongoing and continuous process in many communities. For this reason, it is important to use specific events and patterns in local history to define the beginning and closing dates for the overall "historic" period, as well as dates for chronologically-based property types. Approximate dates set at the beginning of the study can be revised later after research and field surveys have been completed to ensure accuracy. Actual events rather than an arbitrary 40- or 50-year cut-off should be used when examining patterns of suburbanization after World War II.

Compiling Data from Historic Maps and Plats

Historic maps are particularly useful for studying patterns of suburbanization because they graphically depict the relationship between transportation corridors and residential development. Those from the mid-1880s are particularly helpful in locating railroad suburbs, whereas maps dating from 1900 to 1920 are good indicators of the expansion of streetcar suburbs. Maps from the late 1930s to mid-1940s help trace the development associated with the early automobile period, and those from the late 1950s will help trace the massive suburbanization spurred by the expansion of arterial roads and freeways in the postwar period.

Because transportation methods and routes have historically defined the limits of suburbanization, a sequence of historic maps indicating



transportation routes should be assembled. The maps should represent dates far enough apart that they capture significant changes in the overall landscape. These maps can be compared to trace the relationship between transportation and subdivision development

and determine the dates when major episodes of suburbanization occurred locally. Because little physical evidence of streetcar routes remains today, maps showing these routes are a key resource for identifying and verifying the presence of streetcar suburbs.

Historic plats provide an abundance of information about local real estate practices and patterns of subdivision design. They are also an invaluable tool in surveying historic neighborhoods and in evaluating significance and integrity. Plats typically indicate:

Figure 5.

Process for Identification, Evaluation, and Documentation

Identification

Step One: Develop local or metropolitan context on suburbanization

1. Conduct historical research.
2. Determine geographical scale and chronological periods.
3. Compile data from historic maps, plats, and other sources.
4. Prepare a written statement of context.

Step Two: Conduct field surveys of historic residential suburbs

1. Select appropriate survey forms.
2. Gather materials for field reference.
3. Conduct a reconnaissance or preliminary survey.
4. Analyze survey results and identify potentially eligible districts and properties.
5. Conduct an intensive-level survey of selected properties.

Evaluation

Step One: Define significance

1. Apply the National Register criteria.
2. Select areas of significance.
3. Define period of significance.

Step Two: Assess historic integrity

1. Apply seven qualities of integrity.
2. Identify changes and threat to integrity.
3. Classify contributing and noncontributing resources.
4. Weigh overall integrity.

Step Three: Select boundaries

1. Define the historic boundaries.
2. Decide what to include.
3. Select appropriate edges.

Documentation

Steps for Completing the National Register Multiple Property Form (NPS-10-900b)

1. Provide a statement of context.
2. Provide an analysis of property types.
3. Define registration requirements.
4. Explain methodology.
5. Provide bibliographical references.
6. Acquire official certification.

Steps for Completing the National Register Registration Form (NPS-10-900)

1. Describe historic district.
2. Provide a list of contributing resources.
3. Provide a statement explaining the local context.
4. Document the history of the district.
5. Explain how district meets National Register criteria and criteria considerations.
6. Provide bibliographical references.
7. Define and justify district boundaries.
8. Provide photographs and maps.
9. Acquire official certification.

Step Three: Follow registration procedures

1. Consult Federal regulations (36 CFR Part 60) for nominations.
2. Consult Federal regulations (36 CFR Part 63) for determinations of eligibility.

- 1) the date when a subdivision was platted;
- 2) original legal jurisdiction and boundaries of the subdivision;
- 3) name of the land development company or real estate developer responsible for subdividing the land;
- 4) original layout of the streets, utilities, and house lots; and
- 5) adjoining streets and arterials.

The requirements for recording plats vary from locality to locality.

Researchers should make inquiries about local practices for both recording subdivision plats and for maintaining them as archival records. Plat books may be on file at the local courthouse or planning office. The search for historic plats may also involve contacting distant repositories, such as State historical societies or specialized archives housing the records of developers, site planners, or landscape architects. Research of fire insurance maps, recorded deeds, and written notices by land development companies may provide similar and additional information about community planning.

Mapping the Study Area: Information from the historic maps, plats, and other records can be used to prepare a map or series of maps charting the outward expansion of suburban development. Maps should indicate the name, date and location of railroad stations, street-car routes, major arterial streets, parkways and boulevards, and highways, as well as principal land subdivisions. Reference copies should be prepared for field surveys so that the presence of resources can be verified and observations recorded about condition, boundaries, and potential eligible resources.

The best approach for graphically depicting the relationship between transportation and suburbanization is to begin with a current geographical map of the study area as a base map and create a series of overlays or period maps, each representing an important chronological period and showing the relationship of transportation facilities and subdivision development during that period. Such maps not only

illustrate important aspects of the historic context, they also can be used to document multiple property listings, survey findings, and the evolution of large residential districts. Geographical Information Systems (GIS), Global Positioning Systems (GPS), and a number of softwares for mapping now make it possible to efficiently organize digitized information about residential development in the form of maps and comparative graphs.

Preparing a Master List of Residential Subdivisions: General street maps, local plats and planning documents, fire insurance maps, and transportation maps usually provide sufficient information to compile a master list of subdivisions for each chronological period. For survey purposes, the list should be cross-referenced to the field map and should provide the historic name, current name, dates of platting, as well as the names of real estate developers and designers, if known. Based on survey findings and additional research, the list can be further annotated to describe key characteristics such as size, street design, block size, number of lots, types of original improvements, periods of construction, house types, and condition. Many communities are now making tax assessment and planning information available online or on CD-ROM; such a readily available source of digitized data not only provides a wealth of information about residential subdivisions and local housing types, but can be used in a variety of ways, including maps and comparative graphs.

Developing a Statement of Context

The development of a local historic context requires information gathered through both historical research and field surveys. For this reason, the written statement should be developed in several stages. An initial statement based on research findings and previous surveys should be prepared before the reconnaissance survey begins. The findings of subsequent research and both reconnaissance and intensive-

level surveys should be added at later stages. The final statement of context can be used in National Register nominations and multiple property listings, as well as State or locally published contexts and survey documents.

The statement should include a brief summary of the history of the metropolitan region and local community being studied and an explanation of the factors—geographical, legislative, and economic—that have influenced the growth and suburbanization of the region. In addition, the statement should explain the jurisdictional boundaries within the metropolitan region and identify the governing bodies historically responsible for local planning and development in the area being studied. It should contain dates, the proper names of influential individuals and organizations, and references to representative historic subdivisions and neighborhoods associated with the context.

Local contexts on suburbanization typically include information about the following:

- Transportation trends, including the location of railroad stations, street-car routes, major arterial streets, parkways and boulevards, and express highways (freeways).
- Local events that reflect national trends in transportation, industry, commerce, and government.
- Local economic, demographic, and other factors that historically influenced the location and expansion of residential suburbs (e.g. rise of aerospace industry).
- Representative types of residential subdivisions and neighborhoods believed or known to exist in the study area, including the name, dates, and general characteristics of important examples.
- General types of single and multiple family housing that characterize the area's residential development, including their association with particular income levels, socioeconomic groups, industries, or local events.

- History of local or regional planning efforts, including the introduction of zoning ordinances, comprehensive planning, and subdivision regulations, which historically influenced patterns of suburbanization.
- Local practices concerning mapping, recording of subdivision plats, aerial surveys, and issuance of building permits, noting any particular records that are strong indicators of suburban growth and development.
- The ways that local patterns of suburbanization reflected changing views and attitudes about family, home, and the social roles of men and women.
- The ways local patterns of housing and subdivision design reflected national trends in architecture, landscape architecture, and community planning.
- Establishment and activities of local chapters of the National Association of Real Estate Boards, National Association of Home Builders, American Institute of Architects, American Society of Landscape Architects, American Civic Association, American Institute of City Planners, Better Homes of America, Inc., and Small House Architect's Service Bureau, including the names of members who were influential in shaping local patterns of suburbanization.
- Principal subdividers, home builders, real estate developers, and lending institutions, including a description of the types of residential and other development with which they were associated, and any distinctive local practices, such as the use of deed restrictions or development of neighborhood shopping centers.
- Principal site planners, architects, and landscape architects known for residential design in the local community or metropolitan area, including examples of their work, the housing types or characteristics of design for which they were known, and the identity of subdividers and builders with whom they routinely worked.

Local contexts typically identify the general types of single and multiple family housing associated with particular socioeconomic groups, local industries, and stages of suburbanization. Three-deckers, also called triple-deckers, making up the Houghton Street Historic District (top) in Worcester, Massachusetts, represent a housing type common to the industrial cities of the Northeast where immigrants and others viewed renting out "flats" as a means of affording a home of their own. The Georgian Revival steel house (bottom) with garage located at 129 South Ridge is one of 22 homes constructed between 1932 and 1941 in Troy, Ohio, by the Troy-based Hobart Welded Steel House Company to demonstrate that arc-welding methods could be used to produce high quality prefabricated housing at a low cost. (Photo by Michael Steinitz, courtesy Massachusetts Historical Commission; photo by Diana Cornelisse, courtesy Ohio Historic Preservation Office)



Figure 6.

Historical Sources for Researching Local Patterns of Suburbanization

The following historical sources are especially valuable in researching local patterns of suburbanization and the history of residential subdivisions. While many can be found in the collections of local or regional libraries, archives, and historical societies, others may be found among the public records of municipal and county governments. Some source materials are available on microfilm or CD-ROM and may be found in many research libraries.

- **Historic Maps and Atlases:** Historic maps indicating the growth and development of a metropolitan area at various intervals of time are especially valuable to chart the outward migration of residential subdivisions in relationship to advances in transportation technology and expansion of transportation routes. Maps were commonly published by streetcar and transit companies, oil companies, local chambers of commerce, highway departments, as well as local governments for tax and planning purposes.
- **Aerial Photographs:** After World War II, many local governments began making aerial surveys of their rapidly changing landscape; many of these remain among local government records. Beginning in the 1930s, the U.S. Department of Agriculture began making aerial surveys of rural areas of the United States for soil conservation purposes; these provide good coverage of the outlying areas of metropolitan cities that were later subject to residential development and are available on microfilm from the Cartographic Division of the National Archives. As part of the Global Land Information System (G.L.I.S.), the U.S.G.S. now makes available electronically the aerial photographs (called "digital orthophoto quadrangles," or "DOQs") taken to update digital line graphs and topographic maps.
- **Fire Insurance Maps:** Insurance maps, such as those compiled by the Sanborn Fire Insurance Company, are available in many local libraries and at the Library of Congress. Due to a major recording effort now underway, many Sanborn maps will soon be available on CD-ROM at major research libraries.
- **Local or County Ordinances:** These indicate the dates and provisions for local planning controls, such as zoning, subdivision regulations, comprehensive planning processes, local design review, and citizens' associations.
- **City, County and Regional Plans:** On file with local planning offices and available in local libraries and archives, these plans provide information about transportation routes, publicly funded improvements (e.g. utilities, water, sewer, mass transit), and overall plan of development that include distribution and density of land use activities, including residential development.
- **Subdivision Plats:** Local land records for a county, city or town, often organized chronologically in plat-books. While some older records of this type may be found in public libraries or historical collections, many remain among the public records of local courthouse or local planning offices. Also, copies may be found among the records of the architectural, planning, or development firms responsible for the design.
- **Building Permits/Tax Records:** These records frequently provide the names of site planners, architects, and developers and often indicate the dates and cost of original construction and additions. In many communities, tax assessment information is contained in a computerized database and is available on CD-ROM.
- **Deeds of Title, Mechanic Liens, and Real Estate Records:** Public court records indicate a property's chain of ownership and the terms of any deed restrictions. These are generally organized by date of recording and indexed by the names of sellers and purchasers. They may also indicate dates of construction and additions, original cost, source of mortgage, and identity of the subdivider or developer. Mechanics liens—temporary encumbrances on the title of property to ensure payment to the building contractor—may also identify the building contractors and indicate the cost of construction.
- **Building Contracts:** Found in private and public historical collections, the records of architectural firms, and, when a legal dispute arises, in court records. In States where the public recording of building contracts was required by statute, they may be found in courthouse records. In the form of a legal agreement between owner and contractor, they describe the property to be constructed, often specifying materials, workmanship, design, and other specifications. Purchase orders and bills of lading for building materials may also be found with these records.
- **Historic Photographs:** Photographs documenting the design, construction and daily life of residential suburbs exist in many local historic collections. These include family or community records; promotional or documentary materials used by realtors, developers and designers; and illustrations in historic newspapers, journals, magazines, and published portfolios. Although local historical collections may be the best place to locate historic photographs, specialized repositories may contain the work of local or regional architects, landscape architects, and photographic studios.

Figure 6, continued

- **Site Plans, Architectural Drawings, Construction Plans, and Planting Plans:** Available from the office of developer or architect, the archival repository for records of the architect, builder, or developer. Clearinghouse services, such as the Cooperative Preservation of Architectural Records (COPAR) and the Catalog of Landscape Records in the United States, provide researchers assistance in identifying repositories for the records of architectural firms and landscape designers. In addition, home owners may be in possession of promotional brochures, floor-plans, and landscape plans for their yards. Promotional brochures and advertisements may also be found in community archives and local historical societies.
- **Historic Newspapers:** Advertisements in the real estate sections of local newspapers provide information about housing design, subdivisions, housing costs, prospective home owners, and availability of house financing. They are also a source of information about local events affecting suburbanization, such as industrial development, demographic trends, and expansion of transportation routes. Advertisements for merchants, suppliers, and contractors provide information about building materials and practices. Obituaries provide biographical information about architects, landscape architects, and real estate developers. Many local libraries maintain copies of local newspapers on microfilm. Many news publishers now offer archival indexing and assistance through the Internet; while these services are useful for locating recent obituaries or retrospective articles, few extend back far enough to locate original advertisements or features.
- **U.S. Census Records:** Census records provide demographic information about a subdivision or neighborhood, including the size of families, whether they own or rent their house, and the country of origin, education, occupation, and age of family members. The Census Bureau also gathers statistics on economics, housing, and population growth. Many census records are indexed and are available on microfilm from the National Archives (Record Group 29). Enumerative maps used by census takers are among the records of the Cartographic Division of the National Archives.
- **Oral History:** Interviews with original and early homeowners are a valuable source of oral history and may be recorded in audio-tape, videotape, or written transcripts. Such individuals may also own historic materials, such as promotional brochures, architectural drawings, landscape plans, nursery receipts, photographs, diaries and personal memoirs. Interviews with builders, contractors, developers, architects, landscape architects, planners, and former public officials may provide interesting insights into historic patterns of suburbanization.
- **Records of Neighborhood Associations:** Community newsletters, organizational minutes, correspondence, promotional brochures, anniversary publications, news clippings, early advertisements, neighborhood directories, historic photographs, and other information related to the history of a neighborhood. Records may be maintained by the organizations or may be on file in local library or historical collections.
- **City, Neighborhood, and Telephone Directories:** Available in local or regional libraries, historical societies, and community collections, these directories give the name and addresses of residents and their affiliated businesses as well as identify active merchants, suppliers of construction materials, designers, and contractors. Historic city directories for major cities are also available on microfilm in many libraries.
- **Records of Local Chapters:** Local chapters of professional and trade organizations should be contacted for information about historic events and the role of former members in the form of historic correspondence, official minutes, and newsletters. These include chapters of the AIA, ASLA, NCCP, NAHB, NAREB, as well as regionally based associations.
- **WPA Real Property Surveys.** During the 1930s many local governments, using Works Projects Administration (WPA) funds, compiled large-scale, city block maps that recorded information about real estate development and land use. The FHA used these maps to graphically illustrate statistical data on housing in metropolitan areas. Many of these maps are among the Records of the FHA (Record Group 31) in the Cartographic Division of the National Archives. Others may be on file in local libraries or archives.
- **Housing Market Analysis Maps:** Compiled by the FHA beginning in 1937, these maps indicated areas surrounding selected cities where it was considered safe to underwrite mortgages and were supplemented by data concerning commuting times, the location and condition of main highways, and the location of defense areas. These maps are among the Records of the FHA (Record Group 31) in the Cartographic Division of the National Archives.
- **Pattern Books, Mail Order Catalogs, and Landscape Guidebooks:** Sources of popular house and yard designs by architects, landscape architects, and mail-order companies such as Sears, Roebuck, Aladdin, and Van Tine. Many are available in libraries in the form of published reprints, microfilm, or CD-ROM, such as the microfiche edition of the Architectural

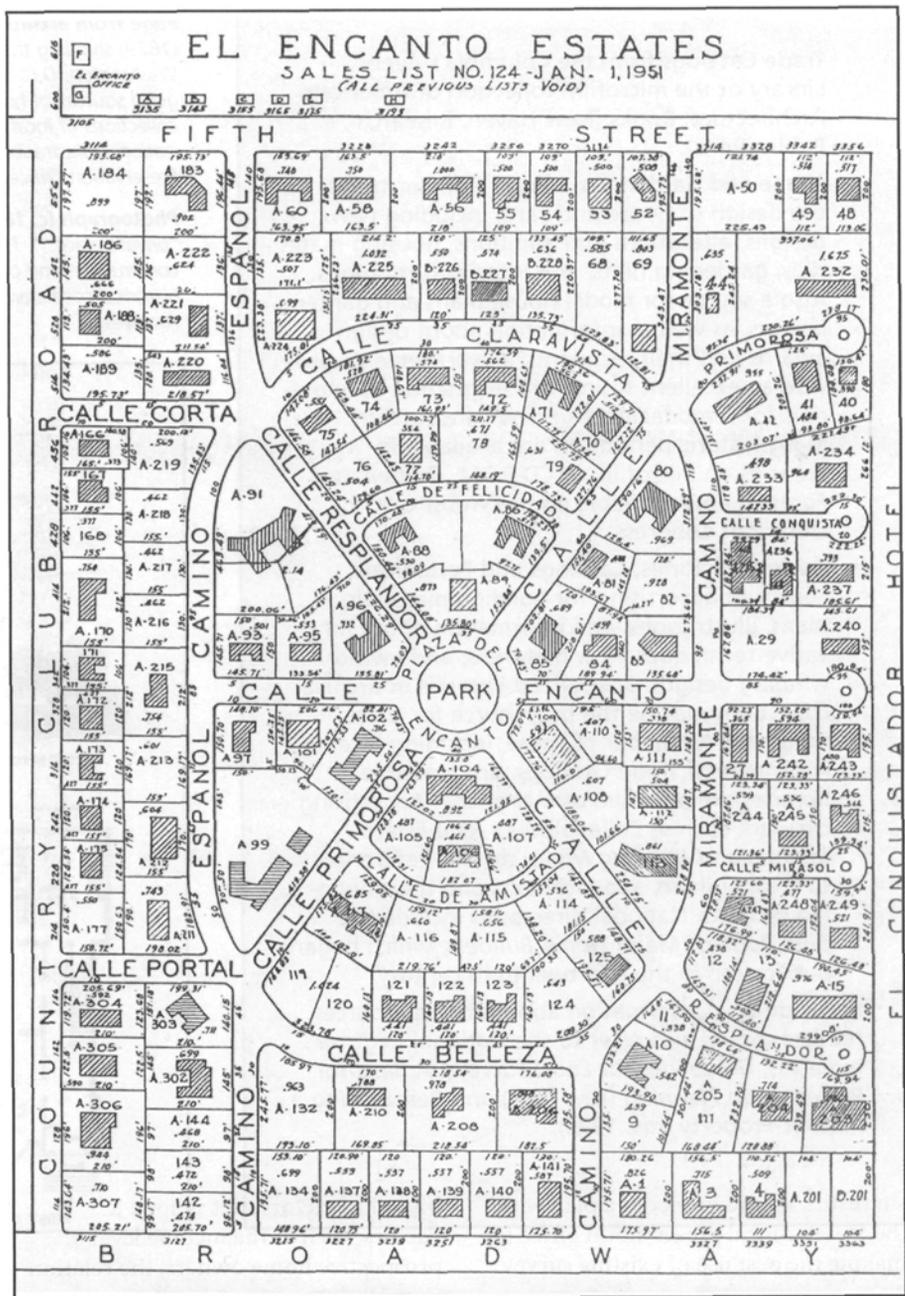
- Biographical sketches of 1) real estate developers known to have had substantial impact on local patterns of suburbanization, and 2) architects, landscape architects, and engineers who influenced the design and character of residential suburbs in the metropolitan area or local community, by introducing innovations in design, achieving work of high artistic quality, or establishing local traditions of design and construction.

SURVEYING HISTORIC RESIDENTIAL SUBURBS

Most historic resource surveys are conducted in two phases once background research has been completed. During the first, called the **reconnaissance survey**, the study area is surveyed to identify subdivisions and other property types illustrating local patterns of suburbanization. Observations are systematically recorded about the general character and condition of numerous subdivisions and neighborhoods.

During the second phase, called the **intensive-level survey**, more detailed information is gathered on one or more neighborhoods and other resources believed to meet the National Register criteria. Survey at this level proceeds with the purpose of verifying significance and integrity, establishing appropriate boundaries, and gathering sufficient documentation to complete a National Register nomination.

Because of their large size and great number, residential suburbs present a challenge to preservationists and decision makers. Field survey, data analysis, and reporting methods can be greatly facilitated through the use of an electronic database that can store, sort, and report data in a number of ways. The State historic preservation office or Certified Local Government should be contacted for guidelines about data entry and retrieval systems currently being used for the statewide comprehensive survey and acceptable formats for National Register nominations.



Survey Forms

Field observations, as well as facts gathered from historical research, should be recorded in a systematic and uniform way. Generally this is done on inventory forms provided by the State historic preservation office. The forms selected for use should be appropriate for the level of the survey and the types of historic properties likely to be found in the survey area.

During a reconnaissance survey, the use of a multi-structure or historic district form may be most useful for recording preliminary information about a subdivision, neighborhood, or streetscape cluster. For intensive survey, a more detailed district form may be needed, as well as individual structure forms to document the character and condition of individual buildings or groups of buildings having common characteristics. Since survey requirements vary from State to State,



An oasis in the desert, Tucson's El Encanto Estates evolved from a geometrically perfect radial plan (1929) designed in the office of a California engineering firm and later laid out by field engineers on the floor of the Sonoran desert. A c. 1934 aerial photograph (above) depicts early improvements, including the layout of streets and spacious lots, rows of evenly-spaced street trees, and a central, circular park. A sales map (left) prepared in 1951 indicates the extent to which streets had been extended and lots further subdivided following World War II. Supplementing State survey forms, a horticultural inventory form was used to record information about the Mexican fan palms (*Washingtonia robusta*) and date palms (*Phoenix dactylifera*) lining the streets and the stately collection of giant saquaro (*Carnegiea gigantea*) gracing the central park. (Photo and sales map courtesy Arizona Historical Society Library/Tucson)

surveyors should work out a plan with the State or local preservation office for making the best use of existing survey forms and deciding how additional information, such as street patterns or spatial organization, is to be collected. Some State programs use the National Register of Historic Places Registration Form (NPS 10-900) or a similar form for recording intensive-level survey data, including an inventory of contributing and noncontributing resources.¹⁶¹

Information needed to evaluate the significance of a particular residential subdivision or neighborhood depends to a large degree on the chronological period in which it developed and the

historical factors that shaped it. Factors, such as the income level of prospective home owners, the relationship of subdivider and home builder, and methods of house construction, varied from period to period and frequently defined a neighborhood's physical character, as well as social history.

Survey techniques should be appropriate to the type of properties one expects to find. The forms used should enable surveyors to cross-reference property files and add fields or textual explanations to supplement the basic survey data. Since many survey forms currently in use do not record information about site planning or landscape design, decisions should be

made before the survey begins on how information about spatial organization, circulation network, street plantings, and other landscape characteristics is to be recorded.

Field Reference Materials

The master list of residential subdivisions and the composite or overlay maps prepared for the local historic context (see page 77) serve as valuable reference materials during field survey. In addition, copies of the following documents will be useful:



- current street maps, planning maps, and U.S.G.S. quadrants;
- early transportation maps, indicating streetcar routes, parkways and boulevards, and highways;
- aerial photographs (dating back as early as the 1930s in some communities);
- historic subdivision plats;
- historic photographs and illustrations; and
- fire insurance maps, such as those produced by the Sanborn Fire Insurance Company.

Field reference materials should provide a level of detail appropriate for the type of survey being conducted. For example, historic plats and current planning maps showing principal streets, location and boundaries of residential land use, and principal topographic features, are useful for reconnaissance surveys, while tax parcel maps and Sanborn maps showing the size, shape, and location of individual house lots provide detailed information useful in intensive-level surveys.

The Reconnaissance Survey

Information gathered during the reconnaissance survey strengthens the local historic context, making it possible to identify locally significant property types and set registration requirements for National Register eligibility. The survey should result in an inventory of historic neighborhoods, subdivisions, and other resources that are potentially eligible for National Register listing. Survey results can be used to select the best approach for nominating eligible properties to the National Register and set priorities for local preservation planning.

Information collected should:

- Provide a general picture of the distribution of different kinds of subdivisions and house types in relationship to historic transportation routes.
- Verify, refine, and expand information gathered through literature and archival sources about patterns of suburbanization and the characteristics of historic suburbs in the local or metropolitan area.
- Provide enough information on the character and condition of specific neighborhoods to identify locally important property types, such as planned communities or apartment villages, and make recommendations on neighborhoods and other related resources that merit intensive-level survey and may be eligible for National Register listing.
- Provide an understanding of the factors that threaten the integrity of historic neighborhoods, and help

establish a threshold for evaluating historic integrity of individual neighborhoods and determining general registration requirements.

During field work, surveyors should take special note of and record information about neighborhoods, as well as individual resources, which are likely to represent important property types and illustrate important aspects of the region's suburbanization. Such properties may include:

- residential subdivisions, or groups of contiguous subdivisions, that represent broad national trends in transportation, subdivision design, community planning, architecture, or landscape architecture;
- neighborhoods that possess historic associations with events or activities in the history of a local community or metropolitan area, or represent locally distinctive methods of construction or design characteristics;

Information about city planning, including the development of transportation routes, helps surveyors trace the evolution of historic suburbs and determine appropriate boundaries for historic districts. A c. 1923 aerial view (left) depicts the infrastructure of electric streetcar lines and wide boulevards that, extending from downtown Cleveland, would spur the suburbanization of Shaker Village in coming decades. By the end of the 1920s, Moreland Circle (lower right of photo) would be transformed into Shaker Square, a commercial center and transportation hub for the rapidly growing suburb. By 1950, Shaker Village contained more than 4500 dwellings and apartment buildings in numerous subdivisions.

A map of the Shaker Village Historic District (below) indicates historic district boundaries, a complex pattern of neighborhood streets, and the rapid transit routes and major thoroughfares that continue to serve the historic district today. (Photo courtesy Western Reserve Historical Society; map courtesy Ohio Historic Preservation Office)

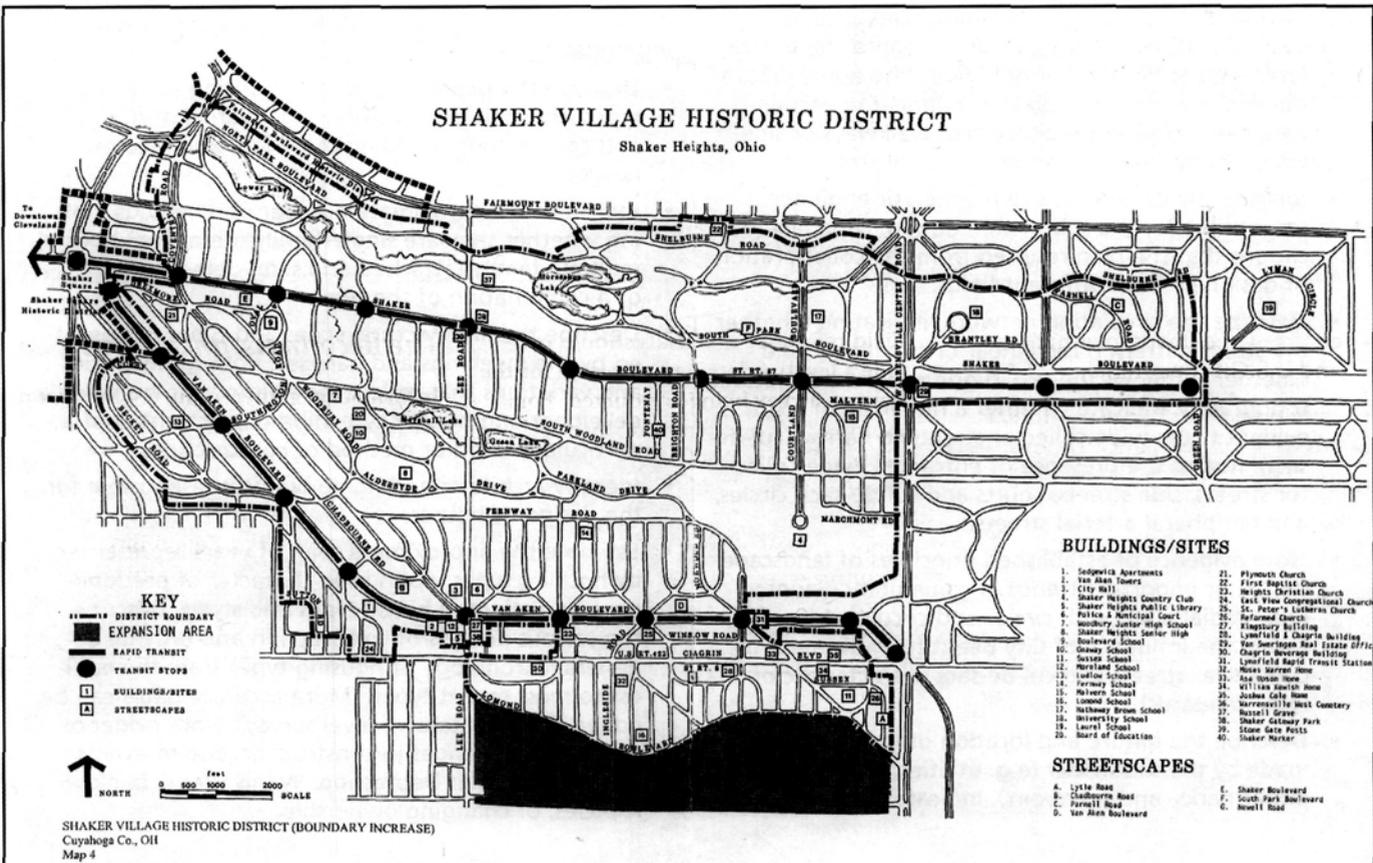


Figure 7.

Guidelines for Surveying Historic Residential Suburbs

The following list should be used as a guide for gathering historical facts and recording field observations that can be used to expand the historic context and to identify National Register eligible properties. Characteristics or evidence noted during the reconnaissance survey should be documented during the intensive-level survey.

1. Relationship to transportation routes and other factors influencing location of subdivision

- Identify the modes of transportation that residents historically used to travel between home and work.
- Note the proximity to former streetcar routes and other transportation corridors, including ferry crossings, boulevards, parkways, major arterials, highways, railroad lines, bus routes, and subways.
- Mention common destinations for commuters other than the center city, for example, centers of defense industry.
- Mention other factors, including demographic patterns, politics, economics, and natural topography, that influenced the subdivision's location and design.

2. Site plan and subdivision design

- Date and describe the subdivision plan, including the date of plat, boundaries, location, approximate size (acreage and/or number of blocks), the approximate number and type of streets (curvilinear or rectilinear), the provision for pedestrian walkways or sidewalks, overall density, and general lot size.
- Identify the developer, site planner, or engineer responsible for the subdivision design. Note any indications that the plan resulted from the collaboration of designers from different fields.
- Describe the circulation network, indicating whether the street pattern is rectilinear or curvilinear and whether it follows the urban gridiron plan or natural topography. Indicate whether a hierarchy of roads is evident (from wide collector streets to narrow cul-de-sacs), noting the presence of entrances, wide collector streets, side streets, courts and cul-de-sacs, circles, and peripheral arterial streets.
- Note evidence of established principles of landscape design or important trends in community planning (e.g., radial plans with circles and circular drives indicating the influence of City Beautiful movement or curvilinear streets and cul-de-sacs characteristic of FHA standards).
- Describe the nature and location of improvements made by the subdivider (e.g. utilities, paved roads, public parks, and reservoirs). Indicate physical

evidence of the use of deed restrictions (e.g., mandatory setbacks, uniformity of housing type).

- Note variations between the subdivision plan as drawn on the plat and as carried out. Note any evidence indicating that subdivision was developed in distinct stages (e.g. noticeable changes in street design or house types).
- Describe major alterations since the historic period, including street closures or widenings, consolidation of lots, out-of-scale additions, further subdivision of lots (infill), and new land uses or incompatible activities.

3. Character and condition of housing

Because great variation exists in house types, surveyors should make detailed observations and photographs making sure that information is gathered on the types of housing associated with all social groups and income levels historically associated with local history and development. Although published style guides are useful for describing general housing styles and types, surveyors should look for local and regional variations and confirm dates of construction using local records. Surveyors should also consider the influence of local firms of small house architects, FHA standards, local home building practices, and availability of ready-cut houses in examining house types.

- Describe the general pattern of housing (dwelling types, chronological distribution, sources of design and construction, building materials, and income range).
- Indicate the approximate number of dwellings, noting whether they are single-family (detached) houses, multiple family (attached and semi-detached) units, or a combination of the two.
- Describe the architectural styles and types represented by the dwellings and garages, noting similarities and variations that reflect the relationship between a developer and builder or exhibit characteristics of a particular period or method of construction.
- Identify architects and home builders responsible for the design of houses.
- Estimate the approximate span of years represented by housing types, noting the character of predominant or distinctive house types and styles. Describe the various periods of construction and provide a general chronology of housing types from the earliest to most recent types. (More accurate dates can be added during intensive-level survey). Note evidence of gaps and changes in construction due to events such as the Great Depression, World War II, bankruptcies, or changing ownership.

- Note distinctive aspects of design and construction, such as materials, size, elements of architectural style, use of prefabricated components, provision for scenic views, and relationship between house and its setting.
- Indicate if housing collectively serves an important design element (e.g., through common set backs or architectural materials, giving the neighborhood a cohesive yet varied character).
- Describe the general condition of housing, including the nature of alterations to individual homes (houses and lots)—e.g., siding, raised roofs, enclosure of carports, construction of garages and additions, changes to windows (materials and fenestration), porch enclosures, and addition of porches, dormers, and nonhistoric garages.

4. Distinctive aspects of landscape design

Field observations are often the best source of information about street plantings, yard design, and the relationship between a subdivision plat and natural topography. Adherence to principles of landscape design may be evident through the careful arrangement of streets to follow the natural topography, an irregular artistic division of land into house lots, the provision of parks and parkways to accommodate water drainage as well as enhance the neighborhood's beauty, and the presence of a unifying program of landscape plantings. These characteristics help identify subdivisions that may be the work of established masters of design or have high artistic values and, therefore, merit further study and contextual development.

- Describe the relationship of street design and overall site plan to the natural topography, noting distinctive street patterns, the way site is divided into house lots, and provisions for site drainage and parks.
- Describe elements of landscape design seen in entrance ways, street plantings, boundary demarcations, recessed roadways, treatment of corner lots, traffic circles, historic gardens, and the grading of community facilities.
- Identify principal types of vegetation, noting distinctive patterns such as use of ornamental or shade trees, shrubbery, and specimen trees. Indicate principal species using common, and, if known, Latin names. Although plants and trees are best identified during seasonal displays of flowers or foliage, they can be recognized at other times of the year by their bark and fruit.
- Note evidence of deed restrictions seen in uniform setbacks, similarity of architectural style, and open, unfenced yards.
- Describe distinctive materials and evidence of workmanship in entrance signs or portals, ornamental plantings, curbs, bridges, gutters, walls, and walkways.

- Note distinctive features associated with utilities and street improvements, including lighting, absence or presence of telephone poles and power lines, reservoirs and water towers, sewer, curbs, sidewalks, gutters.
- Describe the general size of lots and the placement of houses on each lot, including the arrangement of corner lots.
- Note whether streetscapes have uniform setbacks, form a regular or irregular pattern, or exhibit striking vistas.
- Describe distinctive patterns of yard design: open lawns, perimeter fences or hedges, stairways and walls, patios and outdoor terraces, gardens, specimen plants, and foundation plantings.

5. Presence of community facilities, such as schools and stores.

- Describe and date community buildings, shopping areas, parks, civic centers, club houses, country clubs, schools, and other facilities that were built within or adjoining the neighborhood.
- Explain whether these facilities were part of the neighborhood's original design, and describe how they served and supported suburban life.
- Note any distinctive elements of design present in the architectural styles, landscape design, or methods of construction, and identify architects or landscape designers responsible for their design.

6. Patterns of social history

- Provide a general profile of original or early home owners, noting typical occupations, income group, and ethnic or racial associations. (Keeping in mind that prior to the end of the 1940s, deed restrictions were often used to exclude residents on the basis of income, profession, race, and religion.)
- Mention the presence of a citizens' association and established community traditions.
- Note whether or not the subdivision is part of a larger historic neighborhood, and define the characteristics that link it to the larger area.
- Name local industries or institutions (such as colleges or defense plants) that created demand for housing.
- Note changing patterns of ownership, indicating approximate dates of general trends and describing the effects of change on the physical character and social history of the neighborhood.
- Note possible significance in social history and suggest directions for further research, such as oral history and or the review of community held records.

- clusters or streetscapes having historic values, associations, or design characteristics that distinguish them from the larger subdivision of which they were originally a part;
- single homes associated with persons important in our past or distinctive for their architectural design or method of construction, or as the work of a master;
- and community centers, schools, and shopping centers within or adjacent to a residential neighborhood which are associated with important historic events or possess architectural distinction.

While the residential subdivision is the focus of survey activities, historic neighborhoods may extend beyond the boundaries of a single subdivision. Historic associations or physical characteristics linking these areas should be documented and considered in making recommendations about their collective significance or National Register eligibility. Conversely, where a historically important neighborhood no longer possesses historic integrity in its entirety, a smaller area retaining significant qualities and associations may be eligible. Individually eligible resources associated with the suburbanization context but located outside the boundaries of a potentially eligible historic district should also be identified.

Organizing an Itinerary

Organize an automobile **itinerary** that follows historic transportation routes as closely as possible, directing surveyors from the oldest to the newest subdivisions so they can gain a sense of the range of variation that occurred in housing types and subdivision design throughout the community's history.

Because the boundaries of historic subdivisions are often invisible in the field and may not be evident on contemporary street maps, it is a good idea to have copies of historic maps, plats, and aerial photographs, as well as the composite map or series of overlay maps prepared for the historic context. This is especially important when surveying older suburbs where housing was built in small subdivisions by a

variety of builders, often following the rectilinear urban grid, and where subdivision boundaries are not necessarily signaled by changes in architectural style, housing type, or street design.

Recording Field Observations

Following the itinerary and using current and historic street maps as a guide, proceed in two stages. First, drive through as many subdivisions as possible making general notes and taking photographs. Second, for each major subdivision, neighborhood, or distinctive cluster, record field observations incorporating information gathered from maps, plats, and other field reference materials.

Surveyors should be prepared to take photographs, annotate field maps, and complete survey forms as they proceed through each subdivision. It is important to note the presence of distinctive features of architecture, landscape design, and community planning that might be attributes of historic significance and should receive further documentation during an intensive survey. This includes unusual house types, distinctive architectural types, characteristic streetscapes, evidence of professional principles of landscape design, important vernacular trends in housing or yard design, or highly distinctive site plans. Similarly, note interesting historical associations or observations on community life, such as annual traditions, the role of a citizens' association, or the presence of a community center.

One can expect to find a huge variation in the size and design of neighborhoods. Those subdivided before World War II may be relatively small in size, often consisting of little more than a single, rectilinear street with a handful of rectangular lots to either side. In these cases it may be useful to develop a system of classifying such subdivisions by attributes—such as street pattern or architectural variety—to define local patterns and establish a set of local property types, or to look for common characteristics that link subdivisions into larger historic neighborhoods.

Analyzing Survey Results

Survey data should be incorporated into the written statement of context, and connections made between broad patterns of local suburbanization and the development of specific suburbs and neighborhoods. At this point, the master list of subdivisions can be annotated to include information about developers, builders, architects, site planners, and other designers and to note important events in social history that illustrate locally important themes or trends. Also, note the condition of specific subdivisions and the general nature of changes that each area has undergone since the end of the historic period.

Information about distinctive characteristics of site planning, housing, or landscape design should be used to define significant local patterns, to document the work of important designers, and to identify properties that should be more closely examined for significance in architecture, landscape architecture, or community planning during the intensive survey. Likewise, information about events in the neighborhood's cultural or social history should be used to identify neighborhoods associated with significant patterns of community life and social change. Survey information about condition of local residential suburbs and housing types will help establish thresholds for evaluating historic integrity in the local area.

From this synthesis, it is possible to 1) define the set of locally important property types, 2) formulate registration requirements for National Register listing, and 3) compile a list of subdivisions, neighborhoods and other properties that appear eligible for the National Register and merit intensive-level survey.

Analysis of survey data will also suggest areas of further research, appropriate research methods, and special concerns for significance or integrity. For example, observations about the range of housing types may suggest clues about the relationship of subdividers and builders, the period of development, sources of design, and use of restrictive deeds, which can be

substantiated through further research conducted during the intensive-level survey. The presence of original home owners or an active neighborhood organization may indicate opportunities for conducting oral history or viewing community records.

Identifying Significant Patterns of Development

While the significance of a residential suburb depends to a large degree on the local or regional context, the following characteristics generally indicate aspects of a neighborhood's history that may reflect important local or metropolitan trends and should receive further study through an intensive-level survey to verify National Register eligibility.

- The neighborhood's planning and construction related to the expansion of local industry, wartime industry, important stages in metropolitan development, or broad national trends such as returning GI's, the Better Homes movement, and the bungalow craze.
- The neighborhood—through its site plan, overall landscape design, and house design—reflects historic principles of design or achieved high artistic quality in the areas of community planning, landscape architecture, or architecture.
- The subdivider and site planners responsible for the platting and construction of the subdivision figured prominently in the suburban development of the locality or region and made substantial contributions to its character and the availability of housing.
- The neighborhood's design represents the work of one or more established professional designers—site planners, landscape architects, architects, or engineers.
- The subdivision design resulted from the collaboration of professionals representing several fields of design, such as landscape architecture and architecture.
- The neighborhood exemplifies the role that a certain type of developer

(subdivider, home builder, community builder, operative builder, or merchant builder) played in the growth and development of the locality or metropolitan region.

- The neighborhood was designed to conform to FHA-standards and represents one of the “earliest,” “most successful,” “largest,” “finest,” or “most influential” examples locally.
- Historic neighborhoods possessing a high degree of integrity and exhibiting distinctive elements of design in the subdivision plan, landscape architecture, or domestic architecture.
- Historic neighborhoods reflecting important advances, established principles, or popular trends in community planning or landscape architecture.
- Neighborhoods containing homes in a variety of period styles, or representing the work of one or a number of noted architects.
- Neighborhoods whose housing represents one or more locally important housing types (e.g., bungalows and foursquares).
- Residential neighborhoods associated with important local industries or local events and activities that are known to have stimulated suburban growth and development.
- Neighborhoods historically associated with important events in the Civil Rights movement to provide equal access to housing.
- Neighborhoods associated with important patterns of ethnic settlement that contributed to local growth and development.
- Neighborhoods with homes that received recognition or awards from professional organizations, trade organizations, architectural journals, popular magazines, or housing research foundations.
- Neighborhoods that introduced or established patterns of subdivision design, housing, financing, or building practices that became influential in the local community, metropolitan area, or elsewhere.

Conducting an Intensive-Level Survey and Compiling National Register Documentation

Intensive-level survey provides a comprehensive study of selected neighborhoods and gathers the detailed information necessary to document properties for National Register listing and make determinations of eligibility. Building upon the general observations made during the reconnaissance survey, the intensive-level survey provides detailed, factual information about the history and physical evolution of one or more subdivisions or neighborhoods believed to be eligible for National Register listing.

The intensive survey closely examines the neighborhood's historic significance, integrity, and boundaries, firmly establishing its place within the local historical context. Survey at this level gathers sufficient information to confirm National Register eligibility and to document the property according to National Register standards.

Documenting the Physical Evolution of a Historic Residential Suburb

During intensive-level survey, additional field observations and research provide an indepth record of the current character and condition of a historic neighborhood and document its physical evolution and history. The guidelines on pages 86–87 list the information that should be gathered during the intensive-level survey and reported on the National Register registration form.

Several historical documents provide valuable comparative data for tracing the physical evolution of a historic neighborhood. A comparison of the neighborhood as it exists today and the original plat helps determine the extent to which the plan was carried out and the periods of time when housing was constructed. Such a comparison will also help determine whether the neighborhood was developed by a subdivider, who consequently sold unbuilt lots to builders, or, by a community builder, who not only sold lots but also supervised the construction of houses.



Streetscapes of the Cameron Park Historic District, Raleigh, North Carolina, one of three large subdivisions platted c. 1910 during an extensive period of urban growth. Neighborhoods were nominated to the National Register through a survey of the city's historic residential neighborhoods, which included the development of a historic context documenting local patterns of suburbanization. These efforts resulted in a multiple property submission entitled *Early Twentieth Century Raleigh Neighborhoods*. Due to the extremely large study area and predominance of residential resources, surveyors systematically proceeded from the city's oldest sections to newer ones recording block faces on multiple structures forms that were later grouped together by subdivision and cross-referenced to files on selected individual properties. (Photos by Diane Filipowicz, courtesy North Carolina Department of Cultural Resources)

Historic photographs, illustrations, maps and aerial photographs also reveal changes. In addition, fire insur-

ance maps, such as Sanborn Fire Insurance Company maps, drawn soon after the completion of the subdivision, can be compared with more recent maps to identify later construction. Recorded deeds and sometimes tax records provide reliable dates of construction, which can be used to create a series of period maps showing the neighborhood's evolution.

During the intensive-level survey, it is important to document the physical evolution of the neighborhood, identifying who was responsible for the subdivision plan as well as the design of houses and landscape features. This means:

- Determining which profile of developer (e.g. subdivider, home builder, community builder, operative builder, or merchant builder) the developer most closely fits.
- Explaining the relationship between the developer and any site planners, architects, landscape architects, engineers, and home builders who contributed to the design of the neighborhood.
- Documenting the specific contributions of each professional group and of individual designers collaborating on the neighborhood's design.
- Providing documentary evidence that deed restrictions were used, mentioning specific provisions of such restrictions and explaining how they influenced the character of the subdivision.
- Indicating whether the original developer remained in charge of executing the plan and, if not, describing any major changes made by subsequent developers.

Classifying House Types for Inventory Purposes

An intensive survey of one or more residential suburbs often covers an area of considerable extent and literally hundreds of houses and other resources. Decisions need to be made about how houses and streetscapes can be surveyed most efficiently so that determinations can be made about district boundaries and the classification of contributing and noncontributing resources. Sufficient information should be drawn from the reconnaissance survey to determine whether a building-by-building survey is needed or whether there are sufficient similarities of construction and design so that resources can be grouped in categories based on common housing types. Such a typology can then be used to define significant patterns as well as facilitate the collection of information about condition and integrity which is needed to complete the building-by-building inventory of contributing and noncontributing resources.

Many subdivisions, especially during and after World War II, offered prospective owners a limited number of house types, sometimes being distinguished only by the number of rooms, roof design, or exterior wall materials. For this reason, when conducting an intensive survey in a neighborhood of similarly-designed houses, perhaps designed by a single architect and constructed by a single builder, it makes sense to classify houses or housing units by type and provide a general description of each type. An inventory can be compiled by listing each house by street address or building number and indicating its type according to the general classification scheme and noting its condition, any major alterations or additions, and status as contributing or noncontributing.

For example, in an FHA-approved neighborhood having a dozen house types, the description of House Type 2-B might read:

House Type 2-B is a six-room, two-story hipped roof variation of the standard 1144 square foot

home whose lower-story is clad with painted brick and upper story wooden clapboard. The house originally featured metal casement windows, a side porch, and a side chimney. A pedimented doorway, paneled door, and a moulded entablature reflect minimal Colonial Revival styling.

An inventory entry for one such house could then read:

1212 Columbus Street, an example of Type 2-B, having an enclosed porch, matching aluminum siding over wooden clapboards on upper story, and replacement double-hung, vinyl windows on principal facades. Otherwise house is in good condition. Contributing.

For more information on documenting historic suburbs, refer to the Documentation and Registration section on pages 108-111 and the National Register bulletin, *How to Complete the National Register Registration Form*.



EVALUATION

The evaluation process entails three major activities: defining significance, assessing historic integrity, and selecting boundaries. Information gathered during the intensive survey about the history and condition of a neighborhood is related to the historic patterns of suburbanization that shaped the locality or metropolitan area where it is located. Ultimately the evaluation process verifies whether or

not a property meets the National Register criteria for evaluation and is eligible for National Register listing.

The written statement of historic context—containing information about the local or metropolitan patterns of transportation, subdivision design, and housing—makes it possible to determine the extent to which a neighborhood represents local or regional patterns and is associated with important

events, activities, or persons that contributed in important ways to the growth and development of the community. The reconnaissance survey, furthermore, provides comparative information about the condition of historic neighborhoods and subdivisions, enabling researchers to eliminate from further consideration those that have lost their historic integrity.



Figure 8.
**How Residential Suburbs Meet the National Register
Criteria for Evaluation**

Criterion A

- Neighborhood reflects an important historic trend in the development and growth of a locality or metropolitan area.
- Suburb represents an important event or association, such as the expansion of housing associated with wartime industries during World War II, or the racial integration of suburban neighborhoods in the 1950s.
- Suburb introduced conventions of community planning important in the history of suburbanization, such as zoning, deed restrictions, or subdivision regulations.
- Neighborhood is associated with the heritage of social, economic, racial, or ethnic groups important in the history of a locality or metropolitan area.
- Suburb is associated with a group of individuals, including merchants, industrialists, educators, and community leaders, important in the history and development of a locality or metropolitan area.

Criterion B

- Neighborhood is directly associated with the life and career of an individual who made important contributions to the history of a locality or metropolitan area.

Criterion C

- Collection of residential architecture is an important example of distinctive period of construction, method of construction, or the work of one or more notable architects.
- Suburb reflects principles of design important in the history of community planning and landscape architecture, or is the work of a master landscape architect, site planner, or design firm.
- Subdivision embodies high artistic values through its overall plan or the design of entrance ways, streets, homes, and community spaces.

Criterion D

- Neighborhoods likely to yield important information about vernacular house types, yard design, gardening practices, and patterns of domestic life.

In certain cases, a single home or a small group of houses in a residential subdivision may be eligible for National Register listing because of outstanding design characteristics (Criterion C) or association with a highly important individual or event (Criterion A or B).

Decisions about significance, integrity, and boundaries depend on the historical record as well as the presence of physical features of subdivision design and housing. Aspects of design such as spatial organization present in the general plan of development, the layout of streets and pedestrian paths, and the arrangement of house lots, may be important as indicators of historic patterns of development as the styles or design of housing.

Platted in six sections over a seven-year period beginning in 1920, the F. Q. Story Neighborhood Historic District provides an index of southwestern small house design spanning three decades and vernacular landscape conventions such as the use of paired palms. (Photo by Don W. Ryden, courtesy Arizona Office of Historic Preservation)

Historic period, relationship to transportation corridors, cohesive planning principles, socioeconomic conditions, real estate trends, and architectural character usually impart distinctive characteristics that distinguish the historic neighborhood from the development that surrounds it. Recognition of these factors early in the process makes it possible to place a particular suburb in the national context for suburbanization as well as local or metropolitan contexts. Knowledge of these factors can be used in making comparisons among neighborhoods of similar age, understanding local patterns of history and development, and in defining historic districts that meet the National Register criteria.

Early identification of the type of residential suburb (e.g. railroad suburb,

streetcar suburb) will help the researcher identify areas of significance as well as characteristic features that may be present. Knowledge of the dates when a neighborhood was subdivided and its dwellings constructed will provide a foundation for understanding its physical layout, the design of its housing, its relationship to important stages of local history and development, and its association with important local events.

Although the residential subdivision is a logical unit for study, historic neighborhoods are not necessarily defined by lines drawn on a historic subdivision plat. Historic districts meeting the definition of a historic residential suburb may consist of one or a group of subdivisions, or they may occupy a small portion of a large



Criterion B can apply to neighborhoods that are associated with important developers and best represent their contributions to significant local or metropolitan patterns of suburbanization. The Park Hill Historic District (1921–1950), North Little Rock, Arkansas (top left), is associated with local developer Justin Matthews of the Park Hill Land Company, whose successful entrepreneurial efforts over many years shaped the historic identity of North Little Rock as a suburban community. (Photo by Sandra Taylor Smith, courtesy Arkansas Historic Preservation Program)

A case for exceptional significance under Criterion Consideration G must be made when documenting neighborhoods importantly associated with events that occurred within the past 50 years, even when the homes date to an earlier period. The Glenview Historic District (1920s–1965) in Memphis (top right) possesses exceptional importance as the center of local controversy as African American families exercised their right to purchase homes in existing middle-class neighborhoods during the Civil Rights movement. (Photo by Carroll Van West, courtesy Tennessee Historical Commission)

subdivision. Decisions about significance, integrity, and boundaries, therefore, should take into consideration factors concerning social history and community development of large areas of residential development that broadly meet the definition of “historic residential suburb,” as well as the architecture and site planning of individual subdivisions.

HISTORIC SIGNIFICANCE

Defining historic significance requires a close analysis of information about the development and design of a particular historic neighborhood and an understanding of local, metropolitan, and national trends of suburbanization. The property is viewed in relationship to the broad patterns of suburbanization that shaped a community, State or

the Nation, and to determine whether the area under study meets one or more of the National Register Criteria for Evaluation.

Applying the National Register Criteria and Criteria Considerations

To be eligible for National Register listing, a residential suburb must possess significance in at least one of the four aspects of cultural heritage specified by the National Register Criteria for Evaluation. In addition, neighborhoods less than 50 years of age must meet Criteria Consideration G by possessing exceptional importance.



Association with Important Events and Persons

Historic residential suburbs typically reflect the outward spread of metropolitan areas and the growth and development of communities. For this reason, residential districts are commonly evaluated under **Criterion A** for their association with important events or patterns in community history or with groups of residents (not specific individuals) who collectively made important contributions to the area's prosperity or identity as a place of industry, government, education, or social reform.

Criterion B applies to neighborhoods directly associated with one or more individuals who made important contributions to history. Such individuals must have exerted important influence on the neighborhood's sense of community or historic identity and

they must have gained considerable recognition beyond the neighborhood. This includes prominent residents, such as a leading political figure or social reformer. Criterion B also applies to neighborhoods that are associated with important developers and best represent their contributions to significant local or metropolitan patterns of suburbanization. Subdivisions representing the work of prominent site planners, architects, or landscape architects should be evaluated under **Criterion C**, unless they also served as their residence during an important period of their career. For more information about applying **Criterion B**, refer to the National Register bulletin, *Guidelines for Evaluating and Documenting Properties Associated with Significant Persons*.

Distinctive Characteristics of Design

Historic residential suburbs often reflect popular national trends in subdivision design, such as the Picturesque style of the nineteenth century or FHA-recommended curvilinear plans. They may also reflect popular architectural styles, housing types, and principles of landscape architecture. Such districts are evaluated under **Criterion C** to determine if they embody the distinctive characteristics of a type, period, style, or method of construction; or represent the work of a master architect, landscape architect, or community planner. Historic neighborhoods that form "a significant and distinguishable entity whose components," including streets and homes, "lack individual distinction" are also evaluated under **Criterion C**.

Qualifying physical characteristics, under **Criterion C**, may be present in

the overall plan, the architectural design of dwellings and other buildings, and the landscape design of the overall subdivision or of individual homes, parks, or parkways. Significance under Criterion C requires that the features that mark distinction in planning, architecture, and landscape design remain intact and recognizable.

Organization of space is a key factor in ascribing significance in community planning and landscape architecture. Visible in the general or master plan and aerial photographs, spatial organization is defined by the relationship between design and natural topography, the arrangement of streets and house lots, the arrangement of buildings and landscape features on each lot, and the provision of common spaces, such as walkways, playgrounds, and parks. The recognition of important local patterns may require examining records held by the local planning or zoning office, the development company, or architectural firms involved with construction, as well as making comparisons with other suburbs in the local area from the same period of time. Significance in landscape architecture may also derive from special features such as a unified program of street lighting or tree plantings; the landscape design of yards, entrance ways, or roadways; the presence of scenic vistas; or conservation of natural features.

Distinctive architectural design may be present in a variety of building types—dwellings, garages, carriage houses, community buildings, gate houses, and sheds. Buildings may reflect a cohesive architectural type and style with some variation (e.g. Cape Cod or Ranch) or they may reflect a variety of period or regional styles such as Tudor Revival, Colonial Revival, or Mediterranean. Homogeneity or diversity of housing types and style may be an important architectural characteristic and be an important indicator of the overall design intent of the suburb as well as its period of development. Information about the developer and the various architects and landscape architects involved in the design of a subdivision is important to understanding the character of a residential subdivision, ascribing design signifi-

cance, and placing a suburb in a local, metropolitan, State, or national context.

Ability to Yield Important Information

Criterion D is applied to the evaluation of pre- or post-contact sites, such as remnant mills and farmsteads that pre-date land subdivision and remain intact in parks, stream valleys, floodplain, or steep hillsides. Such sites may provide information important to historic contexts other than suburbanization. In addition, historical archeology of home grounds may provide important information about the organization of domestic grounds, vernacular house types, gardening practices, or patterns of domestic life. When used in tandem with documentary sources, historical archeology helps define data sets and research questions important in understanding patterns of suburbanization and domestic life. For additional guidance, consult the National Register bulletin, *Guidelines for Evaluating and Registering Archeological Sites and Districts*.

Evaluation under Criterion Consideration G

Criterion Consideration G states that properties that have achieved significance within the past 50 years may qualify for National Register listing if they are an integral part of a historic district that meets the criteria or if they have exceptional importance.

The post-World War II building boom, spurred by the availability of low-cost, long-term mortgages for home owners and financial credits for builders, resulted in the widespread development of suburban subdivisions that were not only large in size but vast in number. In coming years as many of these approach 50 years of age, there will be increasing pressure to evaluate their eligibility for listing in the National Register. Their evaluation raises several questions concerning Criterion Consideration G and the National Register's 50-year guideline.

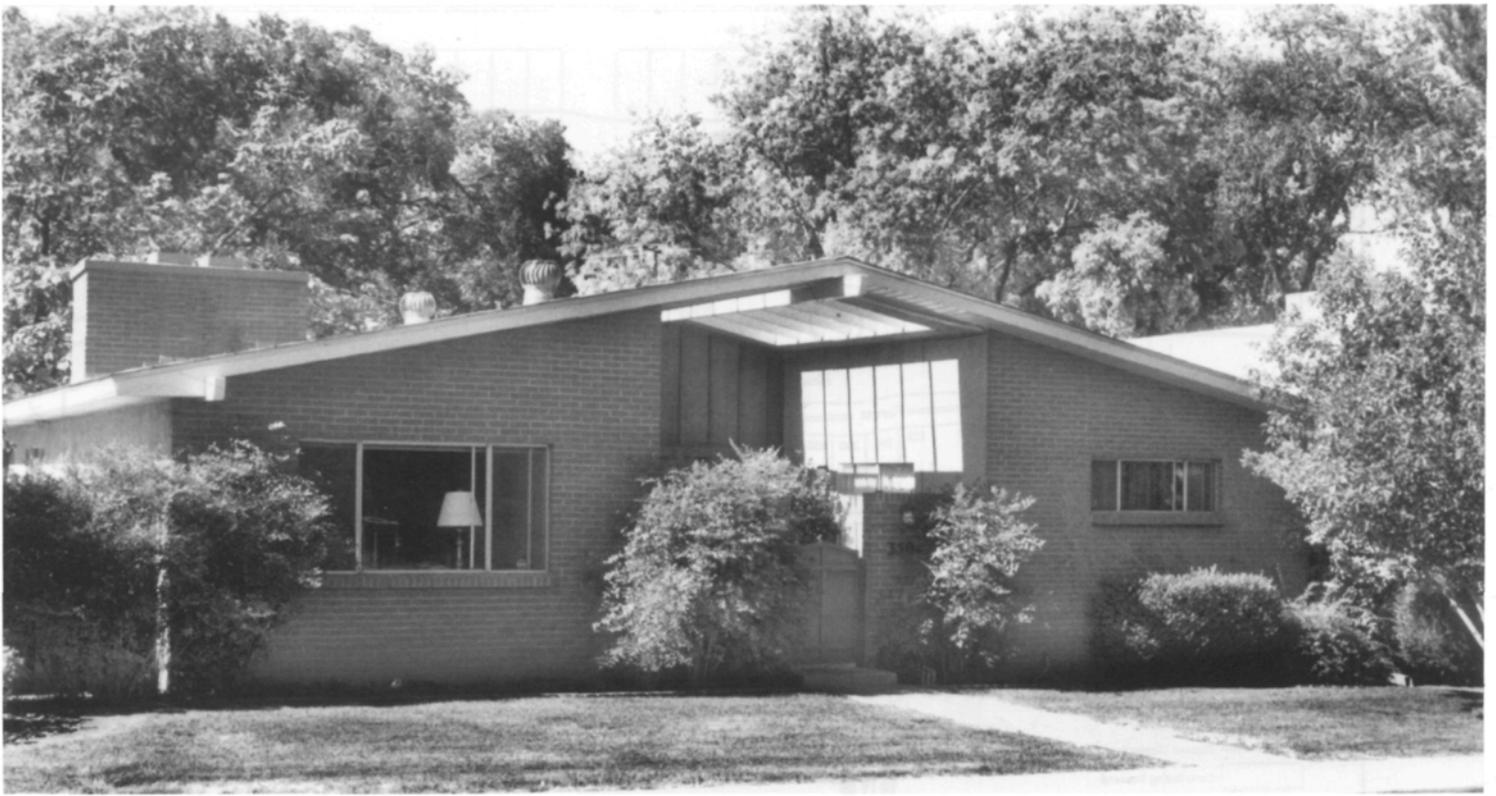
When must a historic subdivision or neighborhood possess "exceptional importance" as a requirement for

National Register listing? Specific dates for the overall site design and the construction of component resources are needed to determine when a case for exceptional importance is necessary to support eligibility or listing. Such a case must be made for subdivisions which were platted and laid out and where the majority of homes were constructed within the last 50 years. It is also required for neighborhoods importantly associated with events that occurred within the past 50 years even though the homes were built during an earlier period, for example an older neighborhood importantly associated with the Civil Rights movement.

Is "exceptional importance" a requirement for a neighborhood whose construction began more than 50 years ago but was completed within the past 50 years? Because subdivisions were typically constructed over a period of many years, it is not uncommon to encounter a subdivision where streets and utilities were laid out and home construction begun more than 50 years ago, but where construction continued into the recent past. As a general rule, when a neighborhood as a whole was laid out more than 50 years ago and the majority of homes and other resources are greater than 50 years of age, a case for exceptional importance is not needed. In such cases, the period of significance may be extended a reasonable length of time (e.g., five or six years) within the less-than-50-year period to recognize the contribution of resources that, although less-than-50-years of age, are consistent with the neighborhood's historic plan and character.

When the majority of homes and other resources, however, are less than 50 years of age, a case for exceptional importance is required. Subdivisions of this type found not to possess exceptional importance should be reevaluated when the majority of resources achieve 50 years of age.

Regional contexts should be developed in areas where suburbanization was widespread and numerous planned subdivisions took form during the post-war era. Such a context can help 1) establish a chronology of the region's



This 1957 contemporary house represents the final phase of home-building in the Monte Vista and College View Historic District, which is listed under the Twentieth Century Suburban Growth in Albuquerque MPS. The district's period of significance was extended to the late 1950s (six years beyond the 50-year cut-off date at the time of listing) to recognize the contribution of houses whose style, type, and quality of construction was consistent with the suburb's design and historic evolution. In such cases a justification of exceptional significance under Criteria consideration G is not necessary. (Photo by David Kammer, courtesy New Mexico Office of Cultural Affairs)

suburban development, 2) target neighborhoods to be surveyed, and 3) identify exceptional examples that may be nominated before the majority of dwellings reach 50 years of age. To determine exceptional importance within a local, metropolitan, or regional context, it is necessary to consider a neighborhood's history in relationship to the overall local trends of post-World War II suburbanization as well as national patterns. Comparisons with other neighborhoods of the same period make it possible to identify distinctive or representative examples and to determine the extent to which they possess historic integrity.

For further guidance, you may wish to refer to the National Register bulletin, *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance Within the Last Fifty Years*.

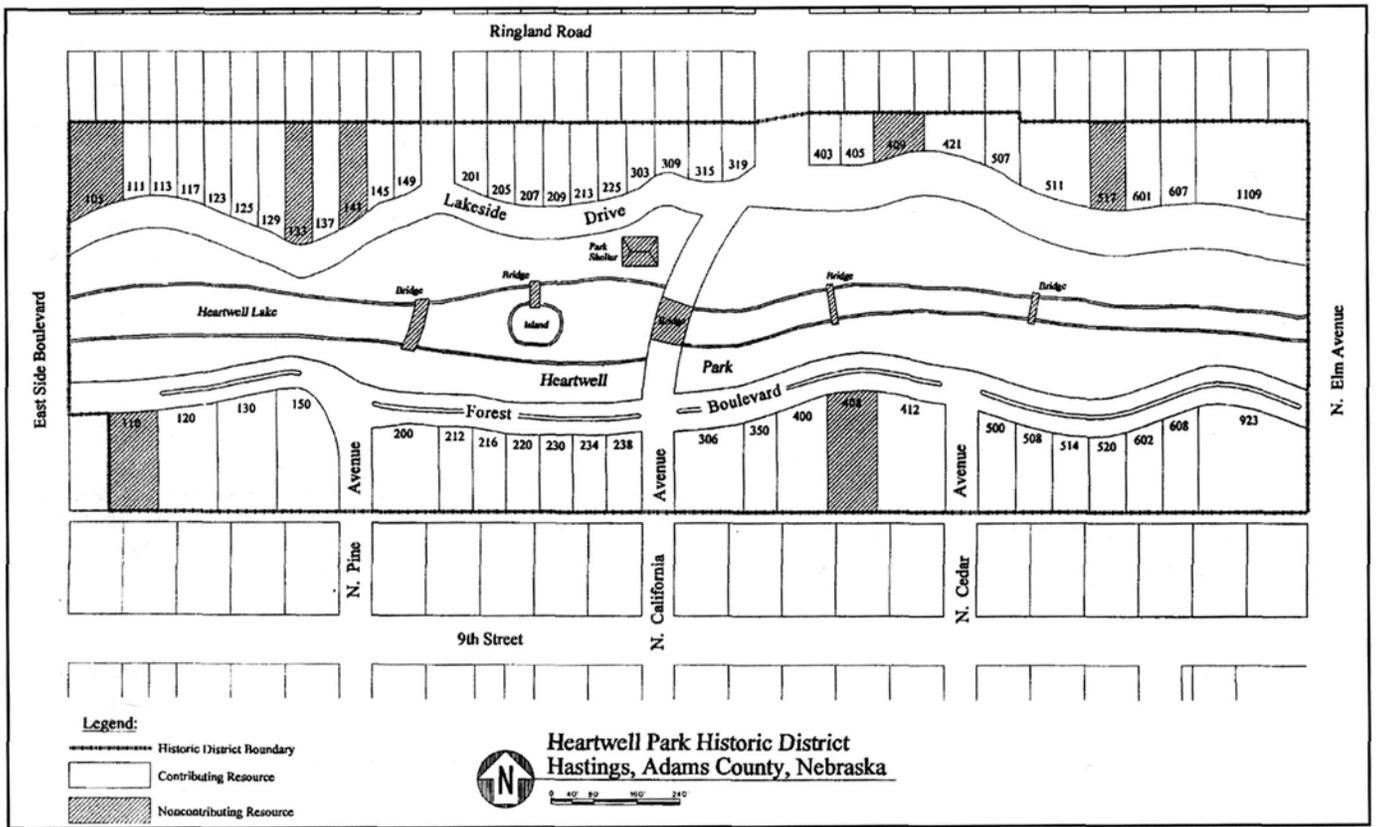
Selecting Areas of Significance

Area of significance is that aspect of history in which a historic property through design, use, physical characteristics, or association influenced the history and identity of a local area, region, State, or the Nation. The following areas of significance are commonly applied to historic neighborhoods important under Criterion A or B for their association with important events and persons.

- **Government** applies to those that reflect early or particularly important responses to government financing, adherence to government standards, or the institution of zoning by local governments.
- **Education, medicine, or government** may be areas of significance when a significant concentration of residents was associated with a

locally important center of government, hospital, or university.

- **Industry** applies when a suburb, by design or circumstance, served the need for housing for workers in a particular industrial activity, such as defense production during World War II.
- **Transportation** recognizes the direct association of a neighborhood or community with important advances in transportation and incorporation of innovative transportation facilities, such as a railroad station or circulation system that separates pedestrian and motor traffic.
- **Social history** recognizes the contributions of a historic neighborhood to the improvement of living conditions through the introduction of an innovative type of housing or neighborhood planning principles, or the



extension of the American dream of suburban life or home ownership to an increasing broad spectrum of Americans.

- **Ethnic Heritage** recognizes the significant association of a historic neighborhood with a particular ethnic or racial group.

The following areas are commonly applied to historic suburbs important for their design under Criterion C:

- **Community planning and development** applies to areas reflecting important patterns of physical development, land division, or land use.
- **Landscape architecture** applies when significant qualities are embodied in the overall design or plan of the suburb and the artistic design of landscape features such as paths, roadways, parks, and vegetation.
- **Architecture** is used when significant qualities are embodied in the design, style, or method of construction of buildings and structures, such as houses, garages, carriage houses, sheds, bridges, gate houses, and community facilities.

Where subdivision design resulted from the collaboration of real estate developers, architects, and landscape architects, significance in all three areas—**community planning and development, architecture, and**

***Period of Significance for the Heartwell Park Historic District** in Hastings, Nebraska, begins in 1886, when the Heartwell Park Addition was platted by developer James B. Heartwell and the park laid out by landscape architect A. N. Carpenter. It extends to 1950 to encompass the final and largest phase of house construction facing the park in the 1940s, when due to local defense industries, the local population increased from 15,145 in 1940 to 20,211 by 1950 and FHA-insured loans provided incentives for home building. Due to the long period of development, the district includes 47 contributing houses in a wide range of styles and a number of landscape features, including the lake and island, curvilinear drives, and several noncontributing bridges. (Photo and map by Mead & Hunt, Inc., courtesy Nebraska State Historical Society)*

landscape architecture—should be recognized and the contributions of designers representing each profession documented. Historic suburbs may be eligible under Criterion C for their reflection of important design characteristics or as the work of a master; those that made important contributions to the theory of landscape design or community planning may also be significant under Criterion A.

Defining Period of Significance

Period of significance is the span of time when a historic property was associated with important events, activities, persons, cultural groups, and land uses, or attained important physical qualities or characteristics. The period of significance defined for a historic district is used to classify contributing and non-contributing resources.

Neighborhoods significant under **Criterion A** often have historic periods spanning many years to correspond with important historic associations and events in community life. The historic period for neighborhoods associated with an important person under **Criterion B** should be based on the years when the person resided in the community or was actively involved in community affairs. The period of significance for neighborhoods qualifying under **Criterion C** generally corresponds to the actual years when the design was executed and construction took place; this will vary depending on the type of suburb and the circumstances under which it took form. For example, suburbs built by merchant builders after World War II are likely to have shorter periods of significance than those laid out earlier in the century by subdividers who were in the business of selling empty lots in improved subdivisions.

Period plans and maps are useful for gaining an understanding of how a neighborhood evolved and for determining the corresponding period of significance. Generally the period of significance for a historic suburb important under **Criterion C** begins with the date when the streets, house lots, and utilities were laid out and extends to the date when the plan was

fully realized or the construction of homes substantially completed. The date of the historic plat may be used as the beginning date only when site improvements were begun shortly afterwards.

National trends of suburbanization as well as local economic factors, including the impact of major worldwide events such as the Great Depression and World War II, influenced the length of time in which historic suburbs formed and the extent to which earlier plans were carried out or modified. Such factors should be considered in defining an appropriate period of significance. Where development was interrupted resulting in lengthy periods when no construction occurred (e.g., a decade or more), it may be appropriate to define several periods of significance.

Where construction occurred over the course of many years, the period of significance may be extended to include more recent construction than 50 years provided it is in keeping with the suburb's historic design and evolution and satisfies the National Register's 50-year guideline (see discussion on page 96). To determine an appropriate closing date for the period of significance, several questions should be answered: What factors (e.g. early plat, deed restrictions, availability of financing) defined the neighborhood's social history and physical character during its early development? How long did these factors continue to influence the character or social history of the district? Are the more recently constructed dwellings of the district, by their location, size, scale, and style, consistent with the suburb's overall historic plan and earlier housing? To what extent do the dwellings, by their architectural style or landscape design, contribute to the historic character of the district? To what extent do they reflect later patterns of suburban development or community history and to what extent are these patterns important? If they occurred within the last 50 years, do they reflect trends or events of exceptional importance?



Historic (c. 1908) and present day views of the Putnam House in University Heights Subdivision Number One, University City, Missouri. A comparison of the two photographs points out many small-scale alterations to the house and a dramatic change in the home's hillside setting due to the growth of trees and shrubs since construction. Because the cumulative effect of the changes is minor, the Putnam House retains its early twentieth-century origins and overall exhibits a high level of historic integrity. (Historic photo courtesy University City Library Archives; present day photo by Charles Scott Payne, courtesy Missouri Department of Natural Resources).

Determining Level of Significance

Properties related to the same historic context are compared to identify those eligible for listing in the National Register and to determine the level—**local, State, or national**—at which the property is significant. Many residential districts will be eligible at the **local level** for their illustration of important aspects of community growth and development and their reflection of the broad trends that shaped suburbanization in the United States.

State level of importance is generally attributed to those that 1) established a precedent or influenced subsequent development within a metropolitan area or larger region within one or several adjoining states; 2) possess outstanding

characteristics of community design, landscape architecture, or architecture within the context of design statewide; or 3) represent the work of one or more master planners, landscape architects, or architects, whose work in subdivision design or suburban housing gained professional recognition in that particular State.

National level of importance is attributed to suburbs whose plan, landscape design, or architectural character introduced important innovations that strongly influenced the design of residential suburbs nationwide; it also applies to examples possessing outstanding artistic distinction or representing pivotal examples of the work of master designers who received national or international acclaim for their contributions to the design of residential suburbs.



HISTORIC INTEGRITY

Assessing historic integrity requires professional judgement about whether a historic subdivision or neighborhood retains the spatial organization, physical components, aspects of design, and historic associations that it **acquired during its period of significance**. When assessing integrity, consider both the original design laid out in the general plan and the evolution of the plan throughout its history. Keep in mind that changes may have occurred as the plan was implemented and that these changes may also be significant. In instances where the period determined to be "historic" bears little or no relationship to the original design or construction, assessments of historic

integrity should be based on 1) a knowledge of changes that occurred during the period of significance, and 2) a comparison of the neighborhood's current condition with its condition at the end of the significant period.

The period of significance becomes the **benchmark** for identifying which resources contribute to significant aspects of the neighborhood's history and determining whether subsequent changes contribute to or detract from its historic integrity. Alterations introduced after the period of significance generally detract from integrity. Their impact on the district's overall integrity, however, depends on their scale, number, and conformity with the historic design.

The final decision about integrity is based on the condition of the overall

district and its ability to convey the significance for which it meets the National Register criteria. Weighing overall integrity requires a knowledge of both the physical evolution of the overall district and the condition of its component elements, including the design and materials of houses, the character of streets, and spatial qualities of community parks and facilities. Those making evaluations should take into consideration the extent to which landscape characteristics remain intact or have been altered. They should also be prepared to assess the cumulative effect that multiple changes and alterations may have on a neighborhood's historic integrity.



Developed by African American developers and philanthropists, Walter and Frances Edwards, and approved for FHA-backed loans, the Edwards Historic District (1937-1946), Oklahoma City, illustrates the use of FHA-recommended house designs to create a unified village setting in a neighborhood of small houses. Today most houses reflect several decades of alterations, the most common being the application of nonhistoric siding. Houses having metal, vinyl, or asbestos siding (right) that mimics the original clapboard siding are considered contributing as long as other alterations are minor and the house's defining historic features are present. Those sheathed with thin brick or sheets of concrete-based "stone" veneer (left), however, are considered noncontributing because they have lost their historic character and substantially detract from the overall character of the neighborhood. (Photo by John R. Calhoun, courtesy Oklahoma Historical Society)

Applying Qualities of Integrity

Historic integrity is the composite of seven qualities: location, design, setting, materials, workmanship, feeling, and association. Historic integrity requires that the various features that made up the neighborhood in the historic period be present today in the same configuration and similar condition. These qualities are applied to dwellings, as well as roadways, open spaces, garages, and other aspects of the historic design.

The presence of certain characteristics may be more important than others. Where the general plan of development has importance, integrity should be present in the original boundaries, circulation pattern of streets and walkways, and the division of housing lots. Where architectural design is of greatest significance, integrity will depend heavily on the design, materials, and workmanship of individual houses. Elements such as roadways, the arrangement of house lots, walls, plantings, walkways, park land, ponds, statuary, and fountains may likewise contribute strongly to importance in landscape architecture. Although historic plantings generally

enhance historic integrity, it is important to recognize that as trees, shrubs, and other vegetation mature, they may sometimes erase intended vistas.

The amount of infill and other changes that a historic neighborhood can withstand before losing integrity will depend on its size and scale, the presence of significant features, and the suburban context in which it developed. The division of suburban lots beyond that specified in historic plans and deed restrictions threatens a historic neighborhood's integrity of design and should be viewed as a compatible pattern of development only if the subdivision occurred as a result of historically important events during the period of significance.

Seven Qualities of Integrity

The seven qualities of integrity called for in the National Register criteria can be applied to historic neighborhoods in special ways.

Location is the place where significant activities that shaped the neighborhood took place. This quality requires that to a large extent the boundaries that historically defined the

suburb remain intact and correspond to those of the historic district being nominated. It also requires that the location of streets and the size and shape of the house lots have remained constant.

The location of historic suburbs was often determined by proximity to transportation corridors (streetcar lines, commuter railroads, parkways, or highways) and accessibility to places of employment. While the presence of historic transportation systems may add to a district's historic significance their loss or relocation does not detract in a major way from the integrity of the district.

Design is the composition of elements comprising the form, plan, and spatial organization of a historic neighborhood. This includes the arrangement of streets, division of blocks into house lots, arrangement of yards, and construction of houses and other buildings. Design may have resulted from conscious planning decisions set

forth in the historic plat, project specifications, building contracts or deed restrictions, or it may be the result of the personal tastes and individual efforts of homeowners to shape their domestic environment.

Integrity of design can be affected by changes to the size of housing lots by recent subdivision or consolidation and alterations to individual dwellings in the form of additions, siding, window replacements, and other changes.

Small-scale additions, such as the construction of modest porches or garages, may not detract in a major way from the historic character of individual homes and the neighborhood.

Large-scale additions, however, that double the elevation, add substantially to the mass of a historic house, or alter the spatial relationship between house and street generally threaten integrity of design.

Setting is the physical environment within and surrounding a historic suburb. Many historic neighborhoods were

designed to provide a semi-rural environment within commuting distance of the city, joining nature and urban amenities. A semi-rural character was often created through the design of an open, parklike setting of landscaped streets, private yards, and sometimes public parks. Subdivisions were often

American foursquare homes built in 1910 by a subdivider hoping to stimulate sales on the Woodland Place Plat in Des Moines. When evaluating the extent to which alterations affect the historic integrity of an individual house within a district, it is important to consider the nature of the change, its size and scale, and its impact on the character and continuity of the streetscape of which it is a part. Although the porch on the house at the right has been enclosed, the house retains the distinguishing characteristics of its type, style, and method of construction; its distinctive gables, massing, and upper-story fenestration continue to echo the overall form, materials, and setback of neighboring homes. (Photo by James E. Jacobsen, courtesy State Historical Society of Iowa)





surrounded by buffers of trees or bordered by undeveloped stream valleys to reinforce the separation of city and suburb.

Integrity of setting requires that a strong sense of historical setting be maintained within the boundaries of the nominated property. This relies to a large extent on the retention of built resources, street plantings, parks and open space. Elements of design greatly affect integrity of setting, and those consistent with the neighborhood's historic character or dating from the period of significance add to integrity. Small-scale elements such as individual

plantings, gateposts, fences, swimming pools, playground equipment, and parking lots detract from the integrity of setting unless they date to the period of significance.

The setting outside many historic neighborhoods will have changed substantially since the period of significance. Evidence of early streetcar or railroad systems in large part has disappeared, and arterial corridors have been widened and adapted to serve modern automobile traffic. Historic train stations, stores, churches, schools and community buildings, however, may still be present, and may be

nominated separately, or, if located within or on adjoining parcels, may be included within the boundaries of a historic residential suburb.

Materials include the construction materials of dwellings, garages, roadways, walkways, fences, curbing, and other structures, as well as vegetation planted as lawns, shrubs, trees, and gardens. The presence of particular building materials (e.g., stone, stucco, brick, or horizontal siding) may be important indicators of architectural style and methods of construction that give some neighborhoods a cohesive historic character.



Four-unit block of row houses (far left) and a double house built in the 1880s in the Barnum-Palliser District, Bridgeport, Connecticut, an important collection of mid-to-late nineteenth-century homes, many attributed to architects George and Charles Palliser. The houses depicted contribute to the district's significance because, despite asbestos siding placed on the houses during the mid-twentieth-century period, they still exhibit the distinctive architectural features—including bays, vergeboards, porches, dormers, capped chimneys, and gables—that characterized their original designs in the Eastlake and Stick styles. In fact, some of the siding is actually in keeping with the variety and fanciful treatment of the original siding. (Photos by Charles Brilvitch, courtesy Connecticut Historical Commission)

Integrity of materials in an architecturally significant neighborhood requires that the majority of dwellings retains the key exterior materials that marked their identity during the historic period. The retention of original materials in individual dwellings may be less important in assessing the integrity of a neighborhood significant for its plan or landscape design. Original plant materials may enhance the integrity, but their loss does not necessarily destroy it. Vegetation similar in historic species, scale, type and visual effect will generally convey

integrity of setting although integrity of materials may be lost.

Workmanship is evident in the ways materials have been fashioned for functional and decorative purposes to create houses, other buildings and structures, and a landscaped setting. This includes the treatment of materials in house design, the planting and maintenance of vegetation, as well as the construction methods of small-scale features such as curbs and walls.

Integrity of workmanship requires that architectural features in the landscape, such as portals, pavement, curbs, and walls, exhibit the artistry or

craftsmanship of their builders and that the vegetation historically planted for decorative and aesthetic purposes be maintained in an appropriate fashion and replaced in kind when damaged or destroyed.

Feeling, although intangible, is evoked by the presence of physical characteristics that convey the sense of past time and place. Integrity of feeling results from the cumulative effect of setting, design, materials, and workmanship. A streetcar suburb retaining its original street pattern, lot sizes, and variety of housing types and materials will reflect patterns of suburban life reminiscent of the late nineteenth and early twentieth centuries.

Association is the direct link between a historic suburb and the important events that shaped it. Continued residential use and community traditions, as well as the renewal of design covenants and deed restrictions, help maintain a neighborhood's integrity of association. Additions and alterations that introduce new land uses and erase the historic principles of design threaten integrity.

Integrity of association requires that a historic neighborhood convey the period when it achieved importance and that, despite changing patterns of ownership, it continues to reflect the design principles and historic associations that shaped it during the historic period.

Classifying Contributing and Noncontributing Resources

Buildings, structures, objects, and sites within a historic residential suburb are classified as “contributing” if they were present during the period of significance and possess historic integrity for that period. Those resources built or substantially altered after the period of significance are classified as “noncontributing” unless they have individual significance that qualifies them for National Register listing.

When a district’s period of significance extends to a date within the past 50 years (see discussion of Criterion Consideration G on page 96), resources less-than-50-years of age are classified as contributing if they were constructed or achieved significance within the defined period of significance, and by function, historic associations, and design, reflect important aspects of the neighborhood’s history and physical evolution. For example, a Colonial Revival home built in 1954 would contribute to a historic residential suburb whose period of significance extends from 1926, the date of platting, to 1958 when the last house following the original plan was constructed, providing the house was built on one of the original lots and was in keeping with the historic design character set by early deed restrictions. Conversely in the same neighborhood, a 1960s Ranch house on an original lot and a 1990s house imitating the Colonial Revival style on a newly subdivided lot would both be classified as noncontributing because their location and design departed from the neighborhood’s historic plan and their construction occurred outside the period of historic significance.

Nonhistoric Alterations and Additions

Alterations and additions since the period of significance affect whether an individual dwelling contributes to a district’s significance. Designed to be small but expandable, the houses built from the early 1930s through the 1950s have typically been enlarged as home owners have added garages, porches, sun rooms, family rooms, and additional bedrooms. Houses with relatively

modest additions that have little effect on the historic design of the original dwelling are classified as contributing. Those with additions that alter the original building’s massing and scale, introduce major noncompatible design elements, and interrupt the spatial organization of the streetscape and neighborhood, however, are classified as noncontributing.

When evaluating the extent to which the addition changes the dwelling’s individual character and the character of the streetscape of which it is a part, it is important to consider the size, scale, and design of the addition as well as its placement on the house lot. Information such as original setback requirements, historic design guidelines, and deed restrictions may also be useful in assessing the effect of additions on historic integrity. Whereas the construction of dormers on a Cape Cod house is unlikely to affect the dwelling’s integrity in a serious way, the addition of a full, second story by “popping up” the roof substantially alters the character of both house and streetscape.

Replacement siding poses a serious threat to the historic character of residential neighborhoods. Not only have wooden clapboards and shingled surfaces given way to a wide array of commercially available siding in aluminum and vinyl, but the asbestos-based materials of many World War II era and postwar subdivisions, now considered unsightly and unhealthy, are being covered. Whether new siding is the result of maintenance, health, aesthetic or energy saving concerns, it can have a substantial, cumulative impact on the character of historic neighborhoods, especially those with architectural distinction.

However, classifying all homes with nonhistoric siding as noncontributing is often too strict a measure. A wise approach is to consider the effect siding has on the character of the individual dwelling, and the character of the neighborhood as a whole. When determining whether a house with nonhistoric siding contributes, consider the following:

- The extent to which the new material visually approximates the house’s original material, design, and workmanship. Siding made of horizontal aluminum or vinyl boards would have less effect on the visual integrity of a house originally sheathed in clapboards or novelty siding than one built of brick or stone.
- The degree to which other distinctive features or architectural styling are obscured or lost by the application of the siding. The negative effect of siding is minimized if features such as window surrounds, purlins, wood detailing, barge boards, and brackets remain undamaged and visible.
- The extent to which new siding is accompanied by other alterations or additions that substantially or cumulatively affect the building’s historic character.

In general, houses may be classified as contributing resources where new siding: 1) visually imitates the historic material; 2) has been thoughtfully applied without destroying and obscuring significant details; and 3) is not accompanied by other alterations that substantially or cumulatively affect the building’s historic character.

Replacement siding is not a new phenomenon, and when evaluating the integrity of a historic neighborhood, one must consider the date when materials such as form stone, imitative brick sheathing, asbestos shingles, and other materials were added. Where these materials were installed during the period of significance, either by original home owners or later ones, they may reflect important aspects of the neighborhood’s evolution.

In sum, determining a reasonable threshold for evaluating the integrity of component resources begins with considering the reasons why the district meets the National Register criteria, and extends to examining the resource not only for its individual characteristics, but also for its contribution to the historic character of the overall neighborhood.

Weighing Overall Integrity

The final decision about integrity is based on the condition of the overall district and its ability to convey significance. The integrity of historic characteristics such as the overall spatial design, circulation network, and vegetation as well as the integrity of individual homes should be considered. Integrity depends to a substantial degree on the context of a metropolitan area's pattern of suburbanization and the condition of comparable neighborhoods in the area. The loss or relocation of a few features usually does not result in the loss of integrity of an entire historic neighborhood; however, the loss of entire streets or sections of the plan, cumulative alterations and additions to large numbers of dwellings, the subdivision of lots, and infill construction all threaten the integrity of the historic plan and the neighborhood's overall historic character.

The integrity of a historic residential subdivision relies in part on the cohesion of the historic plan and aspects of spatial organization, including street design, setbacks, and density. For this reason, integrity cannot be measured simply by the number of contributing and noncontributing resources. The retention of historic qualities of spatial organization, such as massing, scale, and setbacks, and the presence of historic plantings, circulation patterns, boundary demarcations, and other landscape features, should also be considered in evaluating the overall integrity of a historic neighborhood. Historic and contemporary views may be compared through old photographs, correspondence, news clippings, and promotional brochures to determine the extent to which the general design, character, and feeling of the historic neighborhood are intact and to measure the impact of alterations.

BOUNDARIES

The selection of boundaries for historic residential suburbs generally follows the guidelines for historic districts found in National Register bulletins, *How to Complete National Register of*

Historic Places Forms and Defining Boundaries for National Register Properties. Dwellings by noted architects, distinctive examples of a type or method of house construction, or designed landscapes, such as a park or parkway, may be nominated separately if they possess significance for which they individually meet the National Register criteria.

Defining the Historic Property

Boundaries are typically defined by the extent of a historic subdivision or group of contiguous subdivisions, particularly where significance is based on design. Factors such as identity as a neighborhood community based on historic events, traditions, and other associations may be more relevant and should be considered when defining the boundaries of neighborhoods important in social history or ethnic heritage.

Deciding What To Include

Boundaries should be clearly drawn on the basis of physical characteristics, historic ownership, and community identity as a neighborhood. In cases where a plan was only partially completed, the district boundaries should correspond to only the area where the plan was realized. Areas annexed or added to a historic plan may be included in the boundaries if such additions are shown to be historically important aspects of the overall suburb's evolution and therefore possess historical significance. If sections of a historic neighborhood have lost historic integrity, it is necessary to determine whether the sections lacking historic integrity can be excluded from the boundaries and whether the remaining unaltered area is substantial enough to convey significance.

For residential suburbs that developed in several stages, perhaps as a single farm was sold and subdivided in segments, boundaries are generally drawn to encompass the largest area that took form during the historic period and that possesses historic importance. The nomination should

document the sequential stages of development, indicating the boundaries of each stage on a sketch map or period plan. Areas added within the past 50 years should be excluded from the district's boundaries unless they are shown to have exceptional importance. Peripheral areas lacking integrity should also be excluded from the boundaries, for example, in the case of a recently zoned commercial corridor on the edge of a historic subdivision where the relationship of individual dwellings to the original plan and to the historic neighborhood have been lost. However, "donut holes" are not acceptable.

Natural areas such as ponds or woodlands may be included in the boundaries when they have recreational or conservation value and were included in the historic plan. Preexisting resources such as farmsteads may be included in the boundaries when they are integral to the design of the subdivision, were clearly designated for preservation in the subdivision plan, or have individual importance that is documented in the nomination.

Selecting Appropriate Edges

Lines drawn on historic plats, legal boundaries, rights-of-way, and changes in the nature of development or spatial organization are generally used to define the edges of a historic neighborhood. In general, the boundaries should be drawn along historic lot lines or boundary streets. An explanation of the relationship between the historic plan or subdivision and the proposed National Register boundaries should be given in the boundary justification.

DOCUMENTATION AND REGISTRATION

MULTIPLE PROPERTY SUBMISSIONS

Where the history of suburbanization for a metropolitan area is studied for the purpose of identifying a number of historic suburban neighborhoods, the National Register Multiple Property Documentation Form (NPS-10-900b) may be used to document the context, property types, registration requirements, and study methodology. Individual registration forms are then used to document each eligible neighborhood. Instructions for completing the form are found in the National Register bulletin, *How to Complete the National Register Multiple Property Documentation Form*, and videotape, *The Multiple Property Approach*.

INDIVIDUAL NOMINATIONS AND DETERMINATIONS OF ELIGIBILITY

Nominations are made on the National Register Registration Form (NPS-10-900) and processed according to the regulations set forth in 36 CFR Part 60. The form is intended as a summary of the information gathered during identification and a synthesis of findings concerning significance, integrity, and boundaries. General instructions for completing the form are found in the National Register bulletin, *Guidelines for Completing the National Register of Historic Places Registration Form*. Guidelines for documenting nationally significant properties for NHL designation by the Secretary of the Interior are found in the National Register bulletin, *How to Prepare National Historic Landmark Nominations*. The following section provides supplementary instructions for each part of the form.

Name

Historic residential suburbs are historic districts and may be named in various ways relating to their history and significance: historic name given in the original plat or plan, name used by the community during the period of significance, or name based on geographical location such as a town, village, or street. The name can include the term "historic district" or "historic residential suburb."

Classification

A historic subdivision is generally classified as a historic district because it is a collection of buildings, structures, and other features. The land covered by the overall plan is generally counted as a single site, and all buildings and structures substantial in size or scale therein are counted separately as contributing or noncontributing resources. The count should include bridges, free-standing garages, and outbuildings of sufficient size and scale to warrant being counted separately. Landscape features such as curbing, roadways, paths, tree plantings, ponds, and storm drains are generally considered integral features of the overall site and are not counted separately, unless they are substantial in size and scale or have special importance such as a central landscaped avenue or a designed park.

Description

The narrative description documents the physical evolution and current condition of the historic neighborhood being registered. The chart on pages 86-87 can be used as a checklist for describing residential districts. In summary, the description documents:

1) The historical relationship of the suburb or neighborhood to the growth and development of the local community or metropolitan area,

including the location of major transportation corridors; the provision for public utilities, such as power and water mains; the location of civic centers, business districts, schools, and parks and parkways; and local planning measures, such as subdivision regulations and zoning ordinances.

- 2) Neighborhood's relationship to the area's natural topography and physiography, including natural features comprising and surrounding the district, such as streams, canyons, rivers, escarpments, mountains, floodplain, and geological features.
- 3) The subdivision plan and its component features, including the circulation system, entrance features, arrangement of blocks and house lots, provision of sidewalks and pedestrian paths, landscape plantings, and community facilities such as parks, playgrounds, and recreational centers. Developer's role and relationship to architects, landscape architects, and home builders involved in the neighborhood's design and development. Principles of landscape design characterized by the overall plan or by specialized areas within the plan. Improvements provided by the developer, including water and septic systems, roads, and parks. Terms of deed restrictions that provided a form of "private control" over aspects such as the cost of construction, required setbacks, architectural style, and future alterations. The presence of street plantings, lampposts, curbs and gutters, entrance portals or signs, memorials, sculpture, landscape elements, principal vegetation, and important natural features.
- 4) Principal house types, architectural styles, and methods of construction, including predominant characteristics, such as scale, proportions, materials, color, decoration, workmanship, and quality of design.

Significant groupings of dwellings, as well as distinctive individual examples. Architectural types, styles, and methods of construction evident in houses, garages, sheds, and community buildings. Housing may be classified by type based on housing models, architectural style or period, or other descriptive means. Principal architects and home builders, and representative examples of their work should be identified.

- 5) Design and function of schools, churches, commercial centers, and transportation facilities within the boundaries of the historic neighborhood.

- 6) Principles of landscape design and historic landscape features evident in yard design, such as open lawns, border gardens, specimen trees, fences and walls, hedges, shrubbery, and foundation plantings. Identity of landscape architects involved in the design and development of the neighborhood, noting any landscape features that represent their work.

- 7) Appearance of the district during the period when it achieved historical significance and any subsequent changes or modifications. This includes alterations and additions to the plan or to the dwellings and other buildings, noting the types of changes and the degree to which alterations affect the integrity of

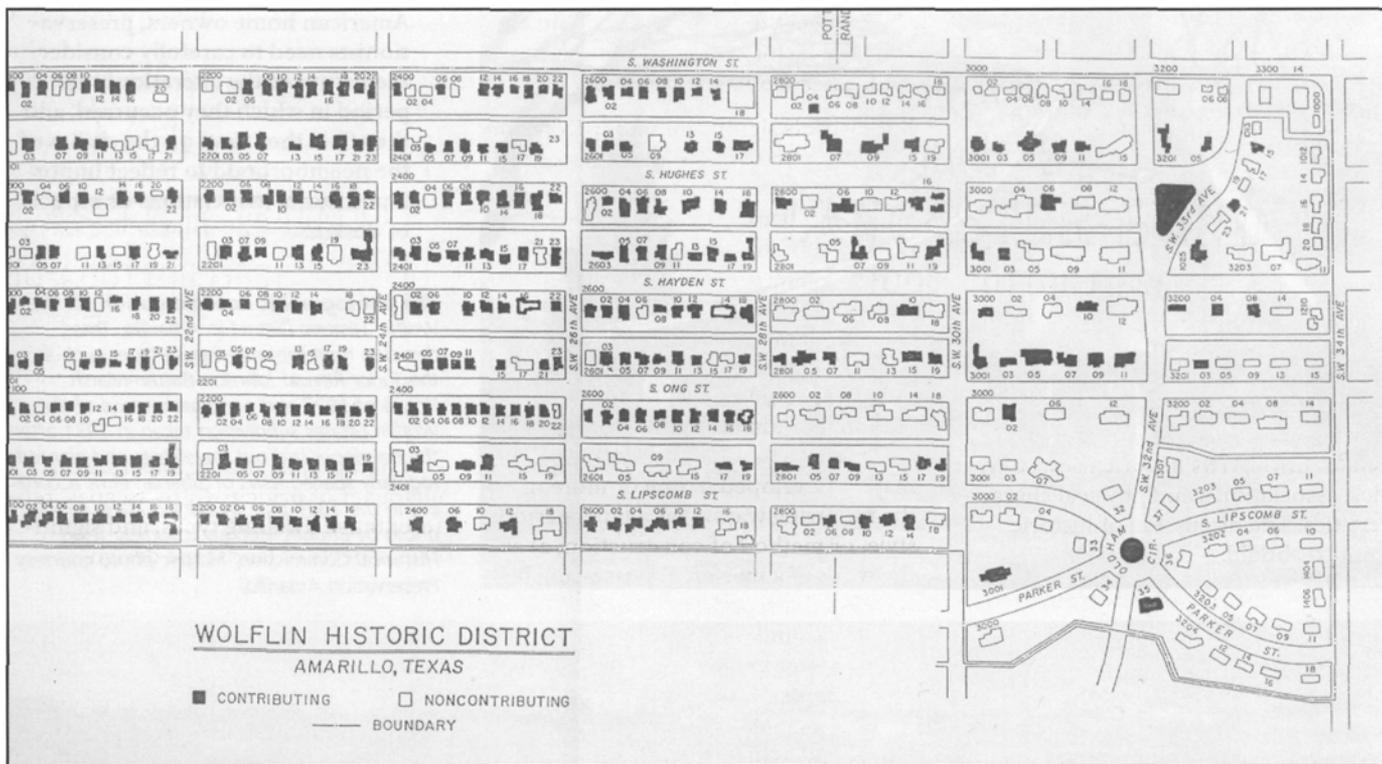
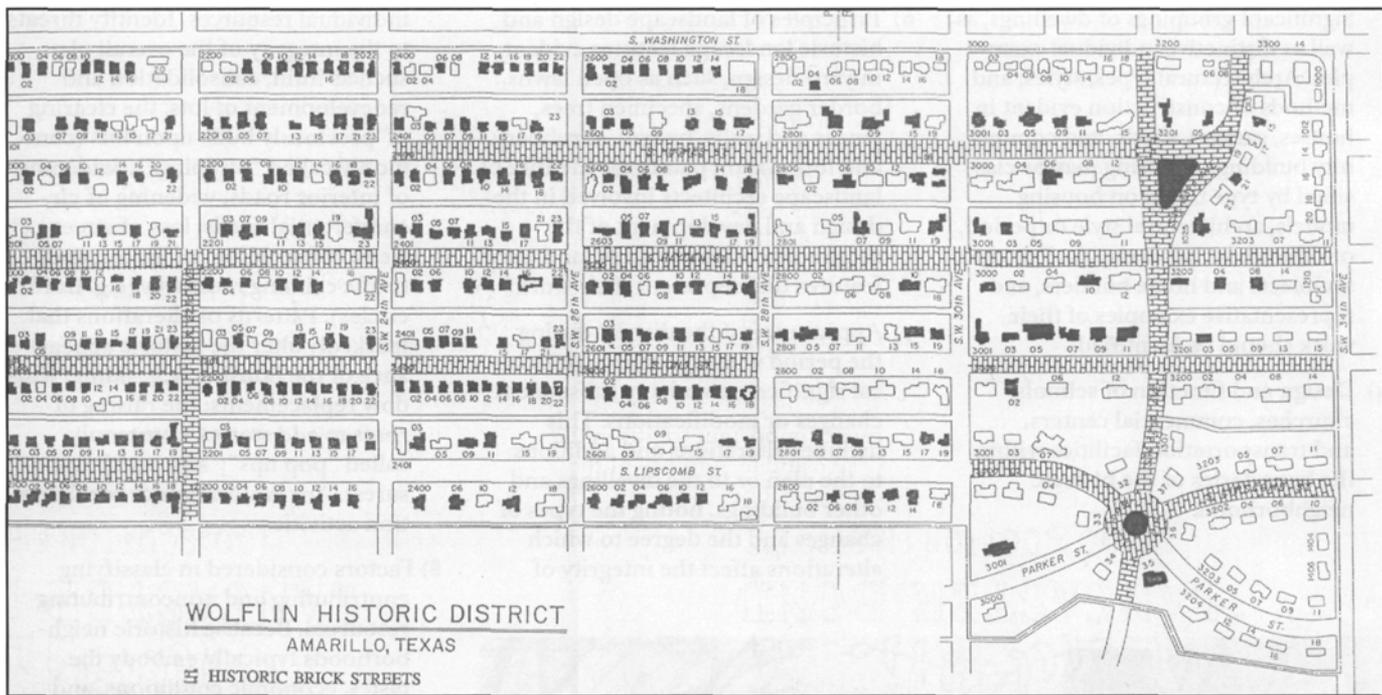
individual resources. Identify threats to the integrity of the overall plan, such as infill, consolidation and redevelopment of lots, the clearing of previously built-upon lots (commonly called “scraping”), widening of interior roads, widening of circumferential roads, loss of street trees, construction of fences, and traffic calming measures (e.g. traffic circles). Patterns of alterations that markedly alter the historic appearance of the housing (e.g. siding; window replacements; the raising of roofs to add stories, commonly called “pop ups”; and porch enclosures). Any restoration or rehabilitation activities.

- 8) Factors considered in classifying contributing and noncontributing resources. Because historic neighborhoods typically embody the tastes, economic conditions, and lifestyles of several generations of American home owners, preservationists need to carefully consider the nature of the alterations, the period in which they occurred, and the effect they have on the ability of the neighborhood to reflect important historic associations or aspects of design.



The photographic documentation for the Wolflin Historic District in Amarillo, Texas, depicted representative house types such as the Tudor Revival Johnson-Batten-Marsh House of 1927 and panoramic views of the Wolflin Estates subdivision taken in 1931 after the developer laid out the streets and planted regularly spaced rows of Siberian elms according to the 1927 plan by Hare & Hare. (House photo by Bridget Metzger, courtesy Texas Historical Commission; historic photo courtesy Preservation Amarillo)





The Wolflin Historic District consists of Wolflin Place (to the west) platted in 1923 and expanded in 1926 to follow the city's gridiron plan, and Wolflin Estates (to the east), platted with a landscape plan by landscape architects Hare & Hare in 1927. Separate sketch maps were prepared to indicate the location of the community's distinctive brick streets and contributing and noncontributing buildings. Because the landscape design of Wolflin Estates dates to the historic period and is significant as a local example of the work of a master designer, it is included within the district's boundaries even though many of its buildings were built outside the period of significance. (Maps by Hardy-Heck-Moore, courtesy Texas Historical Commission)

9) A list of contributing and noncontributing resources keyed to a sketch map for the entire district. This list should provide the address, date of construction, and condition for all principal buildings, as well as streets,

avenues, parks, playgrounds, and recreational areas that are part of the historic neighborhood. Because many residential districts will have a large number of component resources, which often share common aspects of size, plan, and style, it may be useful to develop a typology of housing types that can be used in listing contributing and noncontributing resources and locating examples on sketch maps. Many computer programs are particularly helpful in formulating such a list.

Statement of Significance

The statement of significance explains the ways in which the historic district relates to the theme of suburbanization locally and reflects the national trends presented in this bulletin and sets forth the reasons the district is significant within this context. The statement addresses the National Register criteria, and if applicable, criteria considerations. The greater the importance of certain features—such as the overall plan and circulation network—the more detailed the explanation of their role should be. The reasons for selecting the period of significance and the areas of significance in which the district meets the National Register criteria must be justified.

Unless provided on a related multiple property form, a statement of historic context should identify one or more themes to which the property relates through its historic uses, activities, associations, and physical characteristics. The discussion of historic context should:

- 1) Explain the role of the property in relationship to broad historic trends, drawing on specific facts about the district and its community.
- 2) Briefly describe the history of the community where the neighborhood is located and explain the various stages in the community's suburbanization, the factors leading to the development of suburban neighborhoods, and the characteristics of historic subdivisions locally or regionally. Explain how local trends

and examples relate to the national context for suburbanization.

- 3) Explain or discuss the importance of the suburban neighborhood in each area of significance by showing that it is a unique, important or outstanding representative when compared to other neighborhoods of the same period or type or with similar historical associations.
- 4) Explain how housing types, architectural style, landscape design, materials and methods of construction reflect important trends in the design and technology of the American house and yard. Note sources of plans (e.g., factory-made houses, pattern books, mail order plans, Small House Architect's Bureau, FHA-recommended designs, or professional firm).
- 5) Establish the importance of the developer, principal home builders, architects, and landscape architects in the history of the local community or metropolitan region.

For districts significant under Criterion A, provide an explanation of how the events, or pattern of events, represented by the district made an important contribution to the history of the community, State, or Nation. For districts significant under Criterion B, explain how the person with whom the property is associated is important in the history of the community, State, or Nation. For districts significant under Criterion C, the statement of context may be developed in one or more of the following ways: 1) as a type, period, style, or method of construction; 2) as the work of a master; 3) possessing high artistic values; and 4) representing a significant and distinguishable entity whose components may lack individual distinction.

The documentation of neighborhoods that achieved significance within the past 50 years requires a justification of exceptional importance. An explanation of the dates when the subdivision was laid out and the housing constructed should be given in the nomination to support the period of significance and to indicate whether or not a justification of exceptional significance is

needed. As a general rule, a majority of resources must be at least 50 years of age, before the district as a whole can be considered to meet the 50-year guideline. The nomination of a suburban neighborhood whose design was begun and substantially completed more than 50 years ago, although some resources within the district were built within the last 50 years, does not require a justification of exceptional importance.

Maps and Photographs

The general requirements for maps and photographs are given in the National Register bulletin, *How to Complete the National Register Registration Form*. Maps include a U.S.G.S. quadrant map identifying the location and coordinates of the historic district and a detailed sketch map indicating boundaries and labeling resources as contributing or noncontributing. In addition, the sketch map should identify the names of streets and community facilities, such as schools, community buildings, shopping centers, parks, and playgrounds. The map should include street addresses or be cross-referenced by resource number or name to the list of contributing or noncontributing resources in the Description (Section 7). The number and vantage point of each photographic view should be indicated as well as the relationship of the district to surrounding streets or nearby transportation facilities.

Photographs should illustrate the character of principal streetscapes, representative dwelling types, and significant aspects of landscape design. Community facilities, such as schools and parks, and representative examples of noncontributing resources should be depicted.

If possible, supplement the required documentation with copies of historic plats, plans, and photographs. Period plans that show the extent to which housing and landscape design were completed at various intervals of time are also useful for graphically depicting the neighborhood's physical evolution and can supplement the narratives in Sections 7 and 8.

ENDNOTES

Please note: Many of the following references include sources for further reading.

1. David R. Goldfield and Blaine A. Brownell, *Urban America: A History*, 2d. ed. (Boston: Houghton Mifflin, 1990), 289; Leo F. Schnore, "Metropolitan Growth and Decentralization," in *The Urban Scene: Human Ecology and Demography*, Leo F. Schnore, ed., (New York, 1965), 80, cited in Marc S. Foster, *From Streetcar to Superhighway* (Philadelphia: Temple University Press, 1981), 47; Dennis R. Judd and Todd Swanstrom, *City Politics* (New York: Harper Collins, 1994), 187.

2. This bulletin provides an overview of a national context for suburban development in the United States and a methodology for developing contexts at the local, metropolitan, or State level. The complete national context can be found in the "Historic Residential Suburbs in the United States, 1830 to 1960, Multiple Property Documentation Form." It is available electronically on the National Register Web site at <www.nps.gov/nr/pubs>. Printed copies may be requested through e-mail (nr_info@nps.gov) or by writing to National Register of Historic Places, National Park Service, 1849 C. Street, NW, Washington D.C. 20240.

3. See the Public Housing in the United States, 1933-1949, MPS (draft) available from the National Register program.

4. Robert Fishman, *Bourgeois Utopias* (New York: Basic Books, 1987), 155.

5. John R. Stilgoe, *Borderland* (New Haven and London: Yale University Press, 1985); Fishman, *Bourgeois Utopias*.

6. Kenneth T. Jackson, *Crabgrass Frontier* (New York: Oxford University Press, 1985)35-37; 37; David Schuyler, *The New Urban Landscape* (Baltimore: Johns Hopkins University Press), 152; James E. Vance, *Geography and the Urban Evolution in the San Francisco Bay* (Berkeley: Institute of Governmental Studies, University of California, 1964), 43.

7. Anne D. Keating, *Building Chicago* (Columbus: Ohio State University Press, 1988), 14; Jackson, 92-93; Stilgoe, 140; Goldfield and Brownell, 259.

8. Clay McShane and Joel A. Tarr, "The Centrality of the Horse in the Nineteenth Century City," in *The Making of Urban America*, 2nd ed., ed. Raymond A. Mohl (Wilmington, Del.: SR Books, 1997), 111; Jackson, 39-42.

9. McShane and Tarr, 111; Fishman, 138.

10. Paul L. Knox, *Urbanization* (Englewood Cliffs, N.J.: Prentice Hall, 1994), 89; Joel A. Tarr and Josef W. Konvitz, "Patterns in the Development of Urban Infrastructure," in *American Urbanism*, ed. Howard Gillette Jr. and Zane L. Miller (Westport, Conn: Greenwood Press, 1987), 204.

11. Jackson, 118-120. See also Samuel Bass Warner Jr., *Streetcar Suburbs* (Cambridge: Harvard University Press, 1962); Paul H. Mattingly, *Suburban Landscapes* (Baltimore: Johns Hopkins University Press, 2001).

12. Jackson, 119.

13. Foster, 16.

14. See Stilgoe, 239-51; Eric Johannesen, et.al. Shaker Square and Shaker Village H.D. NRHP Nominations, Ohio SHPO, July 1, 1976, and May 31, 1984, and Boundary Increases, December 9, 1983, and January 5, 2001.

15. Foster, 49, 52.

16. Tarr and Konvitz, 210; Mel Scott, *American City Planning Since 1890* (Berkeley: University of California Press, 1971), 186; Federal Highway Administration, *Highway Statistics: Summary to 1985*, as quoted in Knox, 107.

17. Peter G. Rowe, *Making a Middle Landscape* (Cambridge: MIT Press, 1991), 4; Jackson, 181.

18. Tarr and Konvitz, 211.

19. Edward Relph, *Modern Urban Landscape* (Baltimore: Johns Hopkins University Press, 1993), 77; Rowe, *Making a Middle Landscape*, 186-91; Christopher Tunnard and Boris Pushkarev, *Man-Made America* (New Haven: Yale University Press, 1966), 160-62.

20. Tarr and Konvitz, 210.

21. Larry R. Ford, *Cities and Buildings* (Baltimore: Johns Hopkins University Press, 1994), 233.

22. Bruce E. Seely, *Building the American Highway System* (Philadelphia: Temple University Press, 1987), 67; Tunnard and Pushkarev, 162-67.

23. Tunnard and Pushkarev, 162-65.

24. Rowe, 193; Tom Lewis, *Divided Highways* (New York: Viking Penguin, 1997; reprinted New York: Penguin Books, 1999), 41-44.

25. Lewis, 54-55.

26. Mark H. Rose, *Interstate*, rev. ed. (Knoxville: University of Tennessee Press, 1990), 19, 26.

27. Rose, 26; Rowe, 194.

28. Rose, 92; Rowe, 195.

29. Warner, 122; Chase, Susan Mulchahey, David L. Ames, and Rebecca Siders, *Suburbanization in the Vicinity of Wilmington, Delaware* (Newark, Del.: Center for Historic Architecture and Engineering, 1993), 90; Susan Mulchahey Chase, "The Process of Suburbanization and the Use of Restrictive Deed Covenants as Private Zoning" (unpublished Ph.d dissertation, University of Delaware, 1995), 119; Marc A. Weiss, *The Rise of the Community Builder* (New York: Columbia University Press, 1987), 40-42.

30. Weiss, 41-42; Keating, 70. See also William C. Page, et.al., *Towards a Greater Des Moines: Development and Early Suburbanization, ca 1880-ca 1920*, NRHP MPS, Iowa SHPO, October 25, 1996; James E. Jacobsen, *The Bungalow and Square House: Des Moines Residential Growth and Development* NRHP MPS, Iowa SHPO, November 21, 2000.

31. Greg Hise, *Magnetic Los Angeles* (Baltimore: Johns Hopkins University Press, 1997), 25; Weiss, 45.

32. Jackson, 177-78; Stilgoe, 258-59; Weiss, 4, 45-46, 50, 57. See also William S. Worley, *J.C. Nichols and the Shaping of Kansas City* (Columbia: University of Missouri Press, 1990); Catharine F. Black, Roland Park NRHP Nomination, Maryland SHPO, December 23, 1974.

33. See Weiss, 53-60.

34. *Ibid.*, 3-4.

35. Hise, 143.

36. Hise, 201-02; Jackson, 231-45. See also Barbara Kelly, *Expanding the American Dream* (Albany: State University of New York Press, 1993); Gregory C. Randall, *America's Original GI Town* (Baltimore: Johns Hopkins University Press, 2000); Jerry Ditto, Marvin Wax, and Lanning Stern, *Design for Living* (San Francisco: Chronicle Books, 1995); Ned Eichler, *The Merchant Builders* (Cambridge: MIT Press, 1982).

37. Jackson, 196; Keating, 70-71; Weiss, 32-33; Frank A. Chase, "Building and Loan Advantages: The Why and the Wherefore," *New York Tribune*, September 2, 1923.

38. Scott, 284.

39. *Ibid.*; FHA, *The FHA Story in Summary, 1934-1959* (Washington, D.C.: Government Printing Office, 1959), 2.

40. Jackson, 195-97.

41. FHA, *FHA Story*, 5, 13-17; Jackson, 203-09.

42. "Defense Housing in Brief Retrospect: The Aims and Achievements of Certain Housing Agencies—A Symposium," *Landscape Architecture* 33, no. 1 (October 1942): 14-19; FHA, *FHA Story*, 14-15. This bulletin is primarily concerned with legislative incentives that stimulated and influenced private investment in suburban real estate and home construction. The 1937 United States Housing Act (50 Stat. 888) established a federal program of urban public housing and slum clearance under the United States Public Housing Authority, and the 1940 Lanham Act (54 Stat. 1125) established the Federal Works Agency and expanded federal public housing programs to include housing for defense workers. In 1942, the FHA and the public housing programs were consolidated in one agency.

43. See William H. Wilson, *The City Beautiful Movement* (Baltimore: Johns Hopkins University Press, 1994).

44. Quotation is from Weiss, 49.

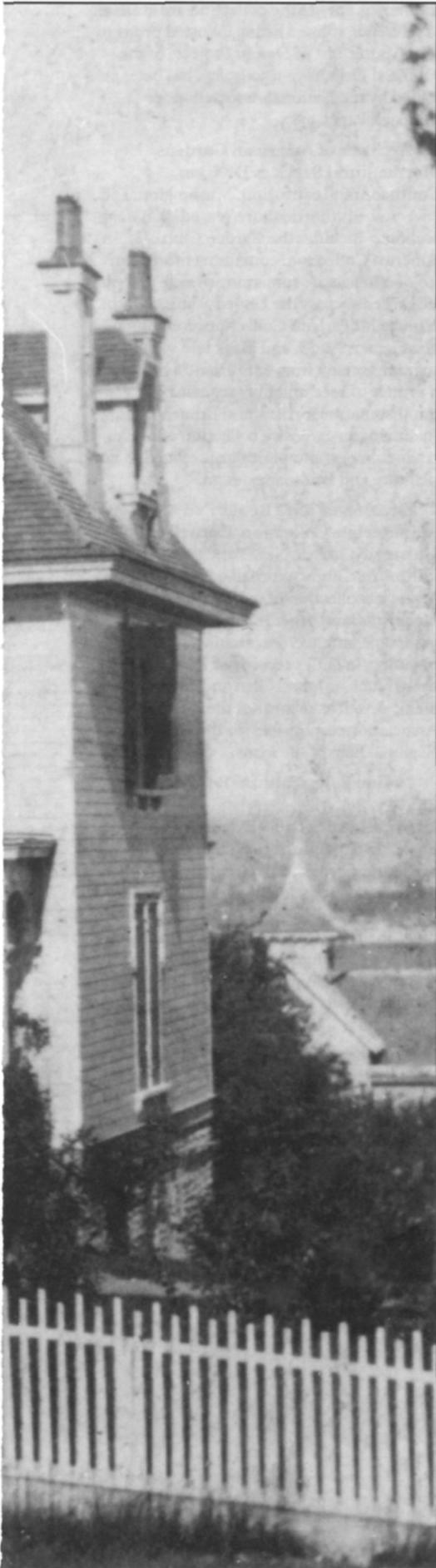
45. Norman T. Newton, *Design on the Land* (Cambridge: The Belknap Press of Harvard University, 1971), 468-69; Weiss, 69-70; See also Gwendolyn Wright, *Building the Dream* (New York: Pantheon, 1981), 200-03; Chase, "Process of Suburbanization."
46. Weiss, 70-72.
47. Committee report can be found in John M. Gries and James Ford, eds. *Planning for Residential Districts*, vol. 1, President's Conference on Home Building and Home Ownership (Washington, D.C.: National Capital Press, 1932), 47-124.
48. The FHA's appraisal system not only encouraged the expansion of residential development on the periphery of many metropolitan areas, but also is said to have contributed to the "redlining" of many urban neighborhoods by the banking industry. For a discussion of the politics and effects of racial restrictions, see Jackson, 197-203, 208-15; G. Wright, *Building the Dream*, 247-48.
49. Weiss, 67, 72-78, 183-84; Jackson, 241-42.
50. G. Wright, *Building the Dream*, 213.
51. Committee recommendations can be found in Gries and Ford, eds. *Planning*, 29-38.
52. Michael Southworth and Eran Ben-Joseph, *Streets and the Shaping of Towns and Cities* (New York: McGraw-Hill, 1997), 88; Weiss 67, 75, 183-84 fn. 29.
53. Scott, 208-10, 289-93. The first of its type, the Los Angeles Regional Planning Commission was founded in 1922; it influenced zoning regulations in local municipalities and in 1927 adopted a county zoning ordinance. The New York regional plan was developed between 1922 and 1931 under the direction of the Russell Sage Foundation with the expertise of preeminent Garden City planners.
54. See John Archer, "Country and City in the American Romantic Suburb," *Journal of Society of Architectural Historians* 42, no. 2 (May 1983): 139-56; Schuyler, *New Urban Landscape*, 149-66; Mary Corbin Sies, "The City Transformed," *Journal of Urban History* 14, no. 1 (November 1987): 81-111.
55. Archer, 150. See also Ann Leighton, *American Gardens of the Nineteenth Century* (Amherst: University of Massachusetts Press, 1987), 164-72; David Schuyler, *Apostle of Taste* (Baltimore: Johns Hopkins University Press, 1996).
56. Archer discusses other influential books, including William Ranlett, *The Architect* (1847); Henry Cleaveland, William Backus, and Samuel Backus, *Village and Farm Cottages* (1856); Gervase Wheeler, *Homes for the People* (1855); Calvert Vaux, *Villas and Cottages* (1857); John Claudius Loudon, *The Suburban Gardener and Villa Companion* (1838); George E. Woodward, *Woodward's Country Homes* (1865); articles in *The Horticulturalist* by Downing, Howard Daniels and others.
57. Alexander Garvin, *The American City* (New York: McGraw-Hill, 1996), 253.
58. J. John Palen, *The Suburbs* (New York: McGraw-Hill, 1995), 51-55.
59. Rowe, *Making a Middle Landscape*, 198.
60. Garvin, 254; Jackson 25-30; Clay Lancaster, *Brooklyn Heights* (New York: Dover Publications, 1980).
61. Jackson, 81-86; Raymond W. Smith, A. T. Stewart Era Buildings NRHP MRA Nomination, New York SHPO, November 14, 1978.
62. Richard Longstreth, "Maximilian G. Kern," in *Pioneers of American Landscape Design*, ed. Charles Birnbaum and Robin Karson, (New York: McGraw-Hill, 2000), 209-12; Garvin, 256-58; Stephen J. Raiche, Portland and Westmoreland Places (a.k.a. Forest Park Addition) NRHP Nomination, Missouri SHPO, February 12, 1974.
63. Newton, 471-72. See also Worley, J. C. Nichols.
64. Archer, 150; Schuyler, *Apostle of Taste*, 206-08.
65. Archer, 154. Archer also discusses the early suburbs of New Brighton on Staten Island and Evergreen Hamlet near Pittsburgh.
66. Schuyler, *Apostle of Taste*, 208-09; Archer, 154-55. See also Susan Henderson, "Llewellyn Park, suburban idyll," *Journal of Garden History* 7, no. 3 (1987): 221-43; Robert P. Guter, et al., Llewellyn Park NRHP Nomination, New Jersey SHPO, February 28, 1986.
67. Newton, 468. See also Archer, 155-56; Schuyler, *New Urban Landscape*, 162-66.
68. Olmsted, Vaux and Company, *Preliminary Report upon the Proposed Suburban Village at Riverside* (1868), reprinted, "Riverside, Illinois: A Residential Neighborhood Designed Over Sixty Years Ago," ed. Theodora Kimball Hubbard, *Landscape Architecture* 21, no. 4 (July 1931), 268-69, cited in Newton, 466-67.
69. Garvin, 263. Early Olmsted projects included Tarrytown Heights (1870-1872), New York; Parkside (1872-1886) in Buffalo; Fisher Hill (1884) in Brookline, Mass.; Druid Hills (1889), in Atlanta; Sudbury Park (1876-1892) near Baltimore. Later suburbs by the Olmsted Brothers further perfected the curvilinear suburb combining its naturalistic principles with features inspired by the garden city movement, such as planted medians and cul-de-sacs, and building a reputation on large projects such as Roland Park (1901) and Guilford (1912) in Baltimore; Alta Vista (1900) in Louisville; St. Francis Woods (1915) in San Francisco, and Palos Verdes (1926) near Los Angeles. See also Arleyn A. Levee, "The Olmsted Brothers' Residential Communities," *The Landscape Universe* (Wave Hill, N.Y.: Catalog of Landscape Records in the United States and National Park Service, 1993), 29-48.
70. See Karen Madsen, "Henry Vincent Hubbard," and Charles A. Birnbaum, "Samuel Parsons Jr.," in *Pioneers*, ed. Birnbaum and Karson, 177-180, 187-91.
71. Henry V. Hubbard and Theodora Kimball, *Introduction to the Study of Landscape Design* (New York: Macmillan, 1917), 175-94, plate XXXIII, op. 280; H. V. Hubbard, "The Influence of Topography on the Layout of Subdivisions," *Landscape Architecture* 18, no. 3 (April 1928): 188-99.
72. T. K. Hubbard, ed., "Riverside," 259-77; Howard K. Menhinick, "Riverside Sixty Years Later," *Landscape Architecture* 22, no. 2 (1932): 109-17; Rowe, *Making a Middle Landscape*, 205.
73. Patricia Erigero, et al., Ladd's Addition Historic District NRHP Nomination, Oregon SHPO, August 31, 1988.
74. Wendy Laird, El Encanto Estates Residential H.D. NRHP Nomination, Arizona SHPO, January 29, 1988; Daniel Hardy, et al., Wolfiin H.D. NRHP Nomination, Texas SHPO, May 21, 1992.
75. Thomas W. Hanchett, Myers Park H.D. NRHP Nomination, North Carolina SHPO, August 10, 1987.
76. Handlin, 185; Newton, 471-74. See Sally Schwenk, Crestwood NRHP Nomination, Missouri SHPO, October 8, 1998; Lauren Bricker, et al., Residential Architecture of Pasadena, California, 1895-1918: The Influence of the Arts and Crafts Movement NRHP MPS, California SHPO, August 6, 1998; John C. Terrell, Prospect H.D. NRHP Nomination, California SHPO, April 7, 1983; Esley Hamilton and James M. Denny, Brentmoor Park, Brentmoor and Forest Ridge NRHP Nomination, Missouri SHPO, September 23, 1982.
77. See Walter L. Creese, *Search for Environment—The Garden City Before and After*, rev. ed. (Baltimore: Johns Hopkins University Press, 1992).
78. See Stilgoe, 225-38; Newton, 474-78; Susan L. Klaus, *A Modern Arcadia* (Amherst: University of Massachusetts Press with the Library of American Landscape History, 2001).
79. Ken Hart, Dean Wagner, et al., Guilford H.D. NRHP Nomination, Maryland SHPO, July 19, 2001.
80. Bruce E. and Cynthia D. Lynch, Washington Highlands H.D. NRHP Nomination, Wisconsin SHPO, December 18, 1989.
81. G. Wright, *Building the Dream*, 203; Fred Mitchell and Marina King, Mariemont H.D. NRHP Nomination, Ohio SHPO, July 24, 1979.
82. Lewis Mumford, "Introduction," in *Toward New Towns for America*, by Clarence S. Stein, rev. ed, 3d ed. (Cambridge: MIT Press, 1966), 12. See also Kermit C. Parsons, "Collaborative Genius" *Journal of American Planning Association* 60, no. 4 (Autumn, 1994): 462-82; Stein, 21-35; Henry Wright, *Rehousing Urban America* (New York: Columbia University, 1935), 36-41; Peter G. Rowe, *Modernity and Housing* (Cambridge: MIT Press), 114-127.
83. Stein, 36-73; H. Wright, 42. See also Rowe, *Making a Middle Landscape*, 200-01; Cynthia L. Girling and Kenneth I. Helphand, *Yard—Street—Park* (New York: John Wiley & Sons, 1994), 59-64.
84. Stein, 74-85; H. Wright, 46-50; David J. Vater, Chatham Village H.D. NRHP Nomination, Pennsylvania SHPO, November 25, 1998.
85. Clarence Arthur Perry, "The Neighborhood Unit," Monograph One, *Regional Survey of New York and Its Environs*, vol. 7, Neighborhood and Community Planning (New York: New York Regional Plan Association, 1929), 22-140; Gries and Ford, eds., *Planning*, 80-82, 122-24; C. A. Perry, *Housing for the Machine Age* (New York: Russell Sage Foundation, 1939), 50-82. See also Hise, 33-35.
86. Gries and Ford, eds., *Planning*, 6-7, 21, 66, quotation is from 76.
87. *Ibid.*, 59.
88. *Ibid.*, 54-55.
89. *Ibid.*, 52-54, 59, 76.

90. Rowe, *Making a Middle Landscape*, 204-05; Barry Cullingworth, *Planning in the USA* (London and New York: Routledge, 1997), 77. See also Girling and Helphand, 85-89; Deborah E. Abele, et al., *Historic Residential Subdivisions and Architecture in Central Phoenix, 1912-1950*, NRHP, Arizona SHPO, December 21, 1994; David Kammer, *Twentieth Century Suburban Growth of Albuquerque NRHP MPS*, New Mexico SHPO, August 3, 2001.
91. Seward H. Mott, "The Federal Housing Administration and Subdivision Planning," *Architectural Record* 19 (April 1936), 257-63.
92. FHA, *Planning Neighborhoods for Small Houses*, technical bulletin 5 (Washington, D.C.: GPO, 1936), 8-9.
93. Seward H. Mott, "The FHA Small House Program," *Landscape Architecture* 33, no. 1 (October 1942): 16; and "Land Planning in the FHA," 1933-44," *Insured Mortgage Portfolio* 8, no. 4 (1944): 12-14.
94. Miles L. Colean, "An Early FHA Experiment—A Forgiven Chapter in Housing History," *Mortgage Banker* 38, no. 8 (May 1978):86-88; "A New Policy for Housing," *Architectural Forum* (August 1936): 150-53.
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96. "Building Types—Low-Rent Suburban Apartment Buildings," *Architectural Record* 86, no. 3 (September 1939): 88-114.
97. Southworth and Ben-Joseph, 88; Rowe, *Making a Middle Landscape*, 202, 205-06. See also Girling and Helphand, 90-94, 94-102; Kelly, 35-37.
98. Weiss, 45.
99. Jackson, 125-127. See Paul E. Sprague, "The Origin of Balloon Framing," *Journal of Society of Architectural Historians* 40, no. 4 (December 1981): 311-19.
100. Schuyler, *Apostle of Taste*, 57-60, 128-29.
101. For further discussion and lists of pattern books, see Clifford E. Clark Jr., *The American Family Home* (Chapel Hill: University of North Carolina Press, 1986); Alan Gowans, *The Comfortable House* (Cambridge: MIT Press, 1986); Dell Upton, "Pattern Books and Professionalism: Aspects of the Transformation of Domestic Architecture in America, 1800-1860," *Winterthur Portfolio* 19, no. 1 (Spring 1984): 107-150; Gwendolyn Wright, *Moralism and the Model Home* (Chicago: University of Chicago Press, 1980).
102. Elisabeth Woodburn, "American Horticultural Books," in *Keeping Eden*, ed. Walter T. Punch (Boston: Massachusetts Horticultural Society and Bulfinch Press, 1992), 252. Other early books include: *Country Life: A Handbook of Agriculture, Horticulture and Landscape Gardening* (1859) by Robert Morris Copeland; *The Practical Gardener* (1855) by G.M. Kern; *Architecture, Landscape Gardening and Rural Art* (1867) by George E. and F.W. Woodward; and *Beautiful Country Homes: A Handbook of Landscape Gardening* (1870) by Jacob Weidenmann.
103. David Handlin, *The American Home* (Boston: Little, Brown, 1979), 171-83; David Schuyler, "Introduction," in *Victorian Gardens: Art of Beautifying Suburban Home Grounds* by Frank J. Scott (1870, reprint, Watkins Glen, New York: American Life Foundation, 1982), n.p.; Ann Leighton, *American Gardens of the Nineteenth Century* (Amherst: University of Massachusetts Press, 1987), 250-60.
104. Clark, 74-75; Gowans, 42.
105. Clark, 76-77; Gowans, 42-46; Robert Gutman, *The Design of American Housing* (New York: Publishing Center for Cultural Resources, 1985), 34-36. See also James L. Garvin, "Mail-Order Home Plans and American Victorian Architecture," *Winterthur Portfolio* 16, no. 4 (winter 1981): 309-34; Leland M. Roth, "Getting the House to the People," in *Perspectives in Vernacular Architecture IV* (1991), 188, and Michael A. "The Palliser Brothers and Their Publications," in *The Palliser Late Victorian* (Watkins Glen, N.Y.: American Life Foundation, 1978), i-iv.
106. Gowans ascribes the term "homestead-temple house" to this housing type, 94-99.
107. Clark, 131-32,
108. Clark, 167-78; Palen, 38-39.
109. See Clark, 171-91; Gowans, 74-83; Rowe, *Making a Middle Landscape*, 68-69; Robert Winter, *The California Bungalow* (Los Angeles: Hennessey & Ingalls, 1980); Clay Lancaster, *The American Bungalow* (New York: Abbeville Press, 1985). Palen used the term "bungalow suburb" in *Suburbs*, 51.
110. Gowans, 84; Rowe, *Making a Middle Landscape*, 73.
111. Gowans, 48-63; Katherine Cole Stevenson and H. Ward Jandl, *Houses by Mail* (New York: National Trust for Historic Preservation and John Wiley and Sons, 1986), 19.
112. Rowe, *Making a Middle Landscape*, 84-87; FHA, *Principles of Planning Small Houses*, technical bulletin 4, rev. ed. (Washington, D.C.: GPO, 1940), 28-29.
113. Gowans 71; Jan Jennings, "Housing the Automobile," in *Roadside America*, ed. Jan Jennings (Ames: Iowa State University Press and Society for Commercial Archeology, 1990), 95-106.
114. Virginia T. Clayton, *The Once and Future Gardener* (Boston: David R. Godine, 2000), xxiii-xxxi.
115. Woodburn, 246-48; Robert E. Grese, "Liberty Hyde Bailey" in *Pioneers*, ed. Birnbaum and Karson, 6-8.
116. Woodburn, 248, 259.
117. G. Wright, *Building the Dream*, 197-98; Janet Hutchison, "The Cure for Domestic Neglect," in *Perspectives in Vernacular Architecture II*, ed. Camille Wells (Columbia: University of Missouri, 1989), 168-78; Joseph B. Mason, *History of Housing in the U.S., 1930-1980* (Houston: Gulf Publishing, 1982), 16. See also Janet Anne Hutchison, "American Housing, Gender, and the Better Homes Movement, 1922-1935," Ph.D. dissertation (University of Delaware, 1989).
118. Gowans, 65-67; G. Wright, *Building the Dream*, 199-202; Robert T. Jones, introduction, *Small Homes of Architectural Distinction* (1929; reprinted as *Authentic Small Houses of the Twenties*, New York: Dover Publications, 1987), 22.
119. Henry Atterbury Smith, "Acknowledgement," in *The Books of A Thousand Homes*, vol. 1 (1923; reprinted as *500 Small Houses of the Twenties*, New York: Dover Publications, 1990), 5.
120. "Community Development Advantages Demonstrated by Tribune," and "Would Landscaping Help Your Grounds," *New York Tribune*, September 9, 1923; Marjorie Sewell Cautley, "Planting at Radburn," *Landscape Architecture* 21, no. 1 (October 1930), 23-29; Girling and Helphand, 65-66; Stephen Child, "Colonia Solana; A Subdivision on the Arizona Desert," *Landscape Architecture* 19, no. 1 (October 1928), 6-13. In *Pioneers*, ed. Birnbaum and Karson, see Mary Blaine Korff, "Stephen Child," 49-52; Cydney E. Millstein, "Sidney J. Hare and S. Herbert Hare," 162-68; Nell Walker, "Marjorie Sewell Cautley," 47-49; and Behula Shah, "Ralph E. Griswold," 151-56.
121. Virginia Lopez Begg, "Mrs. Francis King (Louisa Yeomans King)," in *Pioneers*, ed. Birnbaum and Karson, 216-17. In *Pioneers*, see also biographies of Steele, Bottomley, Requa, and Waugh.
122. Committee reports, including the results of a survey of small houses and a scorecard for home appraisal, can be found in John M. Gries and James Ford, eds., *House Design, Construction and Equipment*. Proceedings of the President's Conference on Home Building and Home Ownership (Washington, D.C: National Capital Press, Inc., 1932), 1-110.
123. Committee report can be found in Gries and Ford, eds., *Planning*, 163-209.
124. FHA, *Planning Small Houses* (1936), 21-23.
125. Hise, 68-69; FHA, *Planning Small Houses* (1936-1939 eds.), 24-27.
126. *Ibid.*, 28-33.
127. FHA, *Planning Small Houses* (rev. ed., 1940), 14-15.
128. *Ibid.*, 37-43.
129. Rental Housing Division, "Architectural Bulletins" (Washington, D.C.:FHA, 1940). See also H. Wright, *Rehousing Urban America*, 29-50, 99-102, 119-28; Perry, *Housing for Machine Age*, 44-48. Marie Ryan, Buckingham Historic District NRHP Nomination, Virginia SHPO, January 21, 1999.
130. Early in the twentieth century, Architect Grosvenor Atterbury used prefabrication methods in the construction of houses for Forest Hills, Long Island, and Frank Lloyd Wright introduced a process called, American System Ready-Cut, in the construction of several duplexes and small houses in Milwaukee. See Alfred Bruce and Harold Sandbank, *A History of Prefabrication* (New York: John B. Pierce Foundation, 1943; reprint, New York: Arno Press, 1972); and John Burns, "Technology and Housing," in *Preserving the Recent Past*, ed. Slaton and Shiffer, II/129-35.
131. Hise, 56-57; Bruce and Sandbank, 10-11.
132. Hise, 58, 62-63; Bruce and Sandbank, 11-12.

133. *Ibid.*, 11, 13-14, 74.
134. FHA, *Recent Developments in Building Construction* (Washington, D.C.: GPO, 1940), 9, 12.
135. Bruce and Sandbank, 71-74; for a Directory of Wartime Prefabricators, see 61-68. See also H. Ward Jandl, et al. *Yesterday's Houses of Tomorrow* (Washington D.C.: Preservation Press, 1991), 183-99.
136. Gutman, 12. See also Gilbert Herbert, *The Dream of the Factory-Made House* (Cambridge: MIT Press, 1984).
137. Mason, 56-57; *Better Homes and Gardens* 33, no. 3 (March 1955), 192.
138. Jackson, 233.
139. *Ibid.*, 235.
140. Clark, 221-23; Jackson, 234-35; G. Wright, *Building the Dream*, 251-53.
141. See also Clark, 217-36; G. Wright, *Building the Dream*, 256-58, and, for profiles on postwar developers, Mason, 48-51.
142. Kelly, 16, 18, 59-65; Rowe, *Modernity and Housing*, 196-97; Jackson, 235; Girling and Helphand, 94-102.
143. David Gebhard, "Royal Barry Wills and the American Colonial Revival," *Winterthur Portfolio* 27, no. 1 (spring 1992): 45.
144. Clark, 211; Rowe, *Making a Middle Landscape*, 73-77.
145. See Clark, 193-216; David Bricker, "Ranch Houses Are Not All the Same," in *Preserving the Recent Past 2*, ed. Slaton and Foulks, 2/115-23; and "Cliff May," in *Toward a Simpler Life*, ed. Robert Winter (Berkeley, University of California Press, 1997), 283-90; Esther McCoy and Evelyn Hitchcock, "The Ranch House," in *Home Sweet Home*, ed. Charles W. Moore (New York: Rizzoli, 1983), 84-89.
146. Clark, 201.
147. Kelly, 80-84.
148. Rowe, 82-84.
149. Jandl, 101, 128-39.
150. Elizabeth A.T. Smith, ed., *Blueprints for Modern Living* (Cambridge: MIT Press, 1989), 75-76; See also Esther McCoy, *Case Study Houses, 1945-1962* (Reprint of *Modern California Houses*, Santa Monica: Hennessey and Ingalls, 1977), 188-93.
151. For architects working in this style, see Mason, 73-77.
152. Mason, 53; Diane Wray, *Arapahoe Acres* (Englewood, Col.: Wraycroft, 1997), 4-5, and Arapahoe Acres NRHP Nomination, Colorado SHPO, November 3, 1998.
153. John Hancock Callender, *Before You Buy a House* (New York: Crown Books, 1953), 31-32, 88-89, 117-19.
154. *Hollin Hills* (Alexandria, Vir.: Civic Association of Hollin Hills, 2000), 181.
155. Clark, 215; G. Wright, *Building the Dream*, 251; Helen Stark, "How to Stretch Space in a Small House," *Homes and Gardens*, 33, no. 3 (March 1955), 56-59+; Thomas Hine, "The Search for the Postwar House," in *Blueprints*, ed. Smith, 178-81.
156. Mason, 78; Rowe, *Modernity and Housing*, 126-27; Stein, 86-91, 188-216.
157. *Architectural Record*, eds., *Apartments and Dormitories* (New York: F.W. Dodge, 1958), 9. Lake Shore Drive Apartments and 100 Memorial Drive were recognized in the AIA's Centennial list of the fifty most influential buildings in America.
158. Rowe, *Making a Middle Landscape*, 93-94; Hines, 168; Marc Treib, "Thomas Church, Garrett Eckbo, and the Postwar California Garden," in *Preserving the Recent Past 2*, ed. Slaton and Foulks, 2-149. See also Marc Treib and Dorothee Imbert, *Garrett Eckbo* (Berkeley: University of California Press, 1997).
159. David Streatfield, "Western Expansion," in *Keeping Eden*, ed. Punch, 110-12.
160. See Callender, 67-76; Marc A. Klopfer, "Theme and Variation at Hollin Hills," and Daniel Donovan, "The Hundred Gardens," in *Dan Kiley*, ed. William Saunders (Princeton: Princeton Architectural Press, 1999), 37-64.
161. Claudia R. Brown, "Surveying the Suburbs," in *Preserving the Recent Past*, ed. Slaton and Shiffer, II/105-12.



RESOURCES



An 1866 stereopticon view of the McGrew House (1862) in Glendale, Ohio, shows the influence that the writings of Catharine E. Beecher and Andrew Jackson Downing had on mid-nineteenth-century domestic design and the rise of a "picturesque" aesthetic for suburban villages that encompassed romantic revival styling, decorative vergeboards, capped chimneys, elaborately worked porch details, wooden fences, cupola-topped carriage houses, and neatly planted yards with an abundance of specimen trees and shrubbery. (Photograph by Glessner, courtesy Glendale Heritage Preservation)

REFERENCE SERVICES AND SPECIALIZED REPOSITORIES

The Catalog of Landscape Records in the United States <www.wavehill.org/catalog> A national catalog designed to assist researchers find records and repositories documenting the work of landscape architects and landscape architectural firms in the United States. Catalog publishes a quarterly newsletter featuring special collections, advances in records management such as planning digital collections, and researcher queries.

WAVE HILL

675 West 252nd Street
Bronx, New York 10447-2899
Email: catalog@wavehill.org

US COPAR/Cooperative Preservation of Architectural Records. A national network of State or regional committees committed to the preservation of architectural records. A national newsletter for COPAR was published from 1980-1985 and 1996-1997. Regional guides to architects and architectural firms have been published for New York City, Chicago, Boston, and Philadelphia. A nationwide list of state and regional committees is maintained by the Massachusetts committee and is available electronically <<http://libraries.mit.edu/rvc/mcpar/copar-contactinfo.html>>. National inquiries should be addressed to:

C. Ford Peatross

Curator of Architecture, Design, and Engineering Collections
Prints and Photographs Division
Library of Congress
Washington, DC 20540-4840
Email: cpea@loc.gov

U.S. Geological Survey <<http://mapping.usgs.gov>> makes available U.S.G.S topographic maps. As part of the Global Land Information System (GLIS), it also makes available the aerial surveys, called digital orthophoto quadrangles or DEQ's, used to revise digital line graphs and topographic maps <<http://earthexplorer.usgs.gov>>.

VAF/Vernacular Architecture Forum <www.vernaculararchitecture.org> maintains a link to a bibliography of published

writings on topics such as vernacular housing, landscape design, and planning. Organization regularly publishes a newsletter that contains current bibliography. Proceedings of annual meetings are published periodically by the University of Tennessee Press, Knoxville, and University of Missouri Press, Columbia.

Library of Congress <www.loc.gov> maintains an extensive library collection, including books, periodicals, prints and photographs, maps, and microfiche versions of collections in other repositories. A catalog of bibliographical references and a number of research tools are available online. The Manuscripts Division contains the Frederick Law Olmsted Papers and records of the American Civic Association. Prints and Photographs Collection maintains many original materials and offers an online catalog of many of its holdings; its holdings include the maps of the Sanborn Fire Insurance Company, which are currently being digitized (along with those maintained by the Bureau of Census) and are being made available to libraries on CD by a private vendor. A complete set of *Garden and Forest* is available online <www.loc.gov/preserv/prd/gardfor>.

Oral History Association <www.dickinson.edu/organizations/oha.html> maintains an up-to-date bibliography and "Oral History Evaluation Guidelines" (Oral History Association, Pamphlet Number 3, adopted 1989, revised Sept. 2000). Association publishes *Oral History Review* twice a year.

Library of the U. S. Department of Housing and Urban Development, Washington, D.C. <www.hud.gov>. Extensive collection of literature on the history of suburbanization and housing in the United States, including the multi-volume Proceedings of President's Conference on Home Building and Home Ownership (1932) and technical bulletins, circulars, and manuals published by the Federal Housing Administration in the 1930s and 1940s.

Olmsted Archives/Frederick Law Olmsted National Historical Site, 99 Warren Street, Brookline, Massachusetts 02445 <www.nps.gov/firla>. Collection includes general plans and drawings for the firm's many subdivisions. Selected finding

aids and guides to the collection are available. A reference volume listing Olmsted projects, The Master List of Design Projects of the Olmsted Firm, 1857-1950 (1987), has been published by the National Association for Olmsted Parks, 1987.

Archives of American Gardens, Horticultural Services Division, Smithsonian Institution, Washington, D.C. <www.si.edu/horticulture/res_ed/AAG/collections> includes the Garden Club of America Collection, containing more than 40,000 images documenting private and public gardens across the United States, and the J. Horace McFarland Collection, containing glass lantern slides and black and white photographs, many from McFarland's business as a printer of seed and nursery catalogs. Smithsonian's Horticultural Branch Library maintains an extensive collection of books, trade catalogs, and periodicals related to horticulture and landscape design.

Division of Rare Books and Manuscripts Collection, Cornell University, Ithaca, New York <<http://rbc.library.cornell.edu/collections/>>. A special collection of manuscripts, drawings, blueprints, and other records pertaining to landscape architecture, architecture and city planning, includes records of masters of design such as John Nolen and Clarence Stein, as well as records of the Regional Plan Association responsible for the New York Regional Plan of the 1920s.

National Agricultural Research Library, Beltsville, Maryland <www.nal.usda.gov/>. Extensive library of books on agriculture, horticulture, and landscape architecture, and circulars and bulletins produced nationwide by agricultural extension services and agricultural research stations, including those on home landscaping, roadside plantings, and village improvements. Online catalog, Agricola, is available <www.nal.usda.gov/ag98/english/catalog-basic.html>.

Environmental Design Archives, University of California, Berkeley <www.ced.berkeley.edu/cedarchives/>. Collections document the work of many prominent West Coast architects and landscape architects, including Julia Morgan,



Charles Sumner Greene, Garrett Eckbo, Thomas D. Church, and William Wurster. An index describing each collection and providing biographical and bibliographical information is available <www.oac.edlib.org>.

Department of Special Collections, Library of the University of California, Los Angeles <www.library.ucla.edu>. Principal repository for the records of architect A. Quincy Jones, including several thousand sets of plans and presentation boards. A catalog is currently being compiled.

Architecture and Design Collection, University Art Museum, University of California, Santa Barbara <www.uam.ucsb.edu>. Extensive repository containing original drawings, specifications, manuscripts, photographs, and models representing more than 350 architects and landscape architects, including Douglas Baylis, Stephen Child, Thomas D. Church, Charles Eames, Garrett Eckbo, Irving Gill, Charles and Henry Greene, Myron Hunt, Reginald Johnson, Cliff May, Richard Neutra, Ralph Rapson, Richard Requa, Lloyd Wright, and Florence Yoch.

Avery Architectural and Fine Arts Library, Columbia University <www.columbia.edu/cu/lweb/indiv/avery>. Extensive collection of books, catalogs, plans, periodicals, and oral history collections covering themes in architecture, planning, landscape architecture, and New York area development. Many of the Avery's extensive collection of trade catalogs, architectural guides, and periodicals are available in microfiche in major libraries.

Frances Loeb Library, Harvard University, Graduate School of Design, Cambridge, Massachusetts <www.gsd.harvard.edu/library/specialcollections.html>. Special collections include manuscripts, drawings, and plans by a number of noted architects, planners, and landscape architects, including Arthur C. Comey, Eleanor Raymond, Charles Mulford Robinson, Hugh Stubbins, Arthur Shurcliff, Dan Kiley, Robert H. Whitten, Walter Gropius, and John C. Olmsted. Also includes the photographs of photojournalist Jessie Tarbox Beals, including numerous views of residences and gardens.

Dumbarton Oaks Research Library, Washington, D.C. <www.doaks.org/>. Contains an extensive collection of books and periodicals on landscape architecture and horticulture.

Library of the Arnold Arboretum, Jamaica Plain, Massachusetts <www.icls.harvard.edu/>. In conjunction with the Institute for Cultural Landscape Studies, the library maintains an expanding collection of works in landscape conservation, design, history, management, and preservation, particularly related to activities in the northeastern United States.

Winterthur Library and Archives, Wilmington, Delaware <www.winterthur.org/index-library.html>. Major library of American domestic design, especially furniture and furnishings. Printed Books and Periodicals Collection contains an extensive collection of home and garden magazines.

Philadelphia Architects and Buildings Project, Philadelphia, Pennsylvania <www.philadelphiabuildings.org>. A richly illustrated, web-based database providing free public access to information on the Philadelphia region's built environment and on the work of Philadelphia-based architects. Project is jointly sponsored by The Athenaeum of Philadelphia, University of Pennsylvania Architectural Archives, Philadelphia Historical Commission, and Pennsylvania Historical and Museum Commission.

Eichler Network <www.eichlernetwork.com>. California-based organization provides technical information about history and home repair to owners of homes built by merchant builder Joseph Eichler. In addition to website, network publishes a regular newsletter.

National Archives and Record Centers <www.nara.gov>. Several record groups (R.G.) contain information about Federal housing programs, as well as a wealth of statistical and research data acquired on local housing trends, methods of home construction, and home financing. Although most records are located in Archives II in College Park, Maryland, additional records may exist in regional repositories. Preliminary

inventories (P.I.) are available on-line and in published form for most record groups.

Records of the **Federal Housing Administration (FHA)**, dating from 1934, are found in R.G. 31 (P.I. III, 1965, and P.I. 45, 1952) and includes selected applications for FHA-approved homes, cartographic and written records pertaining to selected examples of FHA-insured, large-scale rental housing complexes, and real estate survey records and rating maps. Records include a representative group of applications for FHA mortgage approval. Unfortunately many of the administrative files for FHA's early years have been lost.

Records of the **Emergency Fleet Corporation of the U.S. Shipping Board** are found in R.G. 32 (P.I. 97, 1956) and the U.S. Housing Corporation of the U.S. Department of Labor are found in R.G. 3 (P.I. 140, 1962) include textual, cartographic, and photographic records of World War I emergency housing, 1918-19.

Records for the **National Housing Administration** established in 1942 to consolidate all Federal housing programs (U.S. Public Housing Authority, Federal Housing

A wide variety of plans for "architect-designed" small houses were available to local builders in the 1920s and 1930s through architect service bureaus, trade publications, stock-plan businesses, and even savings and loan associations. From left to right: Tudor Revival house, Chautauqua Park Historic District, Des Moines (photo by Barbara Beving Long, courtesy of State Historical Society of Iowa); Moderne house, Westheight Manor Historic District, Kansas City, Kansas (photo courtesy Kansas Historical Society); Spanish Colonial Revival house, F. Q. Story Historic District, Phoenix (photo by Robin Baldwin, courtesy Arizona Office of Historic Preservation); Tudor Revival house, Glenview Historic District, Memphis (photo by Carroll van West, courtesy Tennessee Historical Commission); English Colonial Revival house, Shaker Village Historic District, Shaker Heights, Ohio (photo by Audra Bartley, courtesy Ohio Historic Preservation Office); Moderne/International Style house, Fort Street Historic District, Boise (photo by Susanne Lichtenstein, courtesy State Historical Society of Idaho).



Administration, Federal Home Loan Bank Board, and World War II housing programs) into one agency are found in the Records of the **Housing and Home Finance Agency**, R.G. 207 (P.I. 164). These include FHA files on housing statistics and market analyses as well as the records of the Central Housing Committee which was established in 1935 upon the recommendation of the National Resources Board and served as a clearing-house on all matters pertaining to housing, including land use, prefabricated methods of construction, and financing.

Records of the **Federal Home Loan Bank Board** are found in R.G. 195 (P.I. NC-94, 1965, manuscript form); cartographic records include several hundred small-house designs approved for use by the Federal Home Building Service Plan, 1938-1942. Records of Defense Homes Corporation, 1940-1949, are among the Records of the Reconstruction Finance Corporation in R.G. 234. Records of the U.S. Department of Housing and Urban Development are found in R.G. 220. Records for the U.S. Census Records are found in R.G. 29. Records of the U.S. Department of Commerce, in R.G. 167, contain the records of the National Bureau of Standards and the President's Conference on Home Building and Ownership, 1930-33.

HISTORIC PERIODICALS

Popular Magazines

American Builder
The American Home
American Homes and Gardens
Better Homes and Gardens
Bungalow Magazine
California Arts and Architecture
California Garden
Carpentry and Building
Cosmopolitan
Country Life in America
The Craftsman
Delineator
The Family Circle and Parlor Annual (The Family Circle)
Garden and Forest
The Garden Magazine (Garden Magazine and Home Builder)
Gardener's Monthly and Horticulturist
Good Housekeeping
Harper's Monthly
The Horticulturist
The House Beautiful
House and Garden

Hovey's Magazine of Horticulture
Keith's Magazine
Ladies' Home Journal
Living Magazine
McCall's
National Builder
Parents' Magazine
Park and Cemetery and Landscape Gardening
Scribner's Magazine
The Small House
Sunset Magazine
Woman's Home Companion

Professional and Trade Periodicals

American Architect
American Architect and Building News
American Builder
American Carpenter and Builder
American City
American Civic and Planning Annual
American Garden
Annals of Real Estate Practice
Architectural Forum (formerly Brickbuilder)
Architectural Record
Architectural Review and American Builder's Journal
Arts and Architecture
Building Age (later Building Age and The Builder's Journal)
City Planning
House and Home
Housing
Inland Architect
Insured Mortgage Portfolio
Garden Club of America bulletins
Journal of the New England Garden History Society
Landscape Architecture
NAHB Builder
National Real Estate Journal
Perfect Home
Popular Home
Professional Builder
Progressive Architecture (formerly Pencil Points)
Regional Planning Notes
Southwest Builders and Contractors
Urban Land Institute Bulletin
Western Architect
Western Horticultural Review (Horticultural Review and Botanical Magazine)

RECOMMENDED READING

Related National Register Bulletins

Defining Boundaries for National Register Properties (rev. 1997)

Guidelines for Evaluating and Documenting Properties Associated with Significant Persons

Guidelines for Evaluating and Nominating Properties That Have Achieved Significance Within the Last Fifty Years (rev. 1996)

Guidelines for Evaluating and Registering Archeological Sites and Districts (rev. 2001)

Guidelines for Local Surveys: A Basis for Preservation Planning (rev. 1985)

How to Apply the National Register Criteria of Evaluation

How to Complete the National Register Multiple Property Documentation Form

How to Complete the National Register Registration Form

How to Evaluate and Nominate Designed Historic Landscapes

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Researching A Historic Property (rev. 1998).

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Spanish Revival Residences in Mobile MPS, Alabama

Historic Apartment Buildings MPS, Arkansas

Historically Black Properties in Little Rock's Dunbar School Neighborhood MPS, Arkansas

Little Rock Apartment Buildings MPS, Arkansas

Educational Buildings in Phoenix MPS, Arizona

Residential Subdivisions and Architecture in Phoenix MPS, Arizona

Roosevelt Neighborhood MRA, Arizona

Bungalow Courts of Pasadena TR, California

Lilian Rice-Designed Buildings at Rancho Santa Fe MPS, California

Los Angeles Branch Library System TR

Residential Architecture of Pasadena, California, 1895-1918: The Influence of the Arts and Crafts Movement MPS

Wartime Emergency Housing in Bridgeport, Connecticut, 1916-1920, MPS

Parkways of the National Capital Region MPS, District of Columbia, Maryland, and Virginia

Apartment Buildings in Washington, D.C., 1880-1945, MPS

Clubhouses of Florida's Woman's Clubs MPS

Winterhaven, Florida MPS

Lustron Houses in Georgia MPS

Shotgun Houses of Athens, Clark County, MPS, Georgia

Boise Public Schools TR, Idaho

Tourtellotte and Hummel Architecture TR, Idaho

American Woman's League Chapter Houses TR, Illinois

Chicago Park District MPS, Illinois

Highland Park MRA, Illinois

Historic Resources of Maywood, Illinois MPS

Hyde Park Apartment Hotels TR, Illinois

Illinois Carnegie Libraries MPS

Suburban Apartment Buildings in Evanston TR, Illinois

Apartments and Flats of Downtown Indianapolis TR, Indiana

The Bungalow and Square House: Des Moines Residential Growth and Development MPS, Iowa

Iowa Usonian Houses by Frank Lloyd Wright, 1945-1960, MPS

Prairie School Architecture in Mason City TR, Iowa

Small Homes of Howard F. Moffitt in Iowa City and Coralville, Iowa, MPS

Suburban Development in Des Moines Between the World Wars, 1918-1941, MPS, Iowa

Towards a Greater Des Moines: Development and Early Suburbanization, ca 1880-ca 1920, MPS, Iowa

Lustron Houses of Kansas, MPS

Louisville and Jefferson County MPS, Kentucky

Historic Residential Architecture of Bangor MPS, Maine

Brookline MRA, Massachusetts

Newton MRA, Massachusetts

Stoneham MRA, Massachusetts

Water Supply System of Metropolitan Boston MPS, Massachusetts

Worcester Three-Deckers TR, Massachusetts

Residential Structures in Kansas City, Missouri, by Mary Rockwell Hook TR

St. Joseph MPS, Missouri

Armour Boulevard MRA, Missouri

Suburban Schools in Butte MPS, Montana

Nineteenth Century Terrace Houses TR, Nebraska

Lustrons in New Jersey MPS

Operating Passenger Railroad Stations TR, New Jersey

Multi-Unit Dwellings in Albuquerque MPS, New Mexico

Albuquerque Downtown Neighborhoods MRA, New Mexico

Twentieth Century Suburban Growth of Albuquerque MPS, New Mexico

A.T. Stewart Resources, Garden City, New York, TR

Hudson Highlands MPS, New York

Masten Neighborhood Rows TR, New York

Olmsted Parks and Parkways TR, Buffalo, New York

African-American Neighborhoods in Northeastern Winston-Salem MPS, North Carolina

Early Twentieth Century Raleigh Neighborhoods TR, North Carolina

Eastlake Houses of Ashly TR, Ohio

Hobart Welded Steel Houses TR, Ohio

Architecture of Ellis F. Lawrence MPS, Oregon

Craftsman Bungalows in Descutes County MPS, Oregon

Middle-Class Apartments in East Portland MPS, Oregon

Philadelphia Public Schools TR, Pennsylvania

Pittsburgh Public Schools TR, Pennsylvania

Early Twentieth Century Schools in Puerto Rico TR

Single-Family Houses in Rhode Island MPS

Lustron Houses in South Dakota MPS

Cement Construction in Richard City MPS, Tennessee

Memphis Park and Parkway System MPS, Tennessee

Oak Ridge MPS, Tennessee

Public Schools of Memphis, 1902-1915, MPS, Tennessee

Residential Resources of Memphis MPS, Tennessee

Entrepreneurial Residences of Turn-of-the-Century Provo, Utah, TR

Perkins Addition Streetcar Suburb TR, Utah

Three-Story Apartment Buildings in Ogden, Utah, 1908-1928, MPS

Hilltop Neighborhood MPS, Washington

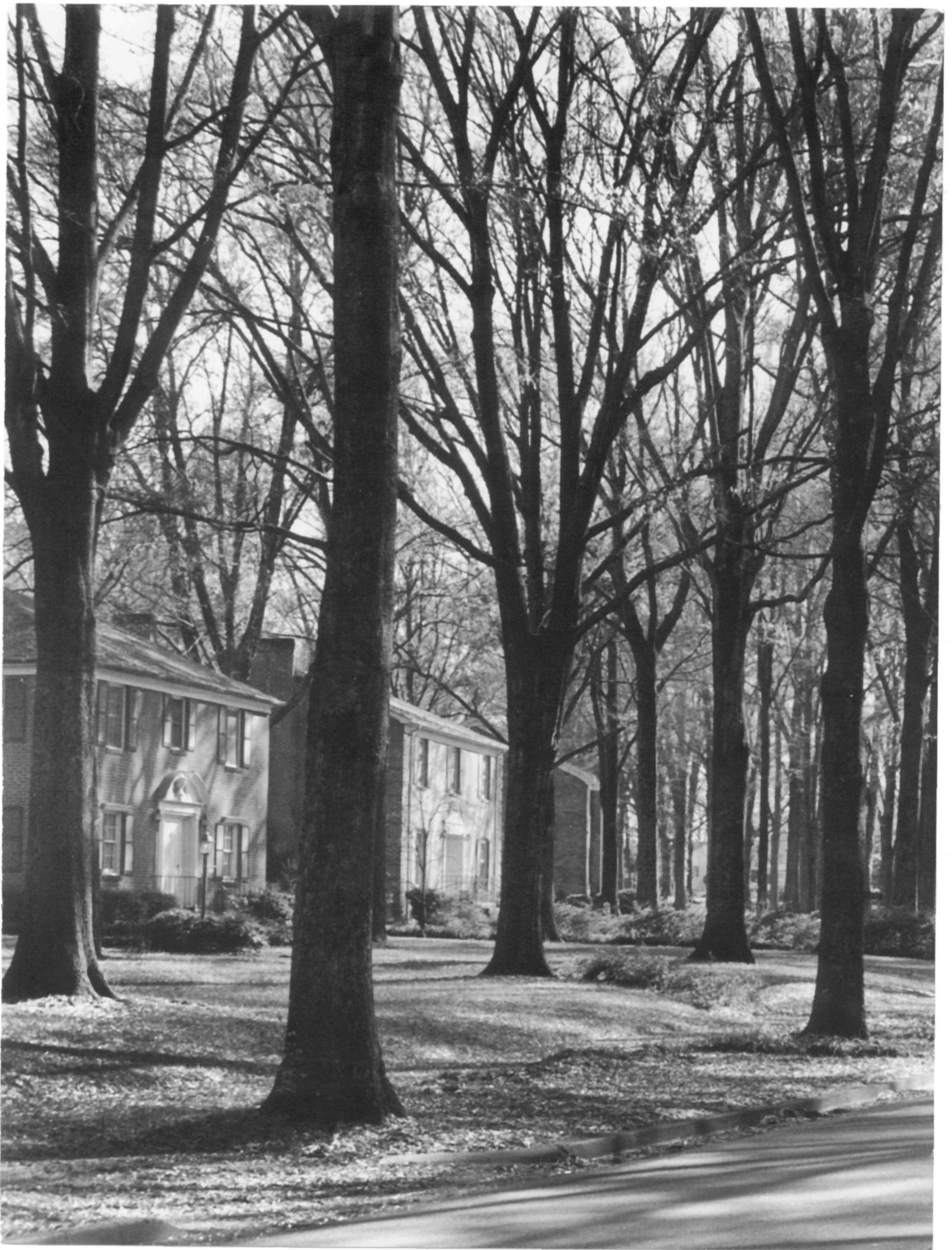
Olympia Residential Architecture MPS, Washington

Women's History in Olympia MPS, Washington

Ernest Flagg Stone Masonry Houses of Milwaukee County TR, Wisconsin

Public Library Facilities of Wisconsin MPS

Rows of willow oaks frame Georgian Revival residences along Queens Road West in Myers Park, Charlotte, North Carolina. Developed between 1911 and 1943 according to a succession of plans by John Nolen, Earle Sumner Draper, and Ezra Clarke Stiles, Myers Park received considerable recognition for its outstanding qualities of landscape design and became an important regional prototype for exclusive planned subdivisions in the Southeast. (Photo by Thomas W. Hanchett, courtesy North Carolina Department of Cultural Resources)



The ideal of suburban life in the parklike setting of a self-contained subdivision away from the noise, pollution, and dangers of city streets has fueled the aspirations of increasing numbers of American families since the mid-nineteenth century. Historic residential suburbs, such as the Guilford Historic District in Baltimore, Maryland, 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. *(Photo by Greg Pease, courtesy Maryland Department of Housing and Economic Development)*

