RESIDENTIAL INTERIOR DESIGN
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Having worked in the design portion of the construction industry for many years, I am well aware of the collaborative nature of the entire industry. Throughout the duration of every project (conception to occupancy), everyone needs to rely on the competence of those whose work precedes one's own. Short of that, it all starts to fall apart.

The other component of a successful project is an owner/client who clearly communicates his or her needs, collaborates on a vision of what could be, and is willing to take some calculated risks. I have had some outstanding clients over the years; I will not compromise their privacy by listing names, but those clients all have my ongoing respect and gratitude.

There is a list as long as my arm of people I have worked with and learned from over the years. You know who you are; you have made a de facto contribution to this book and you are greatly appreciated.

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Finally, I wish to acknowledge my first (and last) wife, Jean, and our grandchildren, who will be part of the next generation of designers; Kala, Macy, Hanna, Kaden, Ellie, and Sophie, you will have to work harder than I did . . . but, you can do it!

COURTNEY W. NYSTUEN
APRIL 2011

It was important to me to work on this project with Courtney. He taught this subject matter (and much more) for years and educated so many design students during his academic tenure; I simply had to find a way to keep him connected with students. He has also kept a full range of professional architectural projects going throughout his academic career and into his alleged retirement.

Courtney’s ability to consider the information and content most useful to students and present it in an approachable manner made this book happen. Working with Courtney has been delightful. How he puts up with me will forever remain a mystery.

When we took a look at all of the CAD files that were part of the first edition, I was amazed by the excellent work done initially by Melissa Brewer. Her work on the first edition was meticulous, clear, and well organized. While Melissa had to move on after doing some work on Chapters 3 and 5 of this edition, she continues to be a major contributor to this project.

Shelley Pecha stepped in to do significant drawing revisions and new CAD work for this edition. With her super-organizational skills and lightning-fast CAD work (and an ability to deal with my lack of both of those things), Shelley made this project arrive on time and in great shape visually.

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MAUREEN MITTON
APRIL 2011

COURTNEY W. NYSTUEN
APRIL 2011
INTRODUCTION

Every cubic inch of space is a miracle.

WALT WHITMAN, Leaves of Grass, “Miracles”

WHAT THIS BOOK IS ABOUT

This book is meant to serve as a primer on space planning for rooms and spaces in a home and to offer related information regarding codes, mechanical and electrical systems, and a variety of additional factors that impact each type of room or space. In addition, this book includes information about accessible design in each chapter in order to provide a cohesive view of residential accessibility. This new edition includes updated information on the International Residential Code and sustainability as well as other updates.

Intended as a reference for use in the design process, this book is meant as an aid in teaching and understanding the planning of residential spaces. Most chapters follow a similar format, starting with an overview of the particular room or space and related issues of accessibility, followed by information about room-specific furnishings and appliances. Chapters continue with information about sizes and clearances, organizational flow, related codes and constraints, and issues regarding electrical, mechanical, plumbing, and basic lighting.

This book is meant to clarify minimum requirements for specific spaces and rooms to aid students and designers in understanding the amount of space that is minimally necessary in order for rooms to function usefully. Examples of larger spaces are also given, but at its heart, this book is intended to show students how to use space wisely and make good use of space throughout the dwelling. With clear knowledge about minimums, designers and students of design can learn when it is appropriate to exceed such standards for a variety of reasons that reflect specific project criteria based on client needs, budget, site, and other constraints.

This book is intended as an introduction to the topics covered with the aim of getting the reader comfortable with the basic concepts so that he or she might move forward in design education or on to additional research in certain areas. To that end, an annotated references section is provided at the end of each chapter. Thinking of the information provided in each chapter as basic building blocks that allow for the discovery of the issues involved is a helpful approach in using this book (Figure 1-1).

There is much that goes into the design of a dwelling that is not covered in this book; our intent is to focus on the use and design of individual rooms
INTRODUCTION

(again, a building-block approach) so that the reader will have the core information required to understand the design of these individual spaces. This basic informational approach may bring up questions about the role of the interior designer versus the role of the architect. Clearly, the design of the totality of the structure is the role of the architect (or engineer); however, in many cases, the interior designer is taking an increasingly larger role in the design of rooms and spaces.

Interior designers engaged in renovation work can take a lead role in the design of the interior architecture of a space, with a significant hand in the design of a room or many rooms. This is in contrast to notions of the interior designer as the person in charge of materials and furnishings selections only. The authors believe that interior designers and design students must be well versed in the aspects of residential design covered in this book. For example, readers will note that the detailed kitchen and bathroom information contained in this book is applicable to remodeling as well as to new construction.

AN OVERVIEW: QUALITY AND QUANTITY

Readers may note that, throughout this book, the authors mention the evolution of the use of rooms, room sizes, and growth of the overall size of the American home. It’s worth noting that the authors have a bias toward careful consideration of the quality of design rather than the quantity of space in a given home. We hope to make clear that the successful design of space requires careful consideration of the real needs of clients measured against budgetary, code, climate, and site restrictions—all of which require careful development of a project program prior to the beginning of the actual design of the project.

The last hundred years have brought dramatic changes related to the public perception of the design, furnishing, and size of the American house. According to the National Association of Home Builders (NAHB), the “typical” American house built in 1900 was between 700 and 1200 square feet, with two or three bedrooms and one or no bathrooms (2006). The average home built in 1950 was 983 square feet, with 66 percent of homes containing two bedrooms or fewer. These earlier homes are quite a contrast to the 2521-square-foot average found in new single-family homes completed in 2007. However, according to NAHB, “new single-family homes were almost 100 square feet smaller in 2009 than in 2007” (2010). This means that after increasing for decades, new American houses have decreased in size, as indicated in Figure 1-2.

Given the recent downturn in the economy and an increasing interest in conservation, some prospective home buyers seem to be moving in the direction of a desire for smaller, well-planned homes. A recent survey commissioned by Builder magazine “unearthed strong demand for smaller homes” pointing to “a new market for a small home, under 1,300 square feet, with the most energy-efficient features possible.” The same survey found that “half of new-home shoppers, for instance, said they would pay at least an extra $5,000 for energy-conserving features.”

The authors argue that a larger house is not necessarily a better house and that designing a house that works well on a functional level is more important than mere size in creating a useful and pleasant environment. Additionally, large single-family homes are currently out of the financial reach of many citizens and are seen by some as wasteful in a time when issues of sustainability are increasingly engaging the national consciousness.

Consideration of housing size and use of related resources is not unique to this publication. Architect Sarah Susanka’s book The Not So Big House has proven very popular, has helped many people to consider quality over quantity of space, and has certainly had an impact on the design of many homes (1998). A Pattern Language, by Christopher Alexander and colleagues, an earlier book and one considered seminal by many, has at its core the notion that spaces should be designed for the way people really live and that good design can be accessible for all (1977).
The notion of seeking quality of design, rather than quantity of space, is shared by many, and yet larger and larger houses continue to be built to house very small family groups. This dichotomy suggests that two opposing popular views of space exist. Although the architect Philip Johnson was once quoted as saying “architecture is the art of wasting space,” clearly that was a bit tongue in cheek, and we concur more with Walt Whitman’s notion that “every cubic inch of space is a miracle”—or should be.

The remainder of this chapter covers issues that relate to housing and serve as an introduction to the concepts that are covered in each chapter. In addition, basic interior design graphics are covered as an introduction to chapter illustrations.

**HUMAN BEHAVIOR AND HOUSING**

Environmental designers—including interior designers—benefit from gaining an understanding of human behavior as it relates to privacy, territoriality, and other issues related to the built environment studied by social scientists. Privacy can be defined as having to do with the ability to control our interactions with others. According to Jon Lang: “The ability of the layout of the environment to afford privacy through territorial control is important because it allows the fulfillment of some basic human needs” (1987). Lang goes on to state that the single-family detached home “provides a clear hierarchy of territories from public to private.”

Lang also states that “differences in the need for privacy are partially attributable to social group attitudes.” He continues, “Norms of privacy for any group represent adaptation to what they can afford within the socioeconomic system of which they are a part.” From Lang’s comments, we can learn that the need for privacy is consistent but varies based on culture and socioeconomic status.

The notion of territory is closely linked to privacy in terms of human behavior. There is a range of theories about the exact name and number of territories within the home. One, developed by Clare Cooper, describes the house as divided into two components: the intimate interior and the public exterior (1967). Interestingly, Cooper (now Cooper Marcus) later wrote *House as a Mirror of Self: Exploring the Deeper Meaning of Home* (1995), which traces the psychology of the relationship we have with the physical environment of our homes, and in which she refers to work being done by Rachel Sebba and Arza Churchman in studying territories within the home. Sebba and Churchman have identified areas within the home as those used by the whole family, those belonging to a subgroup (such as siblings or parents), and those belonging to an individual, such as a bedroom or a portion of a room or a bed (1986). Figures 1-3a and 1-3b illustrate various theoretical approaches to territory and privacy.

The term *defensible space*, coined by Oscar Newman, refers to “a range of mechanisms—real and symbolic barriers . . . that combine to bring an environment under the control of its residents.” Defensible space, as described by Newman, includes public, semipublic, semiprivate, and private territories (1972).