

SUSTAINABLE RESIDENTIAL INTERIORS

ANNETTE K. STELMACK

ASSOCIATES III: KARI FOSTER • DEBBIE HINDMAN

SECOND EDITION



WILEY

sustainable residential interiors

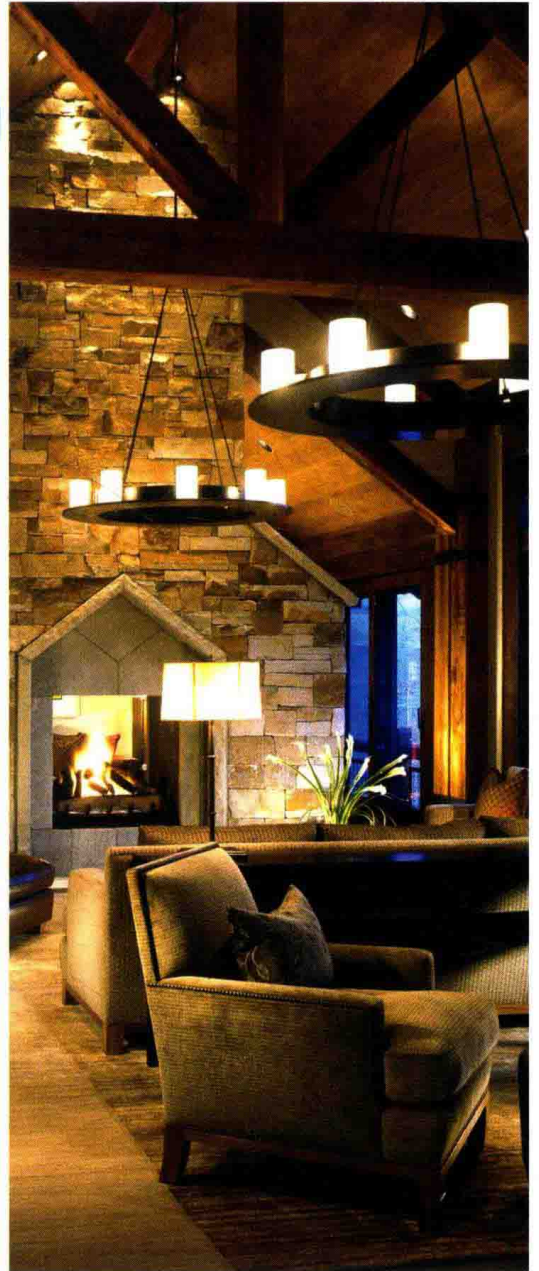
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Associates III:

Kari Foster *and*

Debbie Hindman



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Dedicated to my 'Grosseltern' (grandparents).

—Annette K. Stelmack

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PREFACE

When we heal the earth, we heal ourselves.

—DAVID ORR

As residential interior designers, we create “home” for our clients. Our responsibility is to serve them in one of the most personal and profound expressions of their world—where they live. We are privileged to engage with them on an intimate level, listening to their needs and dreams for “home,” where they welcome us into their living rooms, dining rooms, kitchens, bedrooms, bathrooms, home offices, and closets.

Since the first edition of this book, residential interior designers have developed a greater consciousness and appreciation for green and healthy design issues. In fact, the market transformation has seen an explosion of sustainable ideas, principles, and practices, including eco-friendly and healthier products. Green building rating systems are being adopted nationwide, and product certifications are standard practice for many manufacturers, who are following the leaders in the commercial sector of the industry.

This new edition provides comprehensive and reliable information on how to apply sustainable design principles and practices on projects. We celebrate your interest in integrating environmentally responsible design into your practice, and it is an honor to offer this book to the design community.

Our intention in *Sustainable Residential Interiors* is to support you as you question the status quo, to ignite your spirit as a catalyst for change, to present you with information and processes, and to encourage you to ask well-informed questions as you start down the path to creating healthy, high-performing, eco-friendly, meaningful, nurturing residences that positively impact our clients and the world we live in. Designers around the world are integrating sustainable, healthy, and high-performing strategies into their daily practice; it is no longer an added value, it is inherent to their work. In fact, we implore you to act now, and live differently, for if we don’t, who will?

Consumers, too, are more aware of the environmental issues affecting their homes and lifestyles, and they increasingly ask designers, architects, and builders to incorporate healthy indoor air quality and sustainability into their projects. To help meet this increased demand, this book provides design professionals with a comprehensive, easy-to-understand sustainable resource guide. It will:

- Answer why we must become catalysts for change.
- Share inspiring stories about today’s environmental champions.

- Give visual examples of sustainable projects and applications.
- Examine why the health, safety, and welfare of our clients matter.
- Address the most hazardous chemicals that are consistently in our lives.
- Explore the health impacts of traditional building.
- Encourage critical thinking about environmental issues within homes.
- Present strategies for incorporating sustainable design into work and projects.
- Provide a practical, hands-on approach to sustainable design.
- Offer guidelines for clients and project teams.
- Provide helpful checklists for greening projects and specifications.
- Give in-depth information to promote understanding and assist in specifying interior finishes and furnishings.
- Raise questions for manufacturers and vendors.
- Share effective methods of marketing sustainable design services.
- Discuss what's next with industry leaders.

Years ago, our eyes, minds, and hearts were opened to the inspirational world of sustainable design. Since then, we have been on a quest, searching for ways to exemplify integrity in our work, as articulated through the details of a project—asking how long finishes will last and which adhesives to specify, addressing indoor air quality, ensuring that woods are from certified sources, finding low-impact materials, conserving energy and water, supporting construction teams in reducing waste, providing information regarding healthy cleaning methods, assisting clients with multiple chemical sensitivities to create a healthy interior—all while exceeding the client's expectations.

We know that healthy, eco-friendly design might not always be what our clients want initially, but we believe they will come to value and appreciate it in the long run. And it is for the future that we do this, for the future health of the Earth and its inhabitants, for future generations, indeed, for the future of humanity and our planet. We, the authors, have found that when something is right, there is always consensus, and we have agreed that this is the right way to practice the business of interior design.

Our goal for *Sustainable Residential Interiors* is to create a reference tool for interior designers who are beginning to embrace green design strategies. What is a healthy, green building? Simply, sustainable building takes steps to create homes that are socially and environmentally responsible while supporting the health and prosperity of families, communities, and the environment. Whether renovating an existing residence or designing a new home for your clients, keep in mind these three fundamental goals:

- Be mindful about using limited resources, such as wood and water, to limit waste, pollution, and environmental damage.

- Build and remodel with energy efficiency in mind to save money, create a more responsible home, and reduce air pollution and global warming.
- Choose healthy materials and construction methods to prevent indoor air pollution from formaldehyde, mold, toxins, and other contaminants.

The residential design industry is moving briskly in the direction of sustainable building for many vital reasons, among them:

- *Higher quality.* Most green building products and materials are now developed to perform better than their conventional counterparts.
- *Greater durability and less maintenance.* Green building encourages the use of longer-lasting products that don't require an inordinate amount of time or the use of harsh chemicals to maintain. Less frequent replacement puts less of a burden on natural resources and landfills.
- *Greater comfort and lower utility bills.* Energy-efficient upgrades can reduce the rate of energy consumption, lowering energy bills while providing a comfortable living space.
- *Healthier products and practices.* Green building promotes the use of products and construction practices that avoid introducing harmful chemicals and other pollutants into the home.
- *Natural resource conservation.* Protecting the environment is yet another compelling reason for committing to build green.

This book is a continuation of a journey that started so many years ago. It presents a logical and sequential process for creating healthy, sustainable residential interiors that meet the goals of the homeowner as well as the goals of green design. Step by step, it will take you through an integrated design process, exemplifying how sustainable principles, strategies, and practices can be applied at each level of interior design. These principles and practices can be utilized in any residential project to create a home that is healthy, functional, comfortable, sustainable, and beautiful.

Imagine if:

- We learned how to be eco-friendly from our parents and grandparents, our grade schools, middle schools, high schools, and colleges.
- Clients came to us asking for homes and products that were Earth- and family-friendly.
- We, as residential interior designers, ascribed to the medical profession's charge, "First, do no harm," and recommended and specified only Earth-friendly and healthy materials and products.
- We were able to provide net-zero-energy homes that were truly restorative for our clients and for the planet.
- Residential contractors and architects seamlessly and routinely integrated green principles and strategies into their everyday best practices.

- Government mandated environmentally sustainable construction for residences.
- The core principle of all manufacturers of residential products included healthy ingredients as well as environmental and social responsibility.
- All materials were safe and their contents healthy.
- There was a practical, positive book to assist residential interior designers in converting their practice into one that is socially and environmentally responsible.

Well, here it is!

Our challenge, and opportunity, is to learn how we can leave a lighter footprint on the planet—or better yet, no footprint at all—and have a positive impact on our clients in order to create a thriving future for generations to come. As interior designers, we must actively promote change, transparency, and progress in the building industry—change that will support our clients' vision and respect the environment, fully integrating environmentally responsible design. On each project we are motivated to create designs that are appropriate to the client and that meet traditional goals—the homeowner's needs, budget, schedule, and aesthetics—as well as to give back more than we take from the surrounding environment.

Thank you for taking time to read this book. Whether you are taking your first steps toward adopting sustainability or are well along on your journey, we hope that you will find it informative and helpful and that it will inspire you to act now. We are truly honored to share with you how much our design and building profession is transforming and moving in a better direction. We look forward to engaging in conversations with you about healthy, intelligent, high-performing design, and with that in mind we welcome your feedback, your insights, and your questions. Hope to hear from you soon!

ACKNOWLEDGEMENTS

I am sincerely thankful to everyone who contributed their time, dedication, expertise and knowledge to make this book possible.

To Tom Stelmack, I am endlessly grateful for your never-ending love as my remarkable life partner of more than thirty-five years: You are *my* home. In particular, thank you for believing in me, always, and for encouraging me while we endured a tumultuous year of family illnesses, epic flooding, and the passing of dear loved ones. Your feedback and gracious support helped me through the challenges, the long days and evenings, and the countless weekends of hard work. Thanks for holding down the home front, babe.

My love always to my family, especially my son, daughter-in-law, and grandson, who cheered me on and gifted me with special family time to relax, laugh, love, and celebrate the next generation. Also to my parents and grandparents, for instilling values I deeply cherish, especially your profound love and joy for family, your exquisite caring for nature and her bounty, and your risk-taking spirit that embraces everything the universe offers and proves that life is indeed magnificent.

Thank you to my clients, who continually open their hearts and minds to allow me to help them create healthy, nurturing, high-performing, and vitalizing interiors that reflect their essence and support their health, safety, and well-being.

I want to acknowledge my U.S. Green Building Council family, both near and far: Thank you for teaching and inspiring me. What an amazing professional arena in which to connect, collaborate, inspire, advocate, and educate. To my fellow LEED faculty members: Thank you for sharing your passion, commitment, and expertise. A special shout out to Holley Henderson, who in my moments of weakness took time to brainstorm and clarify the direction of the new chapters; thank you, my Yoda sister.

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Initially, our passion as environmental stewards was nurtured by trailblazers from all walks of life; Buckminster Fuller, Daniel Quinn, David Suzuki, Julia Butterfly Hill, Judith Helfand, Michael Braungart, Paul Hawken, Sarah Susanka, and Sym Van der Ryn are among them. We are thrilled that many have contributed to our book: Bert Gregory, Hunter Lovins, Janine Benyus, Paula Baker-Laporte, Steve Badanes, Trudy Dujardin, and William McDonough. Thank you for your unwavering commitment to creating a better world. You inspire us daily to do our part in creating healthy and nurturing environments.

A special note of gratitude to my exceptional reviewers. To Teen Rollins, who jumped in head first to provide guidance, clarity, and organization for the new chapters. Thank you for reining me in as the material was growing exponentially and for reviewing existing information for necessary updates. To Kari Foster, Debbie Hindman, and Amy DePierre at Associates III: thank you for your valuable review and editing of the draft manuscript and for your feedback, comments, and patience, and particularly for encouraging me to fly solo on this second edition. Namaste dear friends, I treasure our long-standing and enduring friendships.

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To the interior designers, architects, and project teams who submitted their cutting-edge, healthy, and high-performing residential projects: Thank you for your enthusiasm and the wealth of expertise and creativity you share through your work, which illustrates that sustainable, healthy principles and practices are beautiful, culturally rich, and ecologically sound.

My editor, Lauren Poplawski, has been understanding and patient this year, especially when my personal life got in the way of writing. Thank you for your compassion and for being there when I needed your guidance and expertise.

Finally, I want to thank you, our readers, for expanding your commitment to healthy, sustainable interior design. Knowledge empowers change; I am honored to be part of your process. I hope to hear from you as you transform your approach, communication, and design process in your projects.

—ANNETTE K. STELMACK, INSPIRIT-LLC

We are eternally grateful to Annette Stelmack for her incredible hard work in spearheading the research, writing, and rewriting of this second edition of *Sustainable Residential Interiors* and in updating it with the many changes that have occurred in the few short years since we collaborated together on the first edition. It's gratifying to see the new wealth of information available to us all in creating healthy, responsible, beautiful, and life-enhancing interior spaces. A special mention and thank you to Amy DePierre, an integral part of the Associates III team, for her supreme effort and diligence in the review of the content and written word.

—KARI FOSTER AND DEBBIE HINDMAN, ASSOCIATES III, INC.

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CHAPTER 1

why be sustainable?

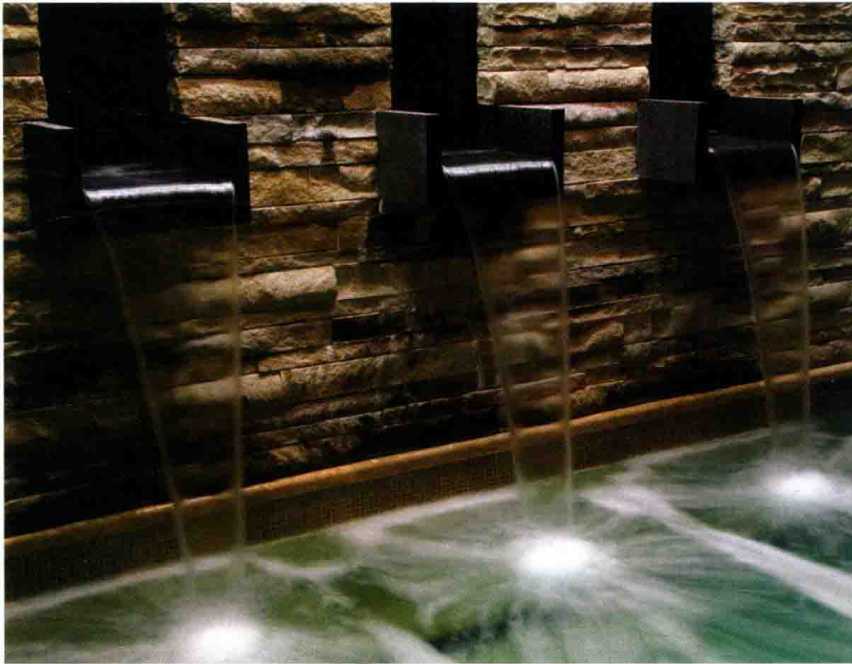


Figure 1.1
Photo courtesy of Allegria Spa.
Interior design by Annette
Stelmack and Donna Barta-
Winfield, Associates III.

There is no greater potential for personal expression than building one's own shelter. For this reason alone, home construction should be sustainable for generations to come. And to be truly sustainable, it is not enough to minimize damage to the environment; the construction must have a net positive impact on it.

—DENNIS WEDLICK, AIA

The answer to the question why, as residential designers, our work should be sustainable is simple: There is only one planet Earth, and if we destroy its ability to sustain life, our planet will become uninhabitable. Numerous speeches have been made and publications written by credible sources who, over the past decades, have been leading the market transformation in the building industry. This book will share knowledge and provide motivation from another perspective—that of the residential interior design community.

Through our experiences and the information that we have gathered and organized, we will demonstrate to residential design professionals that it is possible to build a home that is beautiful, pleasing, functional, healthy, safe, affordable, and life-sustaining. The time is now to 'BE' the catalyst for change within the residential design community and to integrate sustainable residential design into our work.

Interior designers are resourceful beings; they are information-gathering, solution-seeking, innovative creatures, and these are ideal characteristics for promoting healthy, high-performing, sustainable design. Our profession is a natural for revolutionizing the industry by transforming environments. It is, after all, what we do. By focusing our creative energy and implementing sustainable design, we become instruments of beneficial change. If we are resolute in our belief that each positive action makes a difference, our contribution to a healthy planet is guaranteed.

Before us lies a remarkable opportunity to connect where we are with where we have been to inform where we need to be going. Creating healthy, life-enhancing design is an invigorating prospect. Is it challenging? Absolutely! It's challenging, doable, exciting—and, of course, the right thing to do.

Let's begin by asking why everything considered good for us is termed "alternative"—alternative health care, alternative medicine, alternative food. Indeed, sustainable design should no longer be considered an alternative; it is, simply, the responsible way to conduct good business. In fact, states and municipalities have passed legislation mandating high-performing and healthy building standards. It benefits us all to work together toward better solutions that "respect all of the children of all of the species, for all times," to quote renowned architect William McDonough, principal and founder of William McDonough + Partners and MBDC.

Sustainability is transforming the building industry, and expertise in sustainable design is now highly regarded and regularly sought after. Clients, architects, and contractors value the knowledge and skills that we bring to the table as part of the professional services team; as designers, we can offer numerous possibilities for creating eco-friendly homes. The finishes in a home can exemplify environmental responsibility, support our clients' health, and be beautiful as well. By combining materials in a unique and environmentally responsible way, we have a rich opportunity to make a difference.

As interior designers and architects, we have the power—and the responsibility—to create environments that sustain life on the planet. The methods that we employ, often beyond the realm of other professions, compel us to practice sustainable design. By doing so, we are, as defined nearly three decades ago by the Brundtland Commission in 1987, "meeting the needs of the present without compromising the ability of future generations to meet their own needs."

Designers have much to teach the world. Of all people, we understand that there is never only one right way to design anything. Searching for new solutions, creatively adapting what we know to what we need, and solving problems is what designers do. Perhaps, then, we as designers need to expand our vision to include sustainability and start showing ordinary people how to look at the world from a green design point of view.

—FROM DANIEL QUINN,
ISHMAEL: AN ADVENTURE
OF THE MIND AND SPIRIT
(BANTAM, 1995)