

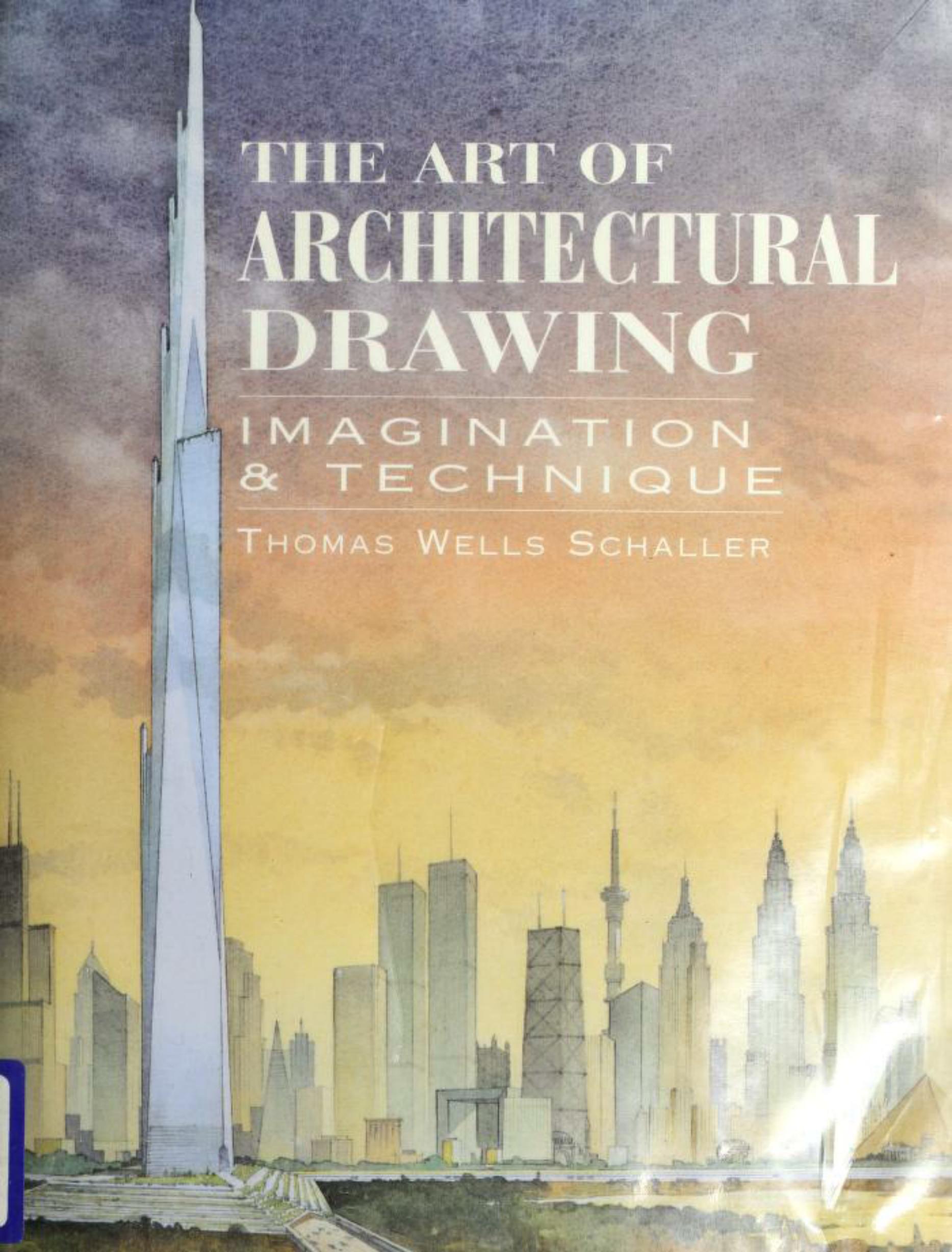
# THE ART OF ARCHITECTURAL DRAWING

---

IMAGINATION  
& TECHNIQUE

---

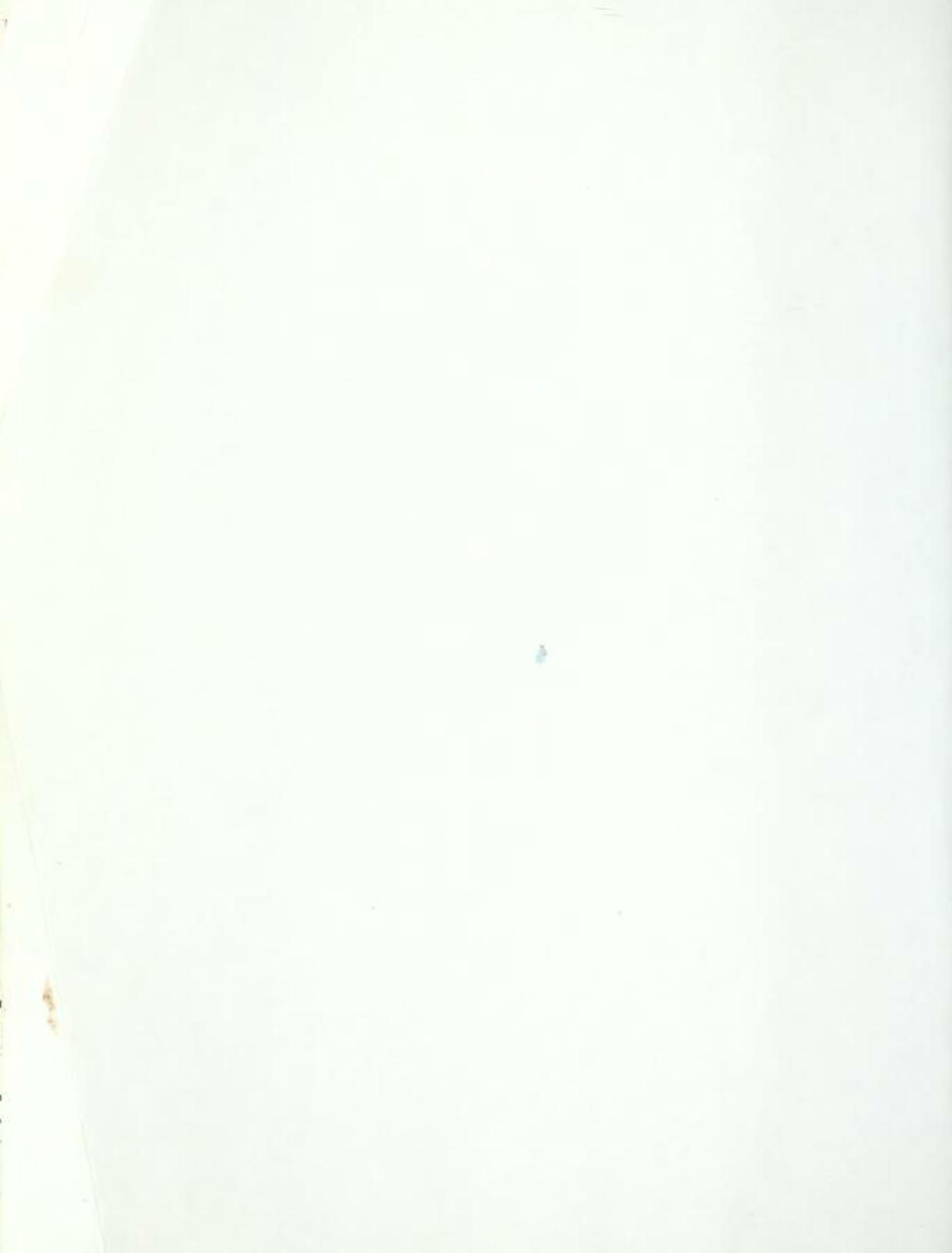
THOMAS WELLS SCHALLER





Digitized by the Internet Archive  
in 2015

<https://archive.org/details/artofarchitectur00scha>



*The ART Of*  
ARCHITECTURAL  
DRAWING  
*Imagination and Technique*

THOMAS WELLS SCHALLER AIA



VAN NOSTRAND REINHOLD

ITP\* A Division of International Thomson Publishing Inc.

New York • Albany • Bonn • Boston • Detroit • London • Madrid • Melbourne  
Mexico City • Paris • San Francisco • Singapore • Tokyo • Toronto

Cover design: Paul Costello  
Cover Illustrations: Thomas W. Schaller

Van Nostrand Reinhold Staff:  
Executive Editor: Roberto de Alba  
Editor: Jane Degenhardt  
Production Editor: Carla M. Nessler  
Production Manager: Mary McCartney  
Designer: Nancy Freeborn

NA27B0  
.S32  
1997

Copyright © 1997 by Van Nostrand Reinhold

**I(T)P®** A division of International Thomson Publishing Inc.  
The ITP logo is a registered trademark under license.

Printed in the United States of America

For more information, contact:

Van Nostrand Reinhold  
115 Fifth Avenue  
New York, NY 10003

Chapman & Hall GmbH  
Pappelallee 3  
69469 Weinheim, Germany

Chapman & Hall  
2-6 Boundary Row  
London SE1 8HN  
United Kingdom

International Thomson Publishing Asia  
221 Henderson Road #05-10  
Henderson Building  
Singapore 0315

Thomas Nelson Australia  
102 Dodds Street  
South Melbourne, 3205  
Victoria, Australia

International Thomson Publishing Japan  
Hirakawacho Kyowa Building, 3F  
2-2-1 Hirakawacho  
Chiyoda-ku, 102 Tokyo  
Japan

Nelson Canada  
1120 Birchmount Road  
Scarborough, Ontario  
Canada M1K 5G4

International Thomson Editores  
Seneca 53  
Col. Polanco  
11560 Mexico D.F. Mexico

All rights reserved. No part of this work covered by the copyright hereon may be reproduced or used in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems—with the written permission of the publisher.

1 2 3 4 5 6 7 8 9 10 RRD-CW 03 02 01 00 99 98 97

Library of Congress Cataloging-in-Publication Data

Schaller, Thomas W. (Thomas Wells), 1950-

The art of architectural drawing : imagination and technique / Thomas Wells Schaller.

p. cm.

Includes bibliographical references and index.

ISBN 0-442-00993-3

1. Architectural rendering—Technique. I. Title.

720'.28—dc20

95-45733

CIP

<http://www.vnr.com>

product discounts • free email newsletters  
software demos • online resources

email: [info@vnr.com](mailto:info@vnr.com)

A service of **I(T)P®**

FOR NANCY

*"If nothing else, the years have taught me this, if there's a pencil in your pocket,  
there's a good chance that one day you'll feel tempted to start using it."*

— PAUL AUSTER



Figure D-1. *Proposed Cliff Structure, China*. (1996) T.W.  
Schaller. Watercolor and pencil, 70.2cm x 31.3cm



# CONTENTS

FOREWORD / vii

PREFACE, *TW Schaller AIA* / ix

ACKNOWLEDGMENTS / xv

## PART I

### EVOLUTION of TECHNIQUE / 1

CHAPTER ONE

*A Drawing Is Not a Building* / 17

CHAPTER TWO

*The Perfect Drawing* / 31

CHAPTER THREE

*The Essential Idea: Objective Form* / 47

CHAPTER FOUR

*The Essential Idea: Subjective Expression* / 73

## PART II

### ARCHITECTURE of the IMAGINATION / 97

CHAPTER FIVE

*Informal Process Drawing: The Sketch* / 113

CHAPTER SIX

*The "Finished" Process Drawing* / 131

CHAPTER SEVEN

*The Black Sun of Piranesi* / 149

CHAPTER EIGHT

*Visions of Utopia* / 165

SELECT BIBLIOGRAPHY / 185

INDEX / 189



# FOREWORD

by Paul Rudolph

The architectural drawing is the most eloquent tool a professional has to communicate design ideas. Its subject may vary from a city to a small detail but its objective is always to inform the act of building. As a practical tool, drawing allows the architect to explore a great variety of schemes—adding, subtracting, and rearranging elements, materials, and systems before reaching a final design solution. As a conceptual tool, it indulges the architect in exploring the ideal worlds of the imagination.

The freehand sketch and the measured drawing or rendering have been, for centuries, the most traditional forms of architectural drawing. Today, the computer drawing is well on its way to challenging the traditional drawing. This, to a degree, is a generational preference. But we must be aware that the techniques utilized in developing an architectural idea profoundly influence the design results.

The freehand sketch is a record of the design process throughout the length of a project. It is a private document often comprehensible only to its creator, embodying the pure essence of the effort involved in making it. To some degree the sketch is the guardian of the design, protecting the integrity of the architectural idea and warning the architect when extraneous or inappropriate elements begin to creep into the composition.

For an architect, sketching is often an exhilarating exploration, a crescendo, that leads to a sort of ecstasy as it approaches “the moment of truth” when architectural balance is achieved. The sketch often reveals the working of the inner mind in unique ways that cannot be duplicated by any other means. It has its own inner logic, and when used often enough it can become a trusted guide towards true invention. In his *Codex Leicester*, Leonardo Da Vinci gives us a marvelous example of thought translated into drawing, and illustrates the fact that the creative process takes a great deal of time and is often the prelude to superior artistic achievement.

The rendering, or measured drawing, seeks to express what its subject—city, building, or object—looks like, and has the unique capacity to convey multiple scales simultaneously (something a model can seldom accomplish). One of its great advantages is that it conveys actual dimensions, the reason why renderings are sometimes used to inform the design process, much as sketches are. One of its most obvious limitations is that it usually represents

a somewhat ideal, single point of view. But it is a point of view that most people understand, and that is why renderings are most often used as sales tools—by the architect to sell his idea to the client, or by the client to sell his project to others. Therefore renderings are inevitably idealized and often “made pretty” to be more effective sales tools.

As we can see in the striking examples presented in this book, the architectural drawing is a powerful visual-communications tool, and still today, the most effective vehicle to convey the essence of the art of building.

## PREFACE

Just as the term "architecture" can be applied to discussions of a specific building, buildings in general, or the act of designing buildings in the first place, the phrase "architectural drawing" can have several meanings as well. Visual representations of architecture can be used to envision and design a specific building, and to document or clarify the construction specifics of a structure to be built. In addition, architectural drawings may be used to portray or interpret the essence of particular structures for design proposals, competitions, or marketing purposes. Finally, architectural artwork can be used to record, or even to dream of, ideas about buildings or architecture and its influence. These types of works may be either building or non-building specific and may in fact more rightly be called examples of fine art in which the process and the elements of architectural design, both known and imagined, are used as



Figure P-1. *Tower of Babel* (1563) Pieter Bruegel the Elder (1525/30–1569). Oil on wood. Kunsthistorisches Museum, Vienna.

The "Myth of Babel" is represented here in an equally powerful allegorical work of art by the great Netherlandish master. An atypically biblical and "architectural" work for the humanist landscape painter, it resonates to this day with the idea of the supreme folly of man's earthly ambition.

subject matter—inspiration. Clearly, these first types of drawings or paintings are about building, the tangible art of architecture, while the latter are more concerned with the intangible, ideas about building perhaps, but more about art itself.

The focus of this book is not building, but the images that both derive from and inspire the act of building. Moreover, a special emphasis is placed upon those works of art that do not have any existent material body, a “real building,” as their aim. The discussion is in no way meant to be construed as qualitative in nature; all the pursuits, the types of drawing thus far defined, have an individual as well as a collective value and purpose. In fact, it can be argued that one type could not fully exist with the other types. The field of architectural drawing is, as a whole, too often seen simply as an adjunct, a by-product, of architectural design—an “art about an art.” It is the sincere aim of this book to demonstrate not only the interdependence of these disciplines, but the viability of the various forms of architectural representation as distinct from the art of architectural building. Each discipline nourishes and

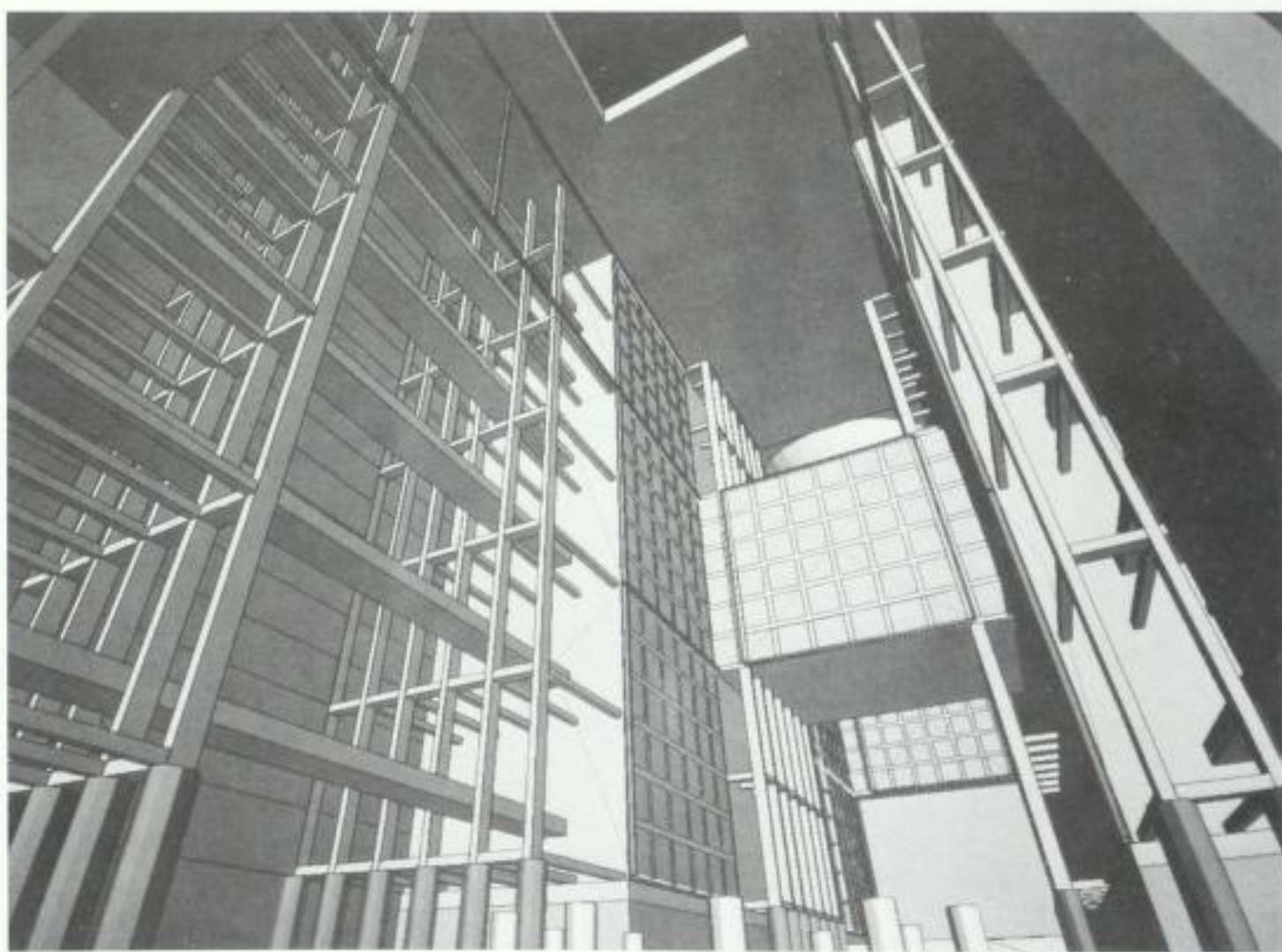


Figure P-2. *Tokyo City Hall Competition, Computer-Generated Interior Perspective View of Atrium*. (1988) Artist/Designer: Arata Isozaki. Ink jet print on paper from the office of Arc Yamagawa, Tokyo. 76.8cm x 108.6cm. Courtesy of Centre d'Architecture Canadien/Canadian Centre for Architecture, Montreal.

Known primarily for the large scale silk-screen representations of his designs—typically seen in plan and elevation—which are a modernist take on Beaux-Arts graphics, this somewhat unusual three-point perspective is a convincing alternative and a highly effective way of organizing the visual elements of this interior space.

informs the other; each, if it would not fail completely, would exist in a far more meager state if not for the other.

In the pages to follow, the essential difference between the acts of building-making and image-making will be discussed, and the very genesis of image-making itself—what we see and the way we see it through the use of architectural images—will be looked upon. Also to be explored is how architectural images are composed, the choice of media and graphic devices which effect the best or most appropriately described result. Various forms of architectural graphic communication—how these various drawing types differ from each other and why one may be seen as more appropriate at times than another—will be examined next. Examples, both historic and contemporary, of work from some of the world's most outstanding architects and architectural artists are included to demonstrate principles of design and design communication—mass, volume and space, gesture, movement, content and intent, as well as shade and shadow, intonation, color, and atmosphere. Finally, examples of



Figure P-3. *Fantastic Monuments*. (c. 1747-1750) Giovanni Battista Piranesi (1720-1778). Pen, brown ink, and brown wash over graphite on cream laid paper, 19.8cm x 27.7cm. Courtesy of Centre d'Architecture Canadien/Canadian Centre for Architecture, Montreal.

The actual genesis of this piece is speculative; there are representative elements of the *Prima Parte* from 1743, though this work was completed some years later. The full range of visionary architectural elements, theatrical use of lighting effects, and bold compositional imagery mark this as an example of the artist's more developed style.



Figure P-4. Studio di l'architettura Assunzione. (1974) Aldo Rossi. Ink, 21cm x 29.7cm

Far more than an academic, isolated mind is at work here in this witty, expressive, and personal "architectural" assemblage with its implicit dialogue on the conflict of chaos and order.

more abstract, non-building directed idea representation are included. Design investigation, architectural fantasies, and dreams are the emphasis here. An attempt will be made to explore the answer or answers to the question of how these types of artworks derive from or even inspire eventual design. Moreover, emphasis will be made upon what these purely image-based efforts have to say about the relationship of architecture and humankind. Are our buildings and our cities a reflection of our civilization or are our civilizations and behavior at least in part reflections of our built environment?

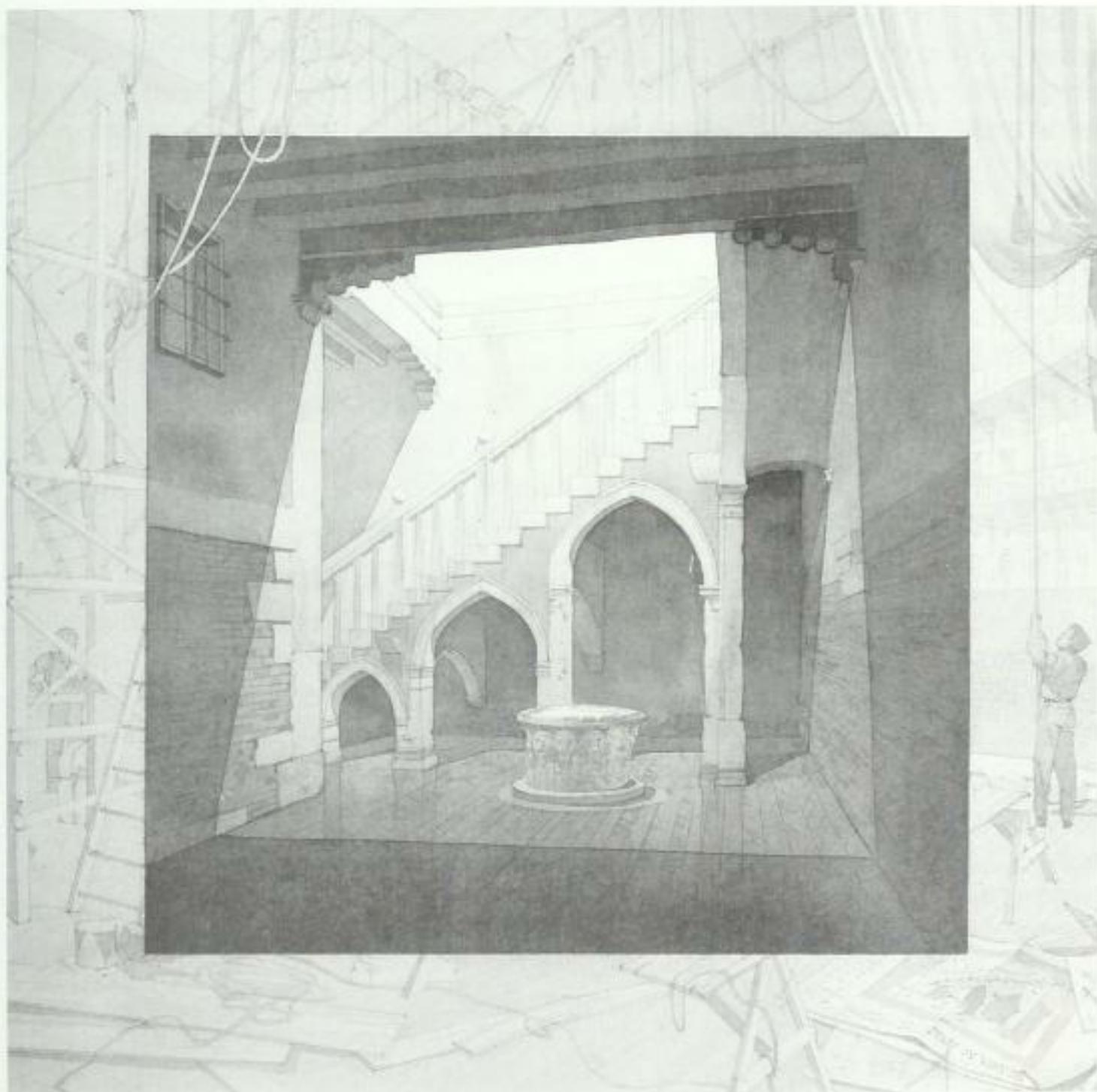


Figure P-5. *Proposed Stage Set, "Death in Venice."* (1991) T.W. Schaller. Watercolor, 46cm x 46cm

A simple stair and a mysterious light set the atmosphere and reveal the essential idea of this piece which seeks to layer and obscure information and to defer resolution for a heightened sense of the unknown.

As a final note, it is hoped that the reader will discover in the words and images represented herein that the would-be designer or architect, seeking to build a better, more useful, or more beautiful world could only be exceptionally well-served by the decision to “think with a pencil”—to investigate his or her ideas by means of visual representation. To clarify, that investigation should be equally valid and fruitful whether that “pencil” might assume the form of a pen, a brush, and even a computer screen. Better, that is to say more informed drawing, can lead only to better, more informed buildings. And lastly, the book attempts to demonstrate the viability, power, and beauty of architectural artwork, not as a means to one end, or necessarily even as an end itself, but as emblematic of the larger process of creative thinking. It is this process that is the real focus, not any one drawing or painting or building. “It is art,” wrote Henry James, “that makes life . . . and I know of no substitute whatever for the force and beauty of its process.”

## ACKNOWLEDGMENTS

The author wishes to express his sincere gratitude to the following groups and individuals without whose dedication, efforts, and generosity, this book would not have been possible:

The Graham Foundation for much appreciated support and a belief in the project.

The design, production, and editorial staffs of Van Nostrand Reinhold who, over the years, have proven their belief in architectural artwork many times over; and especially to Roberto de Alba, Beth Harrison, Jane Degenhardt, Paul Costello, Nancy Freeborn, Mary McCartney, and Carla Nessler. A special word of thanks to John Griffin and Wendy Lochner for keeping the project alive.

Mr. Paul Rudolph for his generosity, well-considered text, and a legacy of images.

Mr. Gavin Stamp of the Macintosh School of Architecture in Glasgow for his scholarship, assistance, and continued support.

The numerous institutions around the world who kindly permitted the reproduction of images from their respective collections: The Avery Architectural and Fine Arts Library, Columbia University, in the City of New York; The New York Historical Society; The Smithsonian Institution's National Museum of Design, New York; The Pierpont Morgan Library, New York; The Art Institute of Chicago; The National Gallery of Art, Washington D.C.; The Toledo Museum of Art, Toledo, Ohio; The Frank Lloyd Wright Archives, Taliesin West, Scottsdale, Arizona; The Minneapolis Institute of Arts, Minnesota; The Ames Gallery, Berkeley, California; Centre D'Architecture Canadien, Montreal; Kunsthistorisches Museum, Vienna; Cordan Art, Baarn, Holland; Nationalgalerie, Staatliche museen du Berlin; École Nationale des Beaux Arts, Paris; Bibliothèque Nationale de France, Paris; Metropolitan Cathedral of Christ the King, Liverpool; The British Architectural Library, The Royal Institute of British Architects, London; Sir John Soane's Museum, London; and Her Majesty, Queen Elizabeth II, The Royal Collection, Windsor.

The many skilled draftsmen and studio assistants who, over the years, have played no small part in the production of many of the images created by the author's studio and represented in this book: Andrew Fitzsimmons, Moritoshi Nakamura, Vladislav Yeliseyev, Janek Konarski, Tom Murphy, Roger Lee, and especially, Mr. Robert Becker.

Ms. Eliza Beckwith for typing and administrative skills, support, and friendship.

Ms. Bonnie Grossman, Ms. Sally Forbes, and Mr. David Garrard Lowe, as well as the memberships of The American Society of Architectural Perspectivists, The New York Society of Renderers, the Japanese Architectural Renderers Association, the Korean Architectural Perspectivists Association, the Society of Architectural and Industrial Illustrators of Great Britain, and the Lawrence Institute of Technology for their individual and collective efforts in advancing the cause of architectural artwork worldwide.

Elizabeth Day, Joyce Rosner, Doug Jamieson, Curtis Woodhouse, and Gordon Grice for being there. Cathie, Erin, Sarah, Nathan, Adam, Ben, and Tommy for their talents, and the rest of my family and friends for patience and understanding.

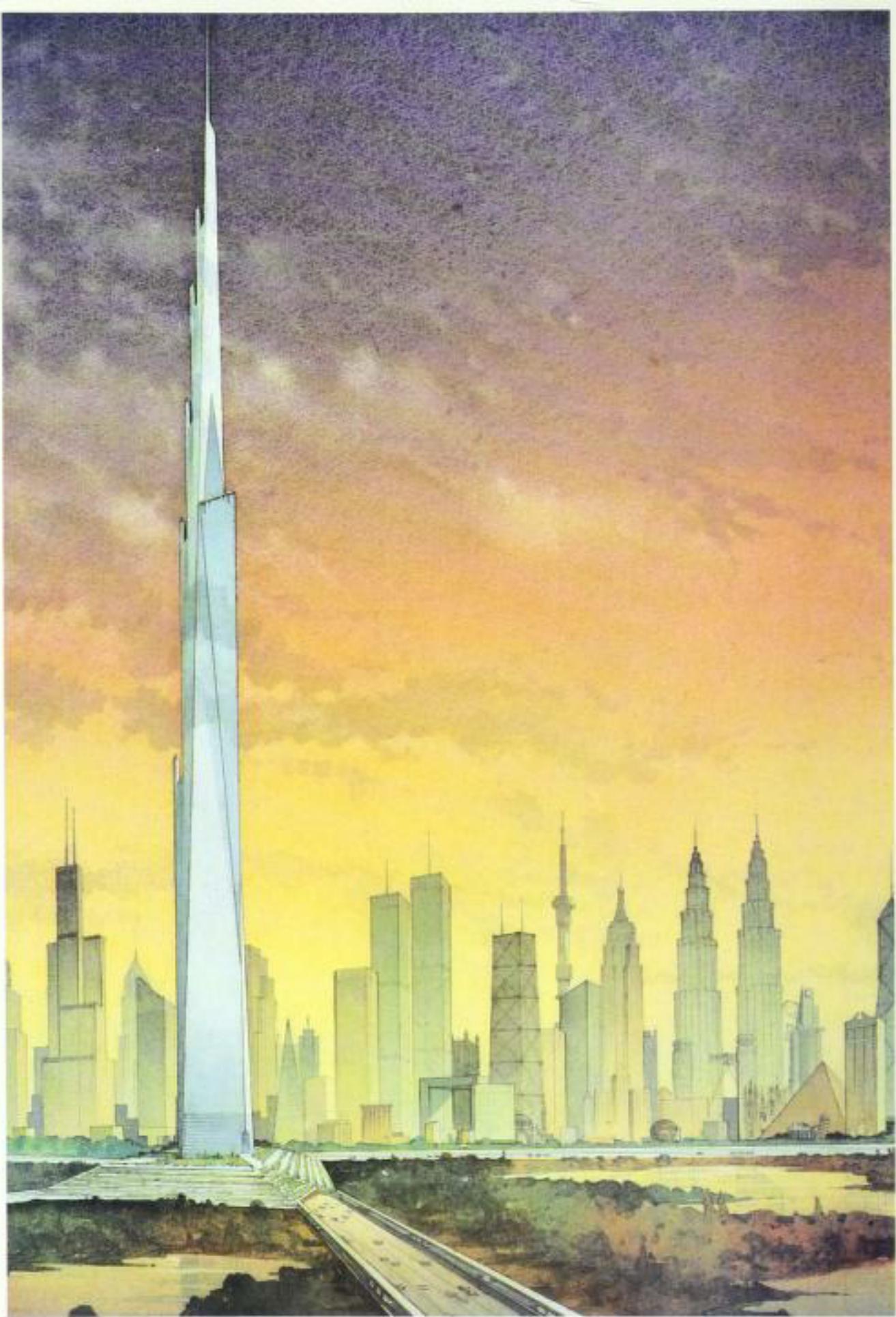
And finally, the great number of artists and architects—colleagues, clients, and friends—whose unforgettable visions are represented herein and whose skills and generosity have made this a far richer volume.

PART ONE

EVOLUTION  
*of*  
TECHNIQUE

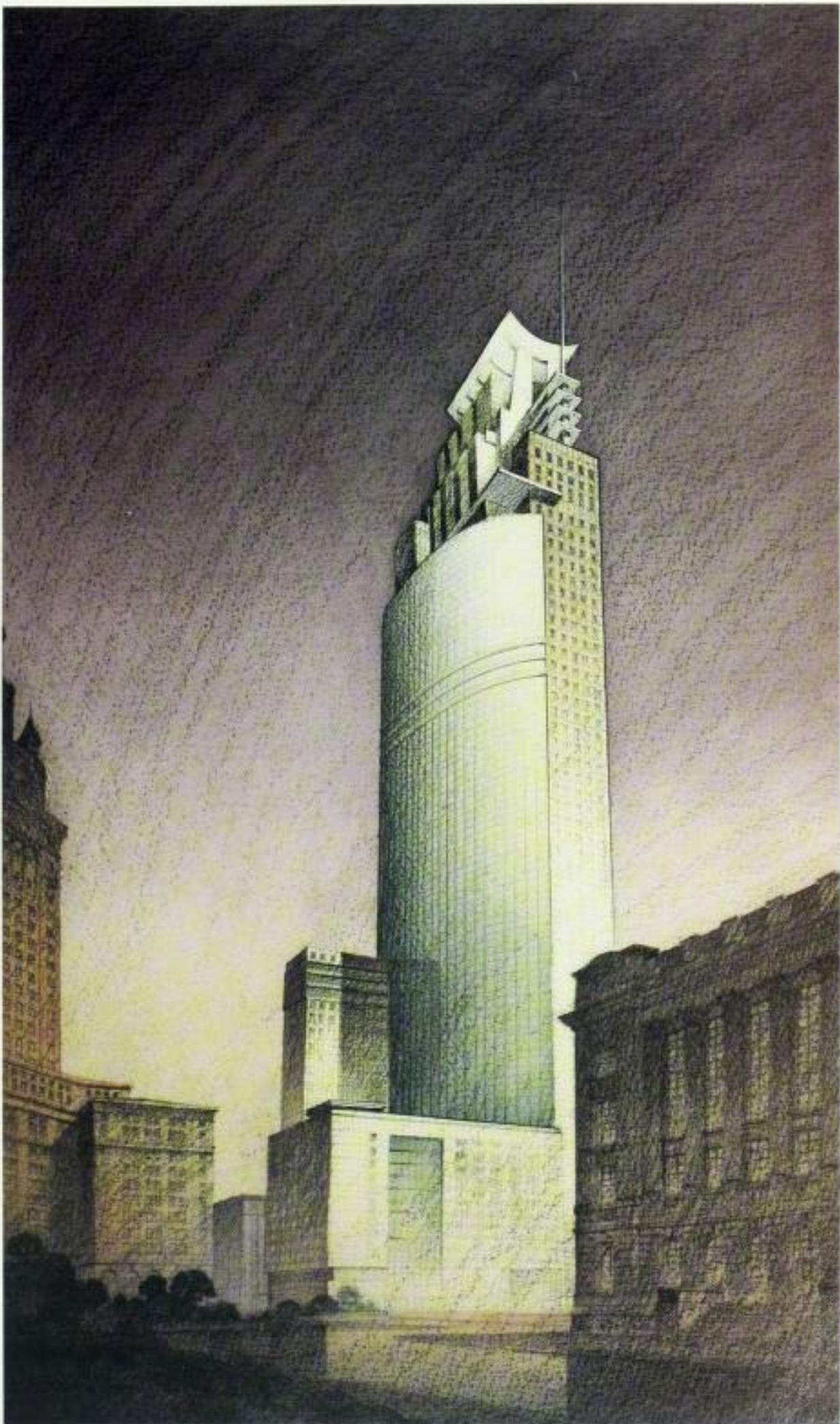


House. (1956) T.W. Schaller. Ink and crayon, 30cm x 23cm



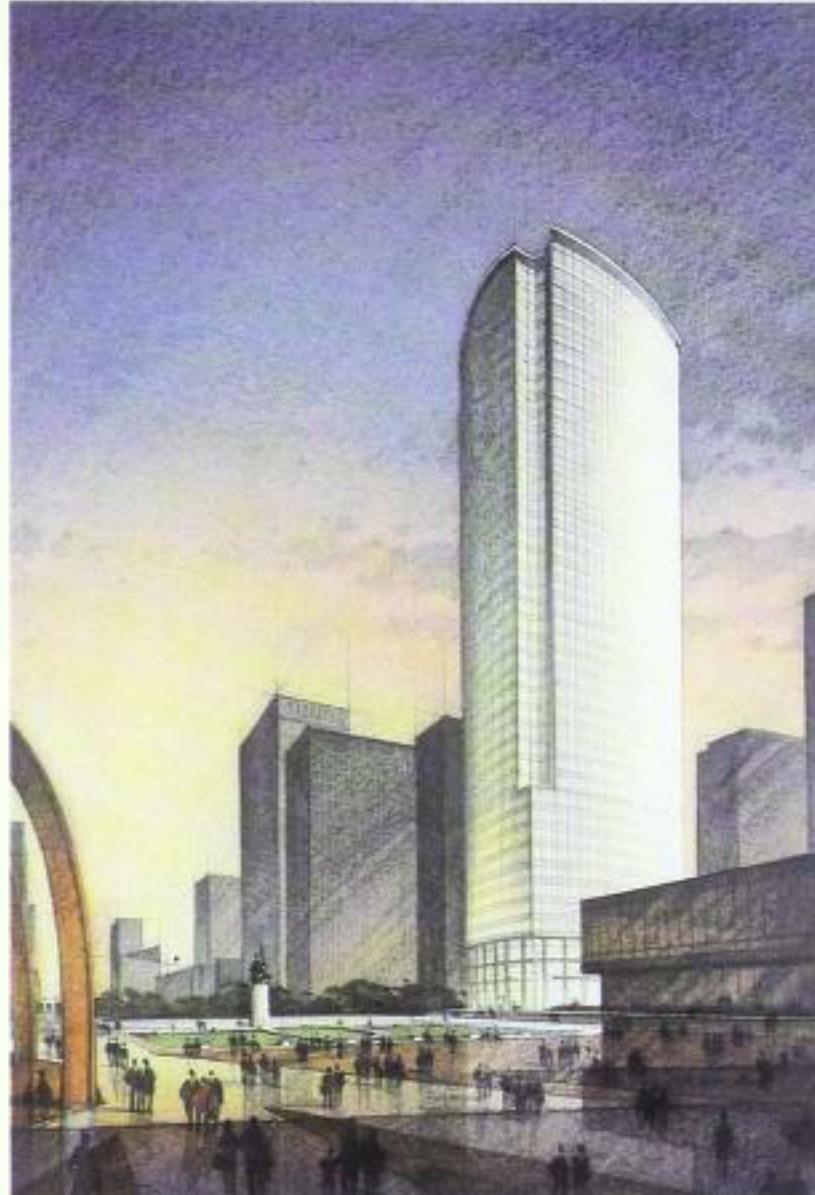
*The Odyssey Project*. (1996) T.W. Schaller. Architects: Frank Lloyd Wright and others. Watercolor, 117cm x 58.5cm; Courtesy of The Otis Elevator Company.

Due to the sheer physical size of this proposed design and in order to maximize visual impact, the rendering of specific detail was avoided in favor of sculptural form. In addition and toward the same end, the light, cool tones of the focus structure contrast with the darker, warmer treatment of sky and overall atmosphere.



*Ameritrust Tower*. (1991) T.W. Schaller. Architects: Kohn Pedersen Fox. Watercolor and pencil, 70.2cm x 42.9cm

The essential design gesture created by the juxtaposition of a solid masonry tower and a floating glass plane is treated graphically as a simple dialogue between warm and cool tonalities.



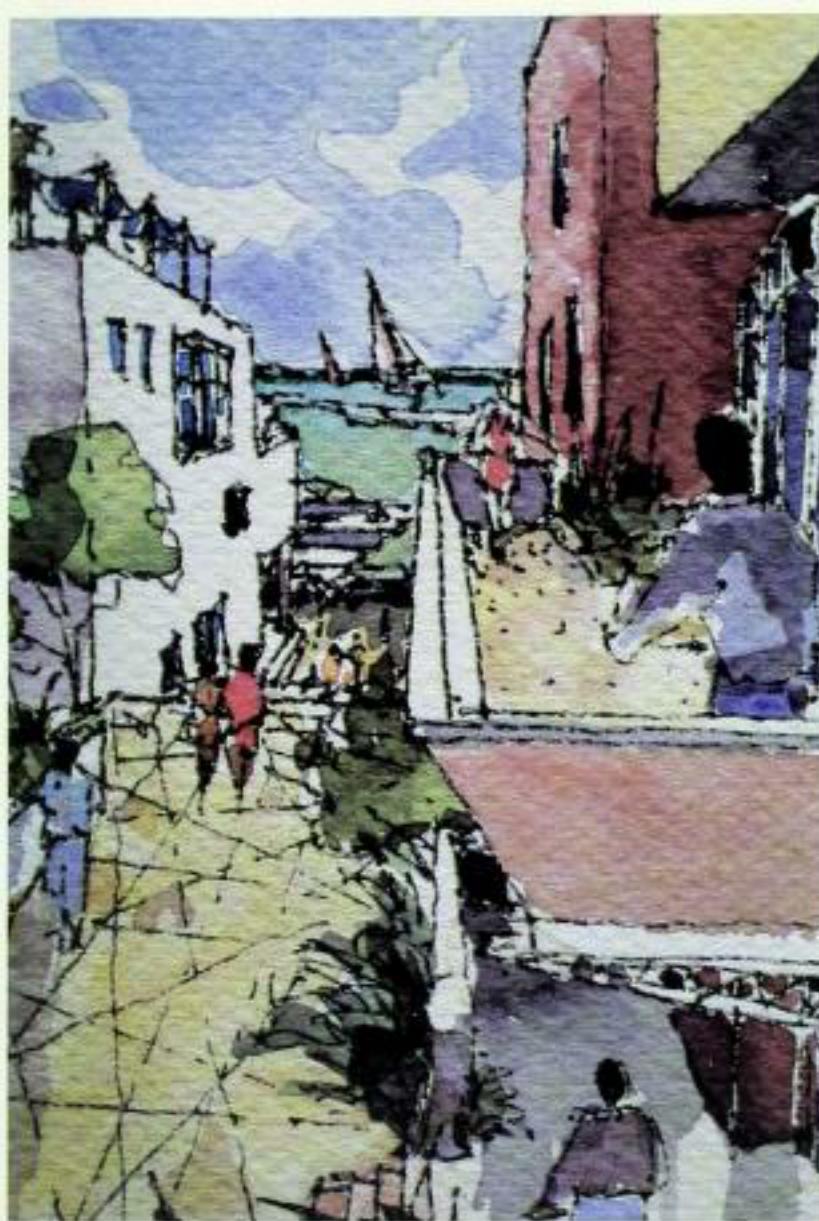
(left) *La Défense Competition, Paris, France* (1995) T.W. Schaller.  
Architects: Cesar Pelli and Associates. Watercolor and pencil,  
42.9cm x 66.3cm

This vigorous graphic treatment demonstrates that it is entirely possible to describe an evolving architectural presence by an emphasis upon volume, light, and context rather than by design specificity.



(below) *Proposed Development, Newport Beach, California, park view* (1994) T.W. Schaller. Architects: Aldo Rossi, Studio di Architettura. Watercolor, 70.2cm x 93.6cm

Color is as deeply important to this image as it was to the development of the design scheme it seeks to interpret.



(left) South Pointe Development Competition (1993) Curtis James Woodhouse, Architects: Arquitectonica with STA and the Portofino Group. Watercolor, 35cm x 31cm



(below) Resort Hotel Proposal, Portugal. (1991) T.W. Schaller. Architects: Arquitectonica. Watercolor, 28cm x 43cm

As designer, Bernardo Fort-Brescia of Arquitectonica sought a highly charged sense of vitality and informality for the multifarious forms of these proposals. The graphics, therefore, needed to be as varied and lively in color range and composition to effectively tell the story.



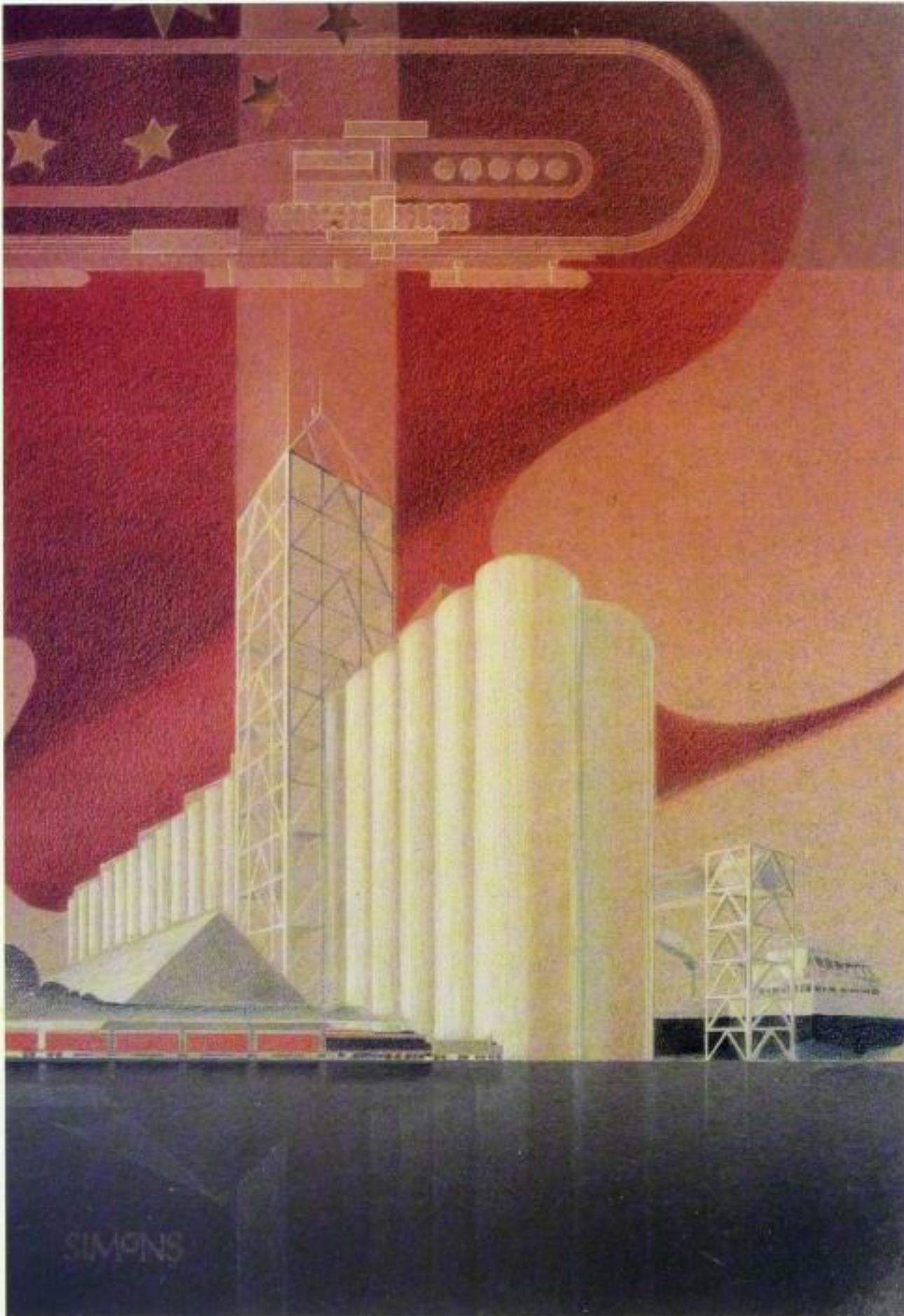
Baltimore Performing Arts Center Competition. (1994) Artist/Designer: Rafael Vignoly. Charcoal and color pencil

This compelling and vigorous image records an instantaneous design impulse; a few brisk lines and tones—the cool blue of the superstructure above and the deep black of the earth below—establish the essential information clearly and concisely. This is a designer who truly “thinks with a pencil.”



Baltimore Performing Arts Center Competition. (1994)  
T.W. Schaller. Architects: Lett/Smith, Toronto.  
Watercolor and pencil, 51cm x 76cm overall

This composite of gestural vignettes establishes an effective and atmospheric progressive “walk-through” of this large design concept proposal by the well-considered choices of view.



*Chinese Grain Infrastructure—Export Terminal, China*. (1993) Barbara Worth Ratner. Architects: Simons-Eastern. Watercolor and color pencil, 101.4cm x 78cm

This image of a generic terminal "was created to elicit interest in developing a comprehensive system of terminals with rail and water links" for the distribution of goods within China. "The red of the sky was selected for its association with joy and prosperity," and it is in perfect sync with the simple bold forms of the design.



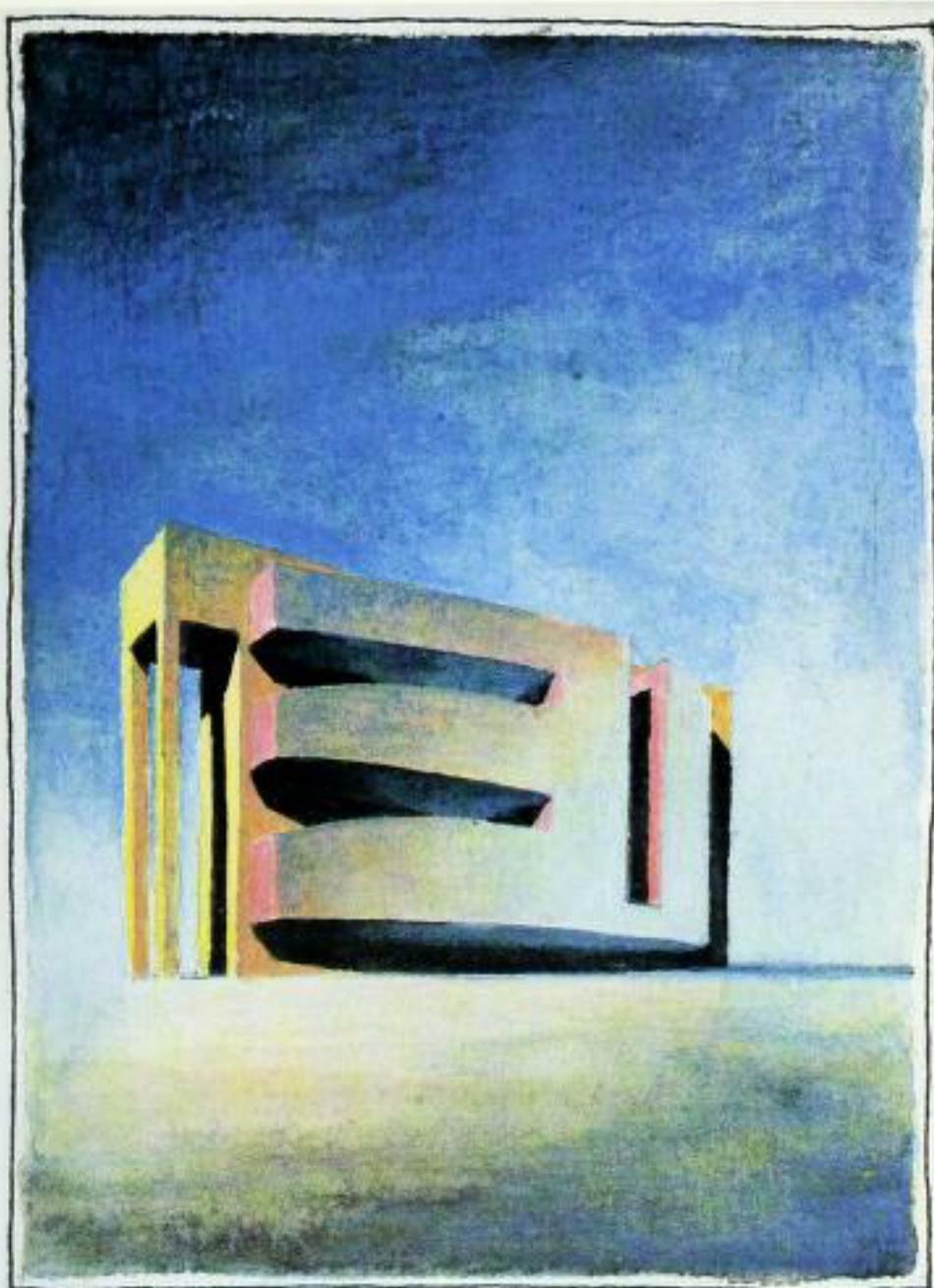
Puebla New Town, Puebla, Mexico. Steve Parker. Architects: Hellmuth, Obata & Kassabaum. Watercolor, 31.2cm x 24.38cm

The bold palette and free watercolor treatment of this early design phase sketch could not be more appropriate to the subject matter, to its intended usage, and to the selected site.



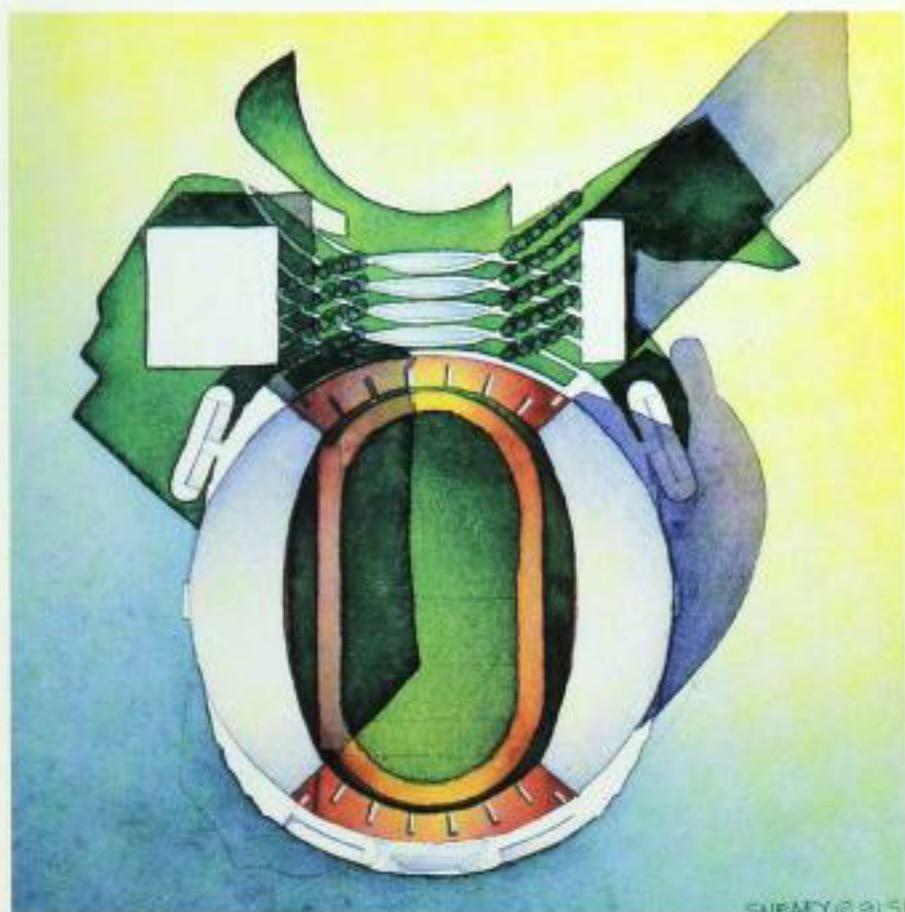
The Four Continents Bridge, Hiroshima, Japan. (1988) Artist/Designer: James Wines, SITE.

This image, completed as a design proposal for the Hiroshima Sea and Island Expo in 1989, is another investigation of the bridge form as destination. The structure symbolizes the connections between land, sea, and people. In order to establish a valuable link of respect and responsibility, the insinuating elements of all three of these influences extend across the span in unison.



III-9. (1995) Artist/Designer: Willem van den Hoed. Watercolor, 10.2cm x 15.3cm

Architect/artist Willem van den Hoed continues his sketchbook-based architectural explorations by, in this case, adding an amorphous shape with geometrical voids subtracted from it to a rectilinear baseform. Using colors along the warm-to-cool spectrum establishes a strong dialogue.



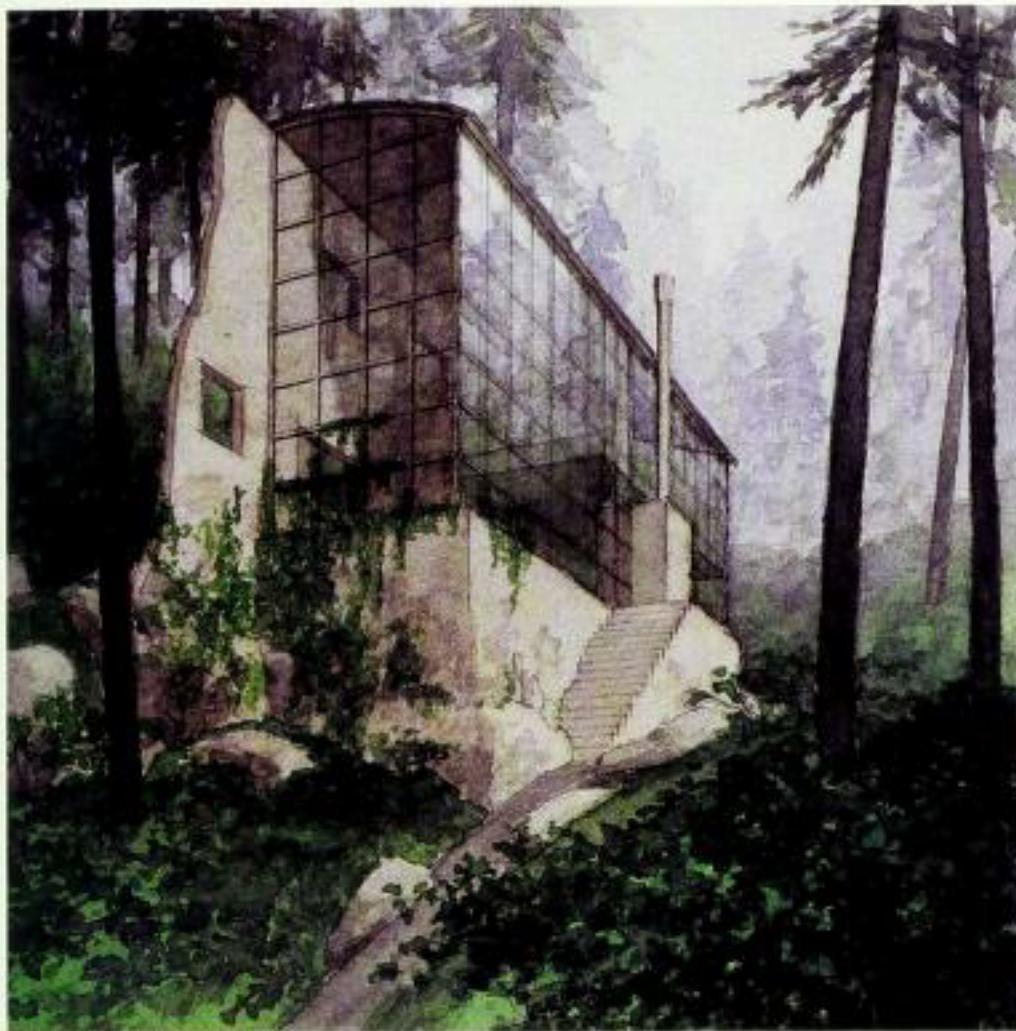
Hong Kong Soccer Stadium. Richard Sneary (and Susan Lynn). Architects: Hellmuth Obata and Kassabaum Sports Facilities Group, Kansas City, MO. Watercolor, 17.9cm x 17.9cm

A deeply effective image on several levels, this work succeeds in imparting clear information about the structural proposal in its eventual three dimensions and acts as a singularly successful work of art.



Untitled. (1976) Aldo Rossi. Ink and markers, 20cm x 30cm

The choice of strong complementary tones of red and green, used here to establish a clear dialogue between the horizontal and vertical forces of the image, creates a subsequent architectural identity.



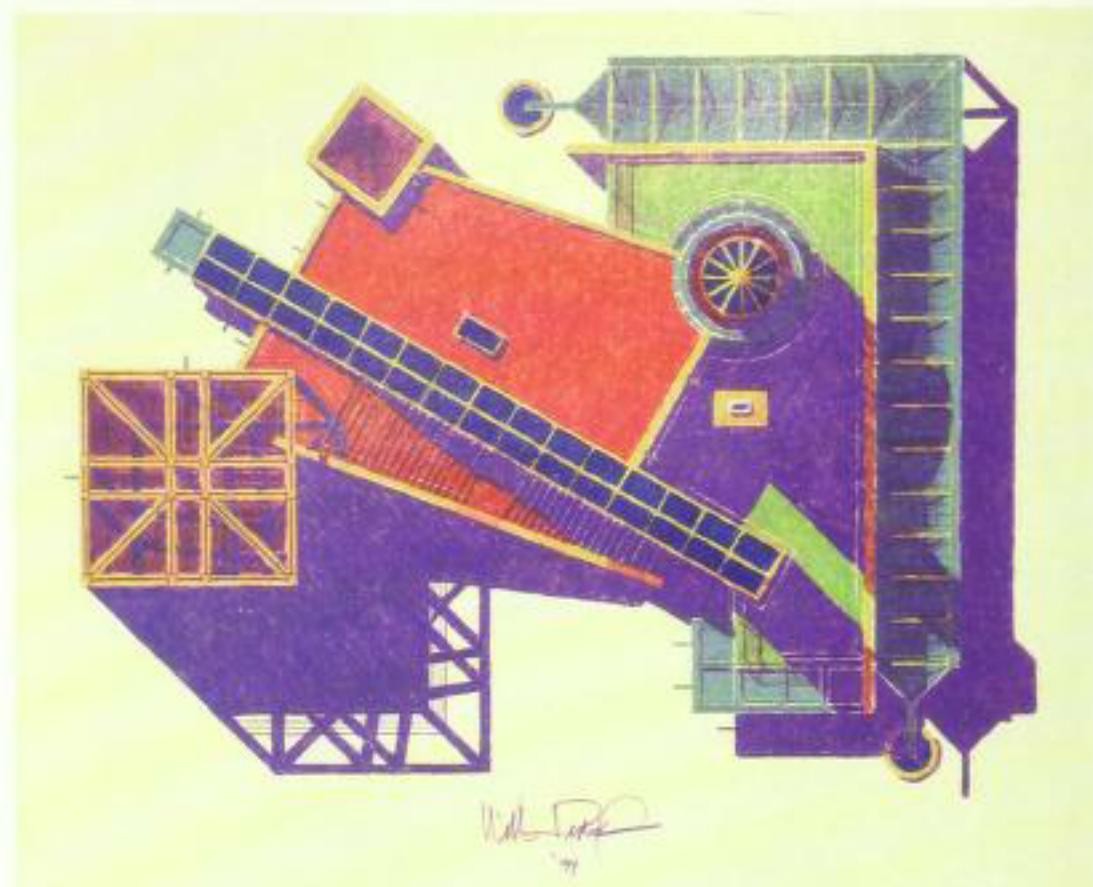
*Forest House* (1996) Artist/Designer: Samuel Ringman. Watercolor, 23.4cm x 23.4cm

Ringman is an architect/artist who explores, via the graphic image, "nature as an integral part of architecture." Of this view, he writes, "the emergence of the building from the rock outcropping and the regeneration of plants on the structure reinforce the concept of the house as an integral part of the forest, not as an object placed within it."



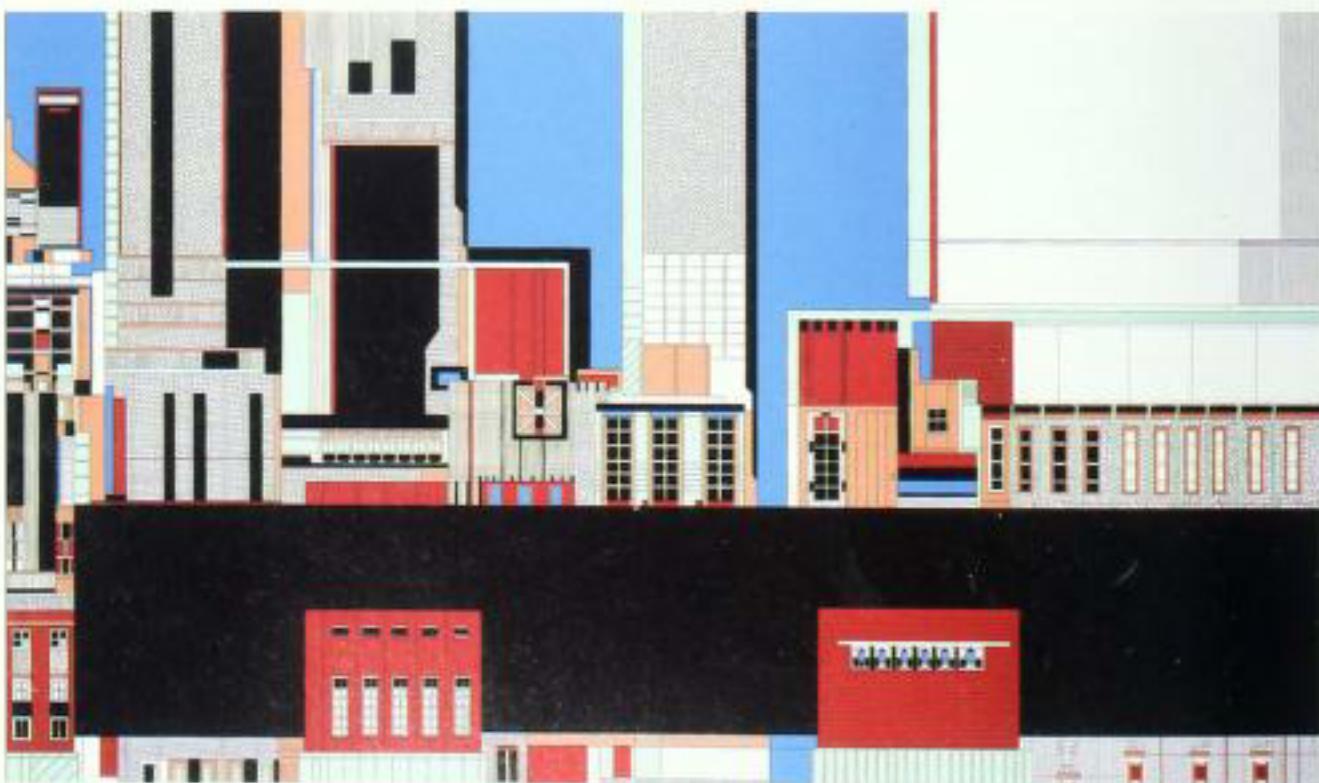
*Cascade House* (1996) Artist/Designer: Samuel Ringman. Watercolor, 23.4cm x 23.4cm

The sentiment of this image reminds one of Piranesi and of Cole's historical preoccupations. Of the house, Ringman writes, it "is integrated into an extraordinary site at its most dramatic point; appearing as a barricade, it actually leaves the stream's flow uninterrupted. The house is a juxtaposition of natural and ordered elements, contrasting man's built environment with the natural forces that will erode and reclaim it."



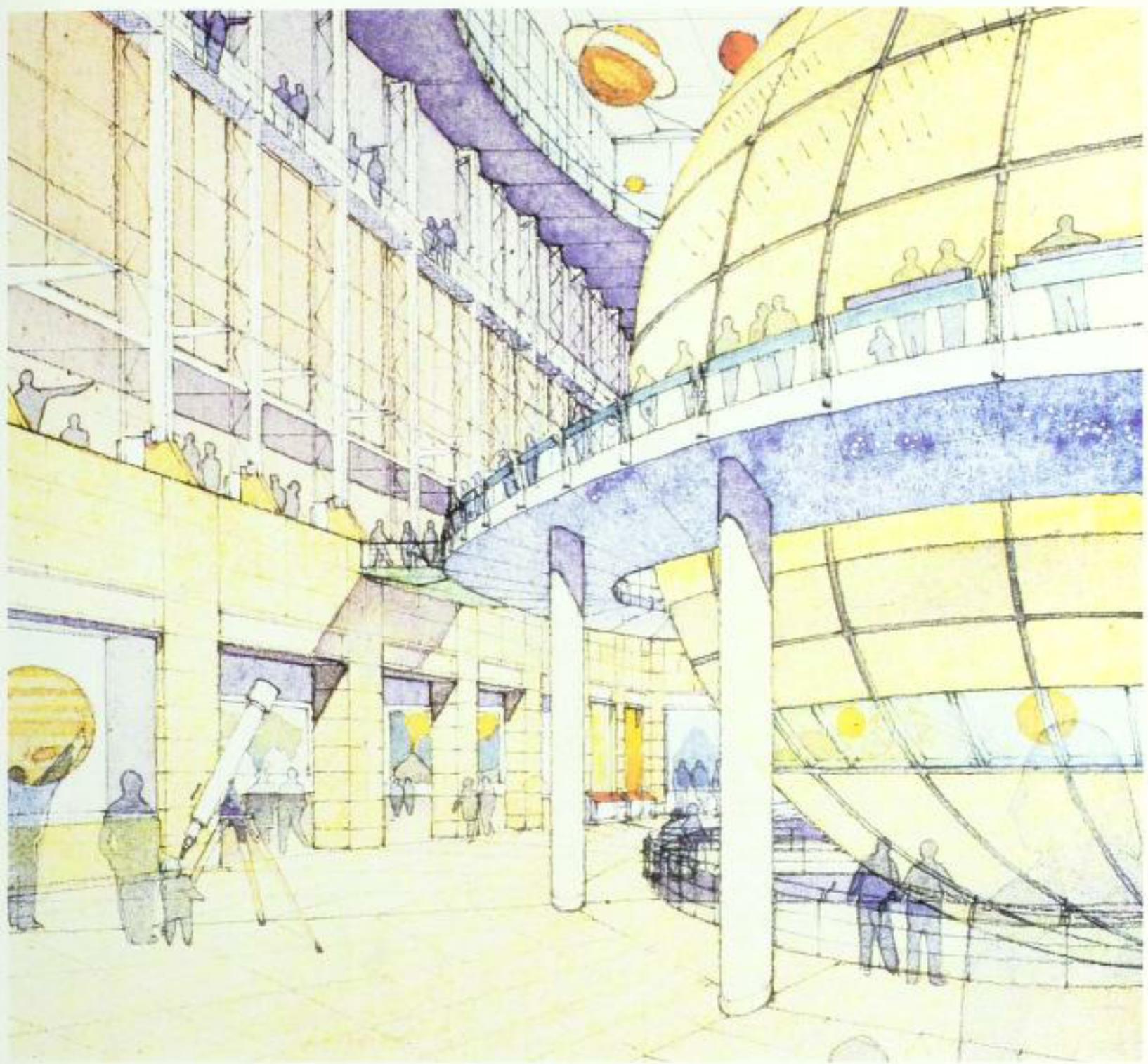
*Shelter Island House, roof plan view* (1994) Artist/Designer: William Pedersen FAIA. Prismacolor pencil, 46cm x 46cm

One of the principal framers of modern skyscraper identity, William Pedersen displays some of the fundamentals of his design impetus in a simple rendered plan view. A bold composition of simple forms creates one of the primary themes discerned in his much larger-scale buildings—strong axial motifs, harmony and discord, balance and asymmetry, conflict and resolution. In its clarity and directness, this image possesses the strength of abstract art.



Serigraph 9202. Michael Insetta. Limited edition private benefit print, 36.4cm x 33.3cm; Printer: Jon Cone Editions, East Topsham, Vermont. Collection: Michael Insetta

Architectural language is abstracted here in both formal and expressive terms to create this striking work of art, which echoes Bauhaus and Constructivist aesthetic as well as DeStijl and the subsequent reductivist paintings of Mondrian.



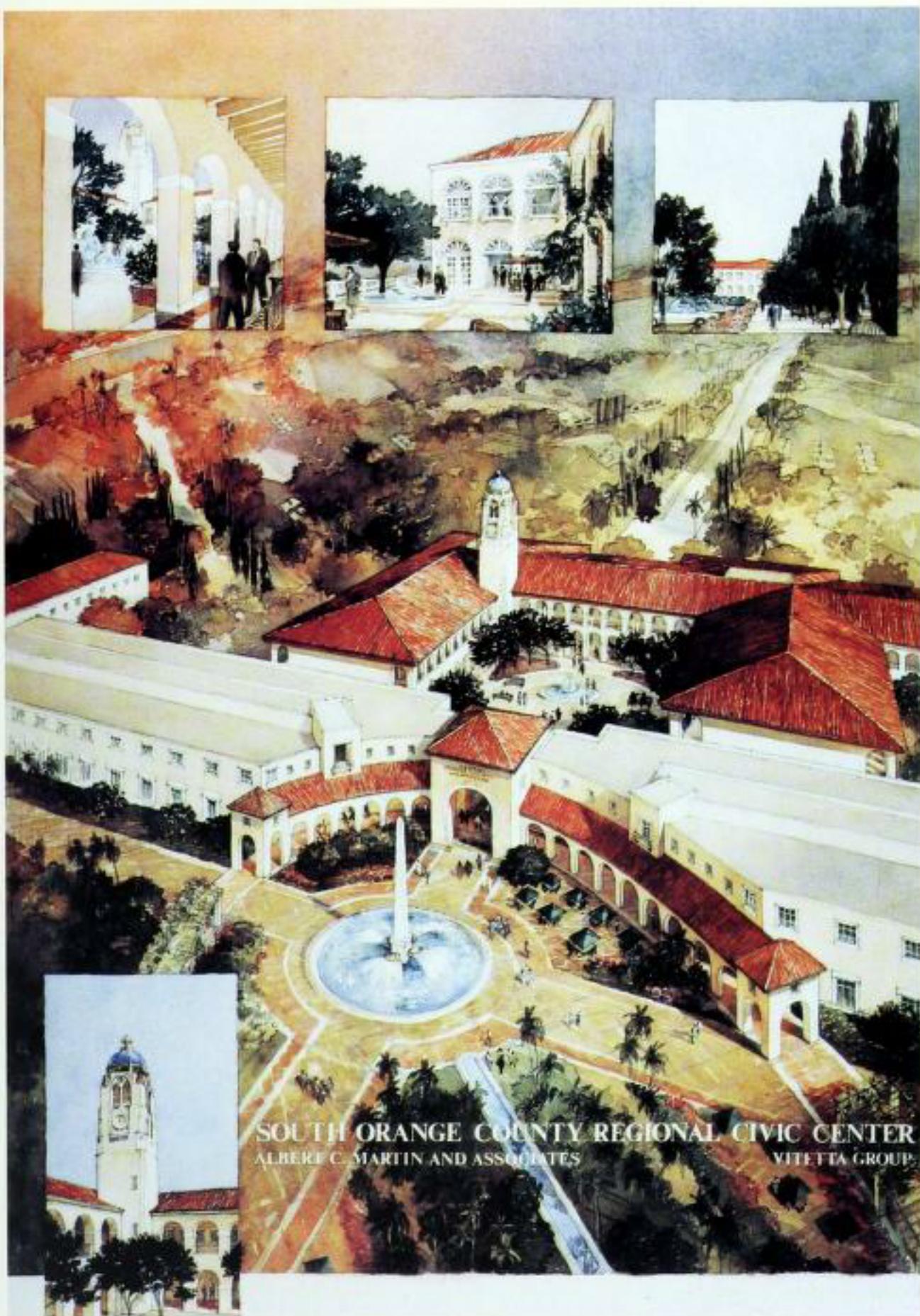
Hayden Planetarium, American Museum of Natural History, New York City (1995) John E. Fernandez, Architects: J.S. Polshek and Partners. Watercolor

This versatile architect/artist continues to effectively explore design by means of the informal perspective study sketch. In this case, a particularly sculptural interior space is revealed very successfully.



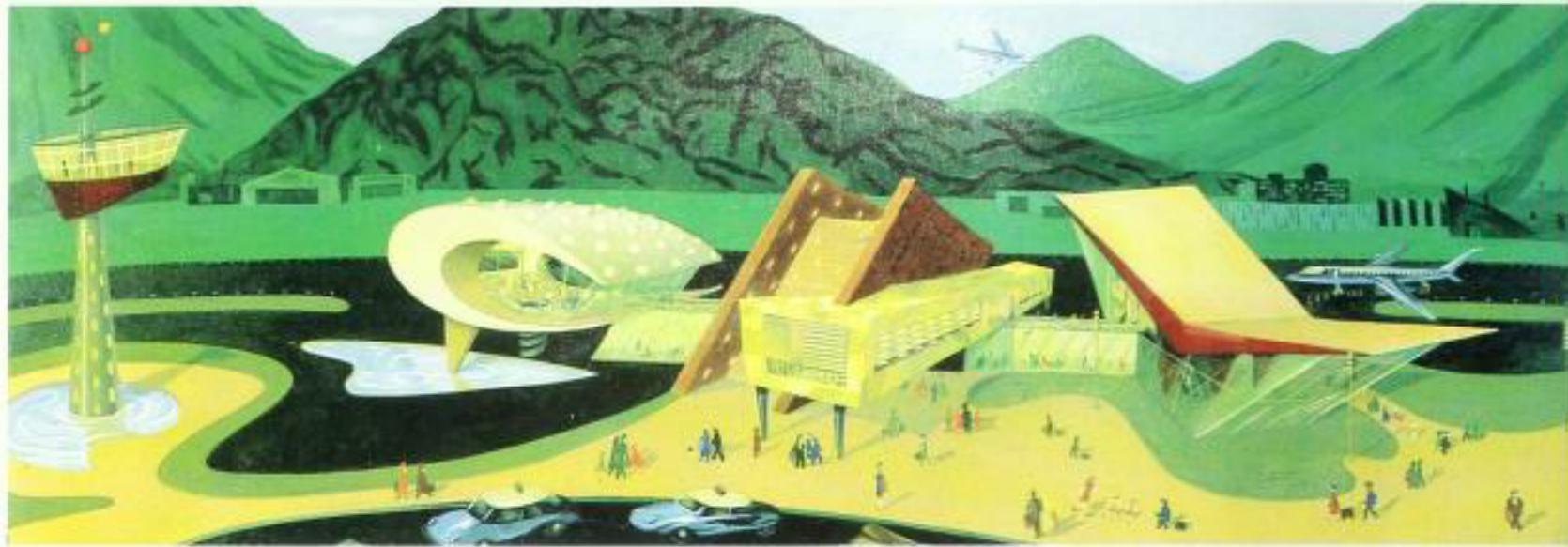
Hancock/Axial I, Boston, (1995) Frank M. Costantino. Watercolor, 24.3cm x 35.8cm

This unique image takes a creative and visionary look at an existing structure—Pei's famous Hancock tower in Boston. While attempting to maintain and respect its iconography, the designer/artist (one of the premier architectural visualists of our day) has graphically suggested changes to the form of the building to add scale, texture, and a more emphatic street wall axis. The well-considered choice of viewpoint and atmospheric condition result in most effective story telling.

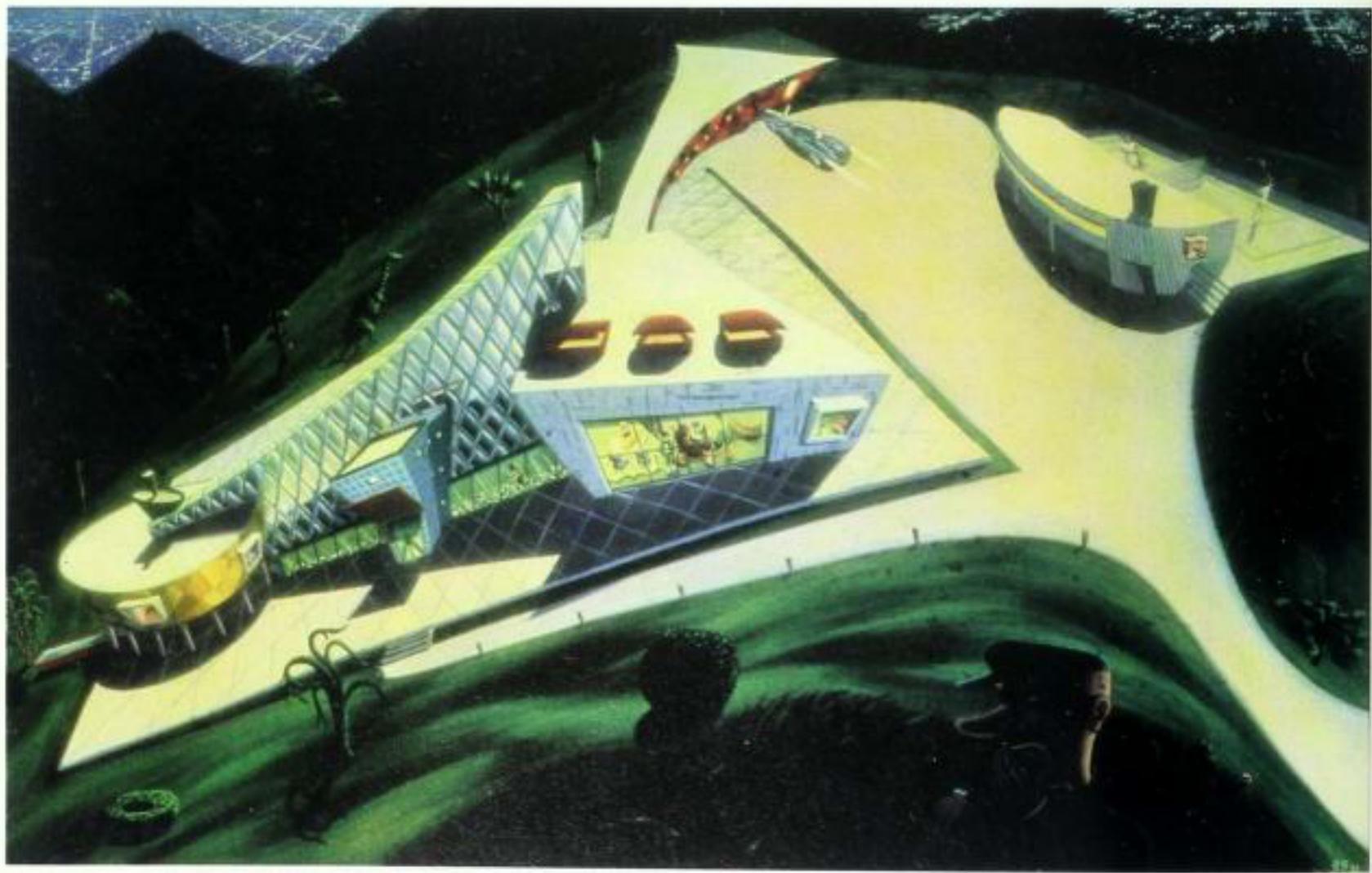


*South Orange County Regional Civic Center, California. (1992) Elizabeth Ann Day. Architects: Albert C. Martin with Vitetta Group. Watercolor, 101.4cm x 74.1cm*

Information through color usage is as much the essential idea of this work as is any structural form; thus, the warm roof tones frame primary spaces and axes. The composite of several views adds focus and enhances the overall narrative success.



*China Airport*. Georgeanne Deen. Architect: Kanner Associates. Gouache, 17cm x 25cm



*Polly's House*. Georgeanne Deen. Architect: Kanner Associates. Gouache, 20cm x 30cm

The landscape and urban-allegory paintings from the 1930s of American Thomas Hart Benton (to say nothing of numerous more modern pop culture references!) echo through the work of this unique artist. By unusual composition and use of skewed perspective, Los Angeles-based artist Georgeanne Deen captures the exuberant intent of the design architects in a witty and entirely appropriate manner.



# INDEX

## A

*Abraham Zachariah* (Rizzioli), 174  
Absolute, striving toward, 20–21  
“Absolute” works, 167–168  
Abstract art, 12  
Abstract expressionism, 47  
“Active negativism,” 59  
*Aerie* (Ringman), 24  
Age of Reason, 159, 160  
Age of Romanticism, 124, 150, 158–159, 169  
Akers, James, 94  
Alberti, Leon Battista, 21, 91  
*Alien*, 140  
*Allometry* (Gorski), 51  
*American Embassy, Moscow* (Schaller), 139  
*Ameritrust Tower* (Schaller), 3  
Ando, Tadao, 180  
“Anecdote of the Jar” (Stevens), 27  
Angled lines, 71  
*Animal* (Schall), 31  
*Apocalypse Now*, 86  
*Aquarius, Bath, England* (Schaller), 108  
Aquinas, Thomas, 21, 167  
*Architect’s Dream* (Cale), 111, 157  
Architectonic explorations, 9  
Architectural artists, critical skills for, 58–95  
Architectural artwork, 22–23, 136–137  
color in, 81–88  
communication via, xi  
creativity and, xiv  
diagrammatic nature of, 78–80  
failure of, 95  
forms of, 23  
as an independent art form, 26  
merit of, 23  
as a unique discipline, 54  
Architectural drawing. *See also* Drawing  
meanings of, ix–x  
uses of, 116  
Architectural fantasies, xiii  
*Architectural Fantasy* (Pizzetti), 149  
“Architectural fictions,” 166  
Architectural ideas, drawn versus built, 23  
Architectural images, 51  
color in, 84  
composition of, xi  
value of, 18  
Architectural information, portraying, 45  
Architectural models, 25  
Architectural objects, function of, 18  
Architectural representation, x–xi  
Architecture  
compositional elements of, 21  
contextuality of, 118–119  
“entire truth” about, 26, 43–44, 80  
experiencing, 29  
function and expression in, 94  
meanings of, 18–19, 116  
nature as an integral part of, 11  
as a place for collective experience, 18  
relationship to humankind, xiii  
views of, 18  
Arnhem, Rudolf, 35, 37–38, 40, 43, 59  
on architectural form, 95  
on function versus expression, 94  
on ordering of visual environment, 83  
on perceptions of space, 62  
Arnold, Matthew, 173  
Arquitectonica, 5, 37, 57  
*Art Recife Adificando* (Rajkovich), 23  
Art  
“charitas” of, 21  
definitions of, 91  
emotive, 113–114  
“perfect,” 33  
as storytelling, 55

“Art about art,” 147  
*Art and Visual Perception: A Psychology of the Creative Eye* (Arnhem), 35, 84  
Artforms, interconnectedness of, 29  
“Artistic cannibalism,” 57  
Artistic endeavor, process of, 114  
Artistic evolution, 159  
Artistic vision, 27  
clarity in, 90  
Art-making, process of, 63  
Art of architecture, as object versus process, 19  
“Art-stories,” 90  
Artwork, overall values in, 147  
*Assimilation* (Gorski), 50  
Austin, Paul, iii  
Avila, Manuel, 58  
Axial motifs, 12

**B**

*Ball Field* (Schaller), 31  
*Baltimore Performing Arts Center Competition* (Vignoly), 6  
Bank of England, 171–172  
*Barnard College, New York City* (Schaller), 146  
*Battersea Power Station Development Project* (Akers), 94  
Baudelaire, Charles, 45, 156  
Beary, John Lee, 141  
Beauty, defined, 91  
“Beauty of masses,” 162  
Beethoven, Ludwig van, 49  
*Belly of an Architect* (Greenaway), 141  
Benton, Thomas Hart, 16  
Bernolucci, Bernardo, 86  
Best Products Scores, 171  
“Big picture” approach, 18, 29  
*Bird’s-Eye View of the Bank of England, London* (Gandy), 171  
*Bird’s-Eye View of Villa Savoye* (Le Corbusier), 113  
*Blade Runner* (Scott), 140  
Blanc, Luis, 92, 167  
*BMC Real Properties Building, Houston, Texas* (Jameson), 74  
Boullee, Etienne-Louis, 95, 159–161, 166, 170  
Bradley, R. H., 20, 23  
*Brazil* (Gilliam), 140  
Bruegel, Pieter the Elder, ix  
Bridge forms, 8, 109  
*Bridge Habitat* (Woesz), 182  
“Building-as-a-garden,” 120  
Buildings, concepts of, 113  
*Built, the Unbuilt and the Unbuildable, The* (Habermann), 166  
Built environments, contrast with natural forces, 11  
Burden, Ernest III, 182

## C

CADD images, 69  
Canal, Giovanni Antonio, 164  
Capricci, 150  
*Capriccio Palladio’s Design for the Rialto Bridge* (Canalotti), 164  
*Caravaggio* (Jarmain), 141  
Carver, 150, 153, 184  
Cartesian geometry, 68  
*Cascade House* (Ringman), 11  
Castle (Decker), 39  
*Cathedral of Christ the King, Liverpool* (Lutyens), 118  
*Cathedral of Liverpool* (Farey), 112  
*Carroll Studio* (Dunnette), 169  
*Catacombe de Newton* (Buallee), 160, 166–167  
Cesar Pelli and Associates, 4

Chang, Amis Ili Tiao, 59–61  
Chapel at Ronchamp (Le Corbusier), 76  
Chartres Cathedral, 56  
Chernikov, Iakov Georgievich, 17  
*Chicago in the Future* (Avila), 58  
*Chicago Mile High Building* (Wright), 23, 175, 178  
*Chicago Tribune Building* (Ferriss), 131  
*Chicago Tribune Competition* (Zonk), 132  
Children’s drawings, 33–36  
expansion of motion in, 40–41  
*China Airport* (Dechi), 16  
*Chinatown* (Grubbs), 93  
*Chinese Gram Infrastructure* (Ratner), 7  
Circles, primal, 41  
Cities, ideal, 140  
*City, The* (Schaller), 168  
Civilization, relationship to architecture, xiii  
*Città Navigabile* (Rajkovich), 22  
Classicism, emotional power in, 124  
Closed building form, 38  
Cockerell, Charles Robert, 133  
Cocteau, Jean, 64  
Cole, Thomas, 111, 156–157  
Color, 81–88  
communication via, 15  
in describing space and form, 107  
emotional response to, 84  
in finished drawings, 144  
illumination and, 84  
importance of, 4  
tension in, 87  
*Columbia University School of Law* (Fernandez), 122  
Communication. *See also* Design communication  
in architectural artwork, 54  
via architectural forms, 141  
via drawing, 27  
in line-based media, 48  
via orthogonal drawings, 66  
*Compact Disc Case, The Four Nations Ensemble* (Schaller), 19  
Competition drawings, 133–139  
graphic information in, 134  
Complementary, of tones, 10  
*Compositional Intentions of Diverse Volumes with Decorative Coloring* (Chernikov), 17  
Computer graphics, 115. *See also* CADD images  
Concept, clarity of, 18  
*Concept Sketches, Proposed Book* (Sylvester), 34  
Conceptualist theory, 35–36  
*Confession of an English Opium Eater* (de Quincy), 153  
“Constellations,” 61  
Construction, advancements in, 179  
Content/intent interdependence, 53–55  
Contextual identity, 136  
Contextuality, understanding, 25–26  
Contrast, to focus attention, 145  
Costantino, Frank M., 14  
*Course of Empire: The Construction of Empire* (Cole), 156  
*Course of Empire: The Destruction of Empire* (Cole), 157  
Creation, process of, 165  
Creative endeavor, sequentiality of, 45  
Creative investigation, 115–116  
Creativity  
architectural artwork and, xiv  
process of, 114–115  
*Critique of Pure Reason* (Kant), 95

**D**

*Dakota Interior Perspective* (Koster), 61  
“Dark Brain of Piranesi, The” (Youscous), 149

- David, Jacques Louis, 84, 159  
 Day, Elizabeth Ann, 15, 65  
 Decker, Adam R., 35  
 Decker, Benjamin M., 39  
 Deen, Georgeanne, 16  
 DeKauning, William, 40  
 Delacroix, Ferdinand Victor Eugène, 84  
 de Quincy, Thomas, 153  
*Die Re Aduitutio* (Rajkovich), 21  
 Design  
 classicism in, 122–123  
 genesis of, 117  
 imaginary, 17  
 Design-based diaries, 82  
 Design communication, xi, 71  
 Design competitions, 132–139  
 Design/development team, 133  
*Design for The Magic Flute, Interior Court* (Schinkel), 111  
 Design impulse, 6  
*Developmental Design Sketch Studies* (Pelli), 117  
 "Diminution," 91  
 Directionality  
 hierarchy in, 71  
 idea of, 64  
*Disney Institute and Town Center Proposal* (Schaller), 125  
*Dominus Winery, California* (Pci), 114  
*Draughtsmen's Contract* (Greenaway), 141  
 Drawing. See also Architectural drawing; Children's drawings; Sketches  
 communication via, 27  
 as the language of architecture, 66  
 as a means of exploring design, 116  
 "perfect," 31–45  
 sequential nature of, 43  
 as storytelling, 88  
 census written word, 66  
 "Dreaming on paper," 23  
 Dubut, Louis-Ambroise, 98  
 Duchamp, Marcel, 91  
 Dammett, Lee, 103, 134, 169  
*Dynamics of Architectural Form* (Aarheim), 95
- E**
- Ecole des Beaux-Arts, 78, 121–123, 161  
 competition drawings from, 134–135  
 Eiffel Tower, 179  
 Elevational sketches, 121  
 Ellis, Havelock, 18  
 Emotion, in process drawings, 120  
 Emotive works, 113–114  
 Engineering, advancements in, 179  
 Enlightenment, 139, 160  
 "Entire truth" concept, 26, 43–44, 80, 180  
 Escher, Maurits Cornelius, 165  
 Essence  
 in art-making, 90  
 expressing, 47  
 visual representation of, 45  
 Essential theme, establishing, 49  
 "Exaggeration for effect," 145  
 Existence, ordering of, 29  
 Expression, 88–95  
 versus function, 94  
*The Reflecting Theatre of Bouffan* (Léonard), 162
- F**
- Fall of Babylon (Martin), 158  
 Fantastic Monuments (Prames), 61  
 Fahey, Cyril Arthur, 112, 177  
 Feuerherz, Andreas, 58, 107  
 Fernandez, John E., 18, 122, 125  
 Ferrer, Hampton, Queredo, and King Architects, 135  
 Ferrier, Richard B., 105, 135  
 Ferris, Hugh, 26, 43–45, 131, 179–181  
 Film, architectural artwork in, 139–143  
 FIRMX Architects, 133  
*Fond Citroën Bank and Trust Company Headquarters, Raleigh, North Carolina* (Schaller), 80
- First Metabolink, Manila (Schaller), 89  
 Fischer, Eric, 40  
*Fixing Our Future* (Grice), 70  
 Floor plan, 76  
*Flor Campi Suite* (Williams), 49  
 Follies, 169  
 Foothill, 154  
*Foothill Analog* (Willis), 154  
 Forest (Gorski), 51  
*Forest House* (Ringman), 11  
 Form, purity of, 161  
 Fort-Brescia, Bernardo, 5  
*Forty Story Building* (Decker), 35  
*Four Continents Bridge, Hiroshima, Japan* (Wines), 8  
 Fox & Fowle Architects, 85  
 France, architectural visionaries in, 159  
 Freelance perspectivists, 122  
 French Academy, 150  
*Friedrichstadt Piazzien, Berlin* (Schaller), 141  
 Fuller, Buckminster, 17, 62  
 Function, versus expression, 94
- G**
- Gandy, Joseph Michael, 73, 171, 172–173  
*George Mason University Prince William Institute Bonneville Center* (Fernandez), 123  
 Gilliam, Terry, 140  
 Glass, Philip, 143  
 Goethe, Johann Wolfgang von, 165, 168  
 Gorski, Gilbert, 50, 51  
 Gothic cathedral architecture, 52  
 Grand Prix de Rome, 123  
 Grand Tour, 150  
 Graphic communication, 66  
 Graphic depiction, genesis of, 64  
 Graphic information, in competition drawings, 134  
 Graphic visualization, value of, 127  
 Great art, characteristics of, 47  
*Great Perspective, The (Stamp)*, 173  
 Greek Revival style, 170  
 Greenaway, Peter, 141  
 Grice, Gordon, 28, 70  
 Ground line, 40  
 Grubbs, Christopher, 93, 129
- H**
- Habitable bridge, 180–183  
 Hadid, Zaha M., 41, 43  
 Half, Chris, 26  
 Haga Sophia, 101  
*Hancock Astoria, Boston* (Costantino), 14  
 Hancock tower, 14  
*Hans-Gert Jellen AIDS Memorial* (Hickes), 104  
 Harbison, Robert, 150, 165, 166, 167, 169, 170–171  
 Hardy Holzman Pfeiffer Architects, 87, 134  
 Harmony, beauty as, 91  
 Harmony/conflict duality, 52  
 Harrington, Sir John, 173  
*Hayden Planetarium, American Museum of Natural History* (Fernandez), 13  
*Hayden Planetarium, American Museum of Natural History* (Schaller), 68, 86  
 Hegel, G. W. E., 18, 64, 94  
*Hirsh, The*, 141  
 Hellmuth, Obata & Kassabaum Architects, 8, 9, 100, 126, 139  
 Hewlett, James, 135  
 Hicket, Andy, 104  
 Hiroshima Sea and Island Expo, 8  
 Hisao Koyama Atelier Architects, 138  
 History, critical theory of, 156  
*Ho Am Art Museum, Kyung Gi-Du, Korea* (Hu), 20  
*Humble Dramaatorium* (Blanc), 167  
*Humber High Rise Dwelling* (Blanc), 92  
*Hong Kong Soccer Stadium* (Sneary), 9  
 Hood, Raymond, 180  
 Hope, as the basis of art, 61  
 Horizontality, 68–73
- Horizontal plane, dominance of, 118  
 House (Schaller), 1, 42  
 Howell and Hood Architects, 131  
 Hudson River Valley School, 156  
 Hof, Peter, 26  
 Hugo, Victor, 156
- I**
- J. M. C. Office Tower, Kuala Lumpur* (Schaller), 79  
*Ideal English House* (Schaller), 155  
 Ideals, representing, 42  
*IGA Island 2003 Master Plan Competition, Blue/Green Metamorphosis, Dresden, Germany* (Wines), 119  
*H-10* (van den Hoed), 82  
*H-9* (van den Hoed), 9  
 Image (Schaller), 107  
 Image-making, versus building making, xi  
 Imaginary design, 17  
 "Inperfection," developing, 45  
 Infinite, artistic process and, 21  
 Ink line drawing, as an expressive tool, 58  
 Insetta, Michael, 12  
*Inspector's House at the Source of the Lane* (Léonard), 161, 162  
 "Intellectualist" theory, 35–36  
*Interior of an Egyptian Temple* (Wallcot), 83  
 Interior space. See also Space  
 light-filled, 67  
 sculptural, 13  
 International design competitions, 132  
 Interpretation, 88–95  
*Invenzione Capricci di Carceri* (Piranesi), 150, 153, 157–158, 168–169  
 Investigative process, 115–116  
 Ishiguro, Kazuo, 90  
 Isometric drawings, 118, 121  
 Iosaki, Arata, x  
 Irad, Robert, 143
- J**
- JFK International Airport Competition, New York* (Schaller), 52, 77  
 J. S. Polcheck and Partners, 13, 68, 86, 122, 123  
 James, Henry, xiv, 141  
 Jamieson, Douglas E., 74  
 Jarman, Derek, 141  
 Jeanneret, Charles-Edouard, 113  
 Johnson, Ralph, 54, 55  
 Johnson/Wierzbich Architects, 61
- K**
- Kahn, Louis, 76  
 Kanner Associates, 16  
 Kant, Immanuel, 84, 95  
 Keating Mann Jerigan Rotter Architects, 74  
 Kinetic art forms, 22  
 Koestler, Gregory T., 61  
*Kohn Pedersen Fox, Architecture & Urbanism 1986–1992*, 52  
 Kohn Pedersen Fox Architects, 3, 18, 52, 53, 65, 67, 75, 77, 80, 89, 99, 125, 136, 138, 146  
 Kunwenn International Architects, 56  
 Kyu Sung Woo Architects, 26
- L**
- LA 2015* (Mead), 103  
*La Defense Competition, Paris* (Schaller), 4  
*La Finesta del Porta a NY con la mano del Santo* (Rouai), 44  
 Landscape paintings, 16  
 Lang, Fritz, 139  
 Laotzu, 59  
*Large Glass: Hancock Tower* (Yamamoto), 91  
 Le Corbusier, 76, 113, 129  
 Ledoux, Claude-Nicolas, 159, 161, 162–163, 177, 178  
 Lemagny, Jean-Claude, 159, 162  
 LeQuen, Jean-Jacques, 163–164

- "Less is more" principle, 59, 66
- Len/Smith Architects, 6
- LIFE Magazine Dreamhouse* (Schaller), 100
- Light, 74–80. *See also* Tonality; Tone  
as essential, 56  
in finished drawings, 143, 144  
natural, 77, 89  
nature of, 76  
as a symbolic device, 108
- "Light composition," 76
- Light control, in free-hand ink line, 56
- Light/dark dualism, 47, 78
- Line, 62–71  
directionality of, 66  
as the genesis of graphic depiction, 64  
visual form and, 69
- Linear perspective, 64, 68–71
- Line-based work, 58, 78  
as an abstract approach, 74–76  
communicative potential of, 48
- Log books, architectural, 82
- Lorenz, Albert, 49
- Lovelace, Richard, 127
- Lutyens, Sir Edwin, 112, 118
- M**
- Machin Age, 119
- MacNeil, Ian, 141
- Madison Square Garden Redevelopment* (Schaller), 60
- Mahaux, André, 26–27, 29, 47, 55, 170
- Man, anti-determinist view of, 20
- Manichean dualism, 78
- Man-made/natural dialog, 120
- Marketing, architectural artwork for, 136–137
- Martin, Albert C., 15
- Martin, John, 158
- Matisse, Henri-Emile Benoît, 84
- Mead, M., 103, 140
- Media  
appropriate handling of, 134  
choice of, 56  
in finished drawings, 143, 144  
for sketches, 130
- Media techniques, 115
- Megaworld Place, Manila* (Schaller), 69
- Menang Lagam Resort, Malaysia* (Grahlis), 129
- Mercer, Henry, 154
- Metropolis* (Lang), 139
- Metropolitan Opera, 142–143
- Mies van der Rohe, Ludwig, 115, 124
- Mile-high building, 23, 173, 178
- Mixed media "events," 83
- Miyagi Arena* (Shitai), 137
- Mnemotech Center, International Ideas Competition, Italy* (Greece), 28
- Monet, Claude, 40
- Momoen Restaurant and Bar, Japan* (Hadid), 43
- Monument (Tchoban), 152
- Monument for Thelma and Louise* (Yamamoto), 177
- Morm, Robert, 102
- Motion, expression of, 40–41
- Mragna Architects, 28
- Musé  
essential theme in, 49–52  
leitmotif in, 88  
tension in, 52
- Myth-making structures, 179
- Myth of Babel, 104, 140, 178, 179
- N**
- Nagoya Building, Nagoya, Japan* (Schaller), 74
- Naïve works, 37
- Nakamura, Mōritoshi, 104, 138
- "Narrative" arts, 88
- National Air and Space Museum, Washington D.C.* (Schaller), 100
- National Cowboy Hall of Fame Addition Competition* (Ferrier), 135
- Nature, exploration of, 11
- "Negative" space, 40, 105
- Neoclassicism, 122, 150, 159
- Newton, Isaac, 62, 160
- New York Botanical Garden* (Schaller), 90
- New York Zoning Law, 181
- Nietzsche, Friedrich Wilhelm, 64, 80
- "Non-architectural" images, 81
- Non-object spaces, 59
- NTT project (Tokyo), 117
- O**
- Object, versus process, 19
- "Objective description," 59
- Objects, identifying, 83
- Odyssey Project* (Schaller), 2, 176
- Ojo de Diu, Tum, New Mexico* (Olei), 20
- Oles, Paul Stevenson, 20
- Operatic stage design, 142–143
- Order  
beauty as, 91  
human endeavor toward, 27
- O'Hare International Airport* (Johnson), 54, 55
- Organic Bridge* (Bünden), 182
- Orlando Furioso* (Ariosto), 73, 173
- Orphens in Orlando* (Schaller), 97
- Orthogonal drawings, 63–66  
toned, 78
- Orthogonal plans, 118
- P**
- "Painting with light," 76–78
- Palladio, Andrea (Andrea di Pietro della Gondola), 150
- Pantini, Giovanni Paolo, 150
- "Paper architecture," 23, 150, 175
- Parameters, choice of, 27
- Parker, Steve, 8, 126
- Part Dieu Competition, France* (Schaller), 57
- Portana Building, Bangkok* (Schaller), 145
- "Pattern clues," 17, 62
- Pedersen, William, 12, 52, 119
- Pei, I. M., 14, 114
- Pei Cobb Freed Architects, 141, 145
- Pelli, Cesar, 117, 180
- Perception  
alternative, 34  
of color, 84–86  
genesis of, 35  
process of, 37–40  
research on, 64  
of space, 62  
visual organization of, 71
- Perceptual development, process of, 43
- Perceptual dynamics, 94
- Perceptual view, 36
- Perfection  
in drawing skills, 31–45  
struggle toward, 21–22
- "Perfect" works, 167–168
- Perkins & Will Architects, 54, 55
- Perspective  
skewed, 16  
three-point, x
- Perspective drawings, 121, 123, 124–126
- Perspective sketches, 13, 118
- Perspectivists, hired, 127
- "Philosophy of intragidity," 59
- Picasso, Pablo, 64
- Piranesi, Giovanni Battista, xi, 124, 149–159,  
183  
impact of, 156, 157, 169
- Pitt, Arthur Beesley, 48
- Plan-based sketches, 118, 121
- Plane, 62
- "Poetry of architecture," 161
- Pollack, Jackson, 60
- Polka's Home* (Deen), 16
- Portofino Group, 5
- Preliminary Sketch for the Walter Drexler House, Gena, Germany* (Mies van der Rohe), 115
- Presentation drawings, 128
- "Primal" colors, 85–86, 87, 88, 108
- Primalglimmer (Rizzoli), 110
- "Primal light," 47, 52
- Prima Parte di Architettura e Prospettive* (Piranesi), xi, 150, 151
- "Primitive" drawings, 33
- Prioritization, sense of, 55
- Prisoners on a Projecting Platform* (Piranesi), 151
- Private Residence, Naples, Florida* (Schaller), 98
- Prix de Rome, Génie Public* (Dahut), 98
- Process  
as inspiration, 56–57  
versus object, 19
- "Process" drawings, 116, 120, 123–124,  
131–147, 157  
nature of, 128
- Progress, social, 20
- Proposal by Raymond Hord: Apartment on Bridge* (Ferrier), 184
- Proposal Archaeology Museum, Crete* (Schaller), 109
- Proposed Arts and Culture Center, Rome* (Schaller), 168
- Proposed City Center Competition, Kuala Lumpur* (Schaller), 138
- Proposed Cliff Structure, China* (Schaller), vi
- Proposed Corporate Headquarters, Armonk, New York* (Schaller), 18
- Proposed Development, Newport Beach, California* (Schaller), 4
- Proposed Hydroponics Research Facility, Uruguay* (Schaller), 107
- Proposed Performing Arts center, London* (Schaller), 25
- Proposed Plaza, Olympia 2000, Istanbul* (Schaller), 101
- Proposed Residential Span, Southwestern United States* (Schaller), 109
- Proposed School of Business, Ohio State University* (Schaller), 140
- Proposed Stadium, Olympics 2000, Istanbul* (Schaller), 143
- Proposed Stage Set, "Death in Venice"* (Schaller), viii
- Proposed Stage Set, Roman Triptych, Siegburg* (Schaller), 106
- Proposed U.S. Ambassador's Residence, Kuwait* (Schaller), 144
- Public and Private Buildings* (Gandy), 172
- Puebla New Town, Puebla, Mexico* (Parker), 8
- R**
- Rajkovich, Thomas Norman, 23
- Rasmussen, S. L., 29
- Rather, Barbara Worth, 7
- Reality  
representations of, 62  
sensitive experience as, 20–21
- Reductum process, 27
- Relative perception, 62
- Relative space, 62, 69
- Remains of the Day* (Ishiguro), 90
- Rembrandt Harmenszoon van Rijn, 76–78
- Renaissance in New York* (Lorenz), 49
- "Rendering," 54
- Representation. *See also* Architectural representation  
clarity in, 35, 37  
conventions of, 21  
of the general, 40  
hierarchy of, 55
- Resort Hotel Proposal, Portugal* (Schaller), 5, 37
- Reverse silhouette, 100
- Richard Dattner Associates, 90
- Richard Meier & Partners, 98
- Ringman, Samuel, 11, 28
- Rizzoli, Achilles G., 110, 173–178
- Robbins, Edward, 110
- Rockwell Group, 94
- Roman forms, 100
- Romantic classicism, 159, 161, 166
- Roene, Piranesi's views of, 150–151
- Rosner, Joyce, 102
- Rossi, Aldo, xii, 6, 10, 31, 44
- Royal Academy (London), 170

Royal Exchange, London (Cockerell), 133  
RTKL/Washington Architects, 144  
Ruins, Romantic notion of, 169

## S

Santama Arts Theatre (Nakamura), 138  
Sarita, Jean-Paul, 20  
Sayer, Thomas J., 41  
Schaller, Nathan T., 31  
Schaller, T. W., in, xiii, 1, 2, 3, 4, 5, 18, 19, 25,  
37, 42, 52, 53, 57, 60, 63, 67, 68, 69, 75,  
77, 79, 80, 80, 85, 86, 87, 89, 90, 97, 98,  
99, 100, 101, 106, 107, 108, 125, 136, 138,  
140, 141, 143, 144, 145, 146, 155, 168, 176  
Schinkel, Karl Friedrich, 111, 166  
Scholl, Cathie, 31  
School of Constantinople, 173  
Scott, Ridley, 140  
Seeing, alternative ways of, 34  
Sentient experience, 20–21  
Scriptograph 9202 (Inertia), 12  
Shape  
    classical view of, 84  
    tone and, 83  
*Sheltering Sky, The*, 88  
*Sheeter Island House* (Petersen), 12  
Shirai, Hideo, 137  
Silhouetting, 145–146  
    visual identity and, 75  
*Silver Screen Junction* (Parker), 126  
Simons-Eastern Architects, 7  
Singapore Performing Arts Center (Schaller), 67  
*Sir John Soane, Public and Private Buildings*  
(Gandy), 172  
Sketches, 113–130  
    nature of, 128  
    perspective, 118  
    by Piranesi, 149  
    value of, 126–127  
Skewed perspective, 16  
Skidmore Owings & Merrill Architects, 60, 63,  
69  
Skyscraper identity, 12  
Skyscrapers, 179, 180  
Slursky, Rael, 56  
Smeary, Richard, 9  
Soane, Sir John, 170–171, 172–173  
*Solo Home* (van den Hoed), 38  
*Southern View of Coss's Stable on a Cool Meadow*  
(Lei Qian), 163  
*South Orange County Regional Civic Center, Calif.*  
(Day), 15  
*South Pointe Development Competition* (Wood-  
house), 5  
Space, 59–62  
    “negative” of, 61  
    perceptions of, 62  
    as a tangible entity, 62  
    understanding, 59–61  
    unexpected ways of imagining, 34  
Spark Park, Houston, Texas (Rosen), 102  
Spatial cues, exaggerating, 63  
“Spectral journey,” 86–87  
Spont, visual representation of, 45  
Spontaneous perception, 41  
*St. Nicholas, Madison Square, New York City*  
(Dummette), 103  
Stage design, 141–143  
Stamp, Gavin, 173  
Stang and Newdon Architects, 101, 103  
Stevens, Wallace, 27, 62  
Stetson, Virgilis, 86–88  
Storytelling, color in, 84  
*Strivers' Century Garden, New York City* (Schaller),  
80  
Structure, search for, 51  
Structure/context relationship, 113  
Structures, perspective interpretation of, 143

*Studio di l'Architetto Assinante* (Rossi), sic  
Subjective expression, 73–95  
Subjectivity, viewer, 168  
Summerson, John, 173  
Sun power, 76  
Surface, delineating, 74  
Sylvester, David, 34  
Symbol, communication and, 66

## T

*Tao of Architecture, The* (Chang), 59  
Tao Te Ching, 59  
Tchoban, Sergei, 152  
*TCU Performance Center, Fort Worth, Texas*  
(Schaller), 87  
Technique, underplaying of, 57–58  
*Telecommunications Tower, Jakarta* (Schaller), 63  
“Temperature” variations, 146  
*Tennessee Aquarium IMAX Building, Chat-  
tanooga, Tennessee* (Wines), 120  
Tension  
    in architecture, 52  
    concept of, 47  
*Testament, A* (Wright), 23  
*Things to Come* (Wells), 139  
“Thinking on paper,” 114, 129  
“Thinking with a pencil,” xiv, 6, 24  
*Third Government Center Competition, Korea*  
(Slursky), 56  
*Third Man, The*, 58  
Thorsen, Christian W., 178  
*Three Manhattan Waterfront Views* (Lovelace),  
127  
Three-point perspective, x  
*Tokyo City Hall* (Iwasaki), x  
*Tokyo International Fashion Competition, Tokyo,*  
Japan (Vigholy), 121  
*Tomb of Merlin* (Gandy), 73, 172, 173  
Tonality. *See also Light*  
    expressiveness of, 78  
    warm, 145  
    warm versus cool, 2, 3  
Tone  
    complementary, 10  
    cool, 146  
    in finished drawings, 144, 145  
    as an indicator of shape, 83  
Tone drawings, 74  
    perspective based, 78–80  
*Touza* (Puccini), 143  
*Tower of Babel*, 178–179  
*Tower of Babel* (Bruegel the Elder), ix  
*Tower of Babel* (Escher), 165  
*Tower of Babel* (Nakamura), 104  
Towers, myth-forming functions of, 178  
Tsao & McKown Architects, 79  
Turner, Joseph Mallord William, 76–78  
Two-dimensional works, 66–68  
    totalities in, 81–82

## U

*U.S. Federal Courthouse Competition, New York*  
(Day), 65  
*U.S. Federal Courthouse Competition, New York*  
(Schaller), 29, 136  
*U.S. Federal Office Building Competition, New*  
York (Schaller), 136  
“Unbuildable buildings,” 166  
*Unfinished architecture portfolio*, 159  
*University of Pennsylvania* (Schaller), 53  
“Universal” things, imagining, 23  
*Untitled* (Rossi), 10, 31  
Urban-allegory paintings, 16  
Urban site, design response to, 25  
Urbanism, considerations of, 114  
Utopian cityscapes, 180  
Utopian visionaries, 165–184

## V

*Valhalla of the Americas, Texcoco, Mexico*  
(Schaller), 106  
Value range, “direction” of, 147  
van den Hoed, Willem, 9, 38, 82  
*West Interior with Temple* (Schinkel), 166  
Yodutama, 150  
Venice, creative influence of, 150  
Venturi, Scott-Brown, Anderson/Schwartz  
Architects, 101, 142  
Verticality, 68–71  
Viewers, emotional response of, 83  
Views. *See also Perspective*  
    choice of, 6, 14  
    composite, 15  
Vignoli, Rafael, 6, 121, 142  
Vision  
    clarity of, 47  
    imaginative, 24  
“Visionary architect,” 159  
*Visionary Architect* (Thorsen), 178  
Visual perception, light and, 76  
Visual representation. *See also Representation*  
    of essence, 45  
    essentials of, 40  
    idea investigation via, xiv  
    line drawing and, 64  
Vitruvius Group, 15  
*Voices of Silence* (Maleau), 26–27  
Volume, essence of, 60  
*Voyage, The* (Glast), 143

## W

“Walk-through,” 6  
Wallcot, William, 83  
Washington Square, 141  
Watercolor, 8  
    in finished drawings, 144  
    perspectives in, 112  
    sketchwork in, 130  
*Wayufund Competition, Shanghai, China*  
(Schaller), 87  
Wedlick, Dennis, 100  
Wells, H. G., 139  
*West End Club-House* (Pite), 48  
*Whitehall Ferry Terminal Competition* (Schaller),  
101, 142  
*Whitehall Terminal Competition* (Diamanté), 134  
*Why Architects Draw* (Robbins), 116  
Williams, Ralph Vaughn, 49  
Willis, Dan, 158  
Wilson-Ely, John, 149, 150, 151, 153, 158, 167,  
184  
Wimberly Allison Tong & Goo Architects, 129  
*Wind, The* (Sayres), 41  
*Windows and Fragments: Memory and Desire* (Fer-  
rier), 105  
*Windows and Fragments* series (Ferrier), 105  
Wines, James, 8, 119, 120, 171  
Woest, Kevin, 182  
Woodhouse, Curtis James, 5  
Woods, Lobbeus, 180  
World, dualistic view of, 52  
Wright, Frank Lloyd, 2, 23, 124–126, 175–178,  
176

## Y

Yamamoto, Tamotsu, 91, 177  
Youscenar, Marguerite, 149, 152, 153, 183

## Z

Zeffirelli, Franco, 143  
*Zonius Envelope* (Ferriss), 181  
Zoek, Hamid R., 132

# WILHELM

WILHELM WILHELM WILHELM

WILHELM WILHELM WILHELM

WILHELM WILHELM WILHELM

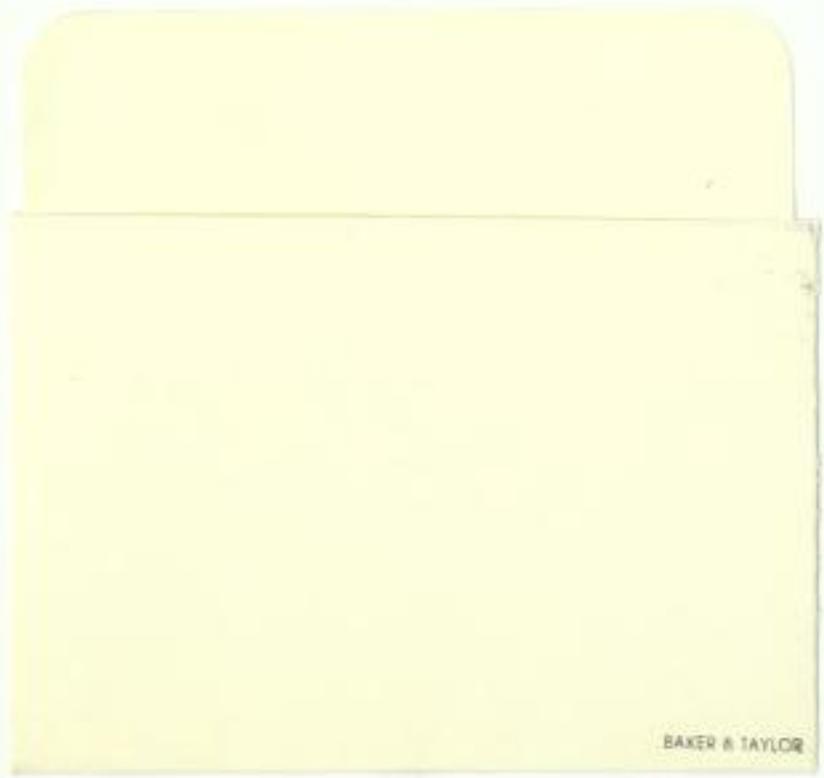


3 9999 03124 325 4

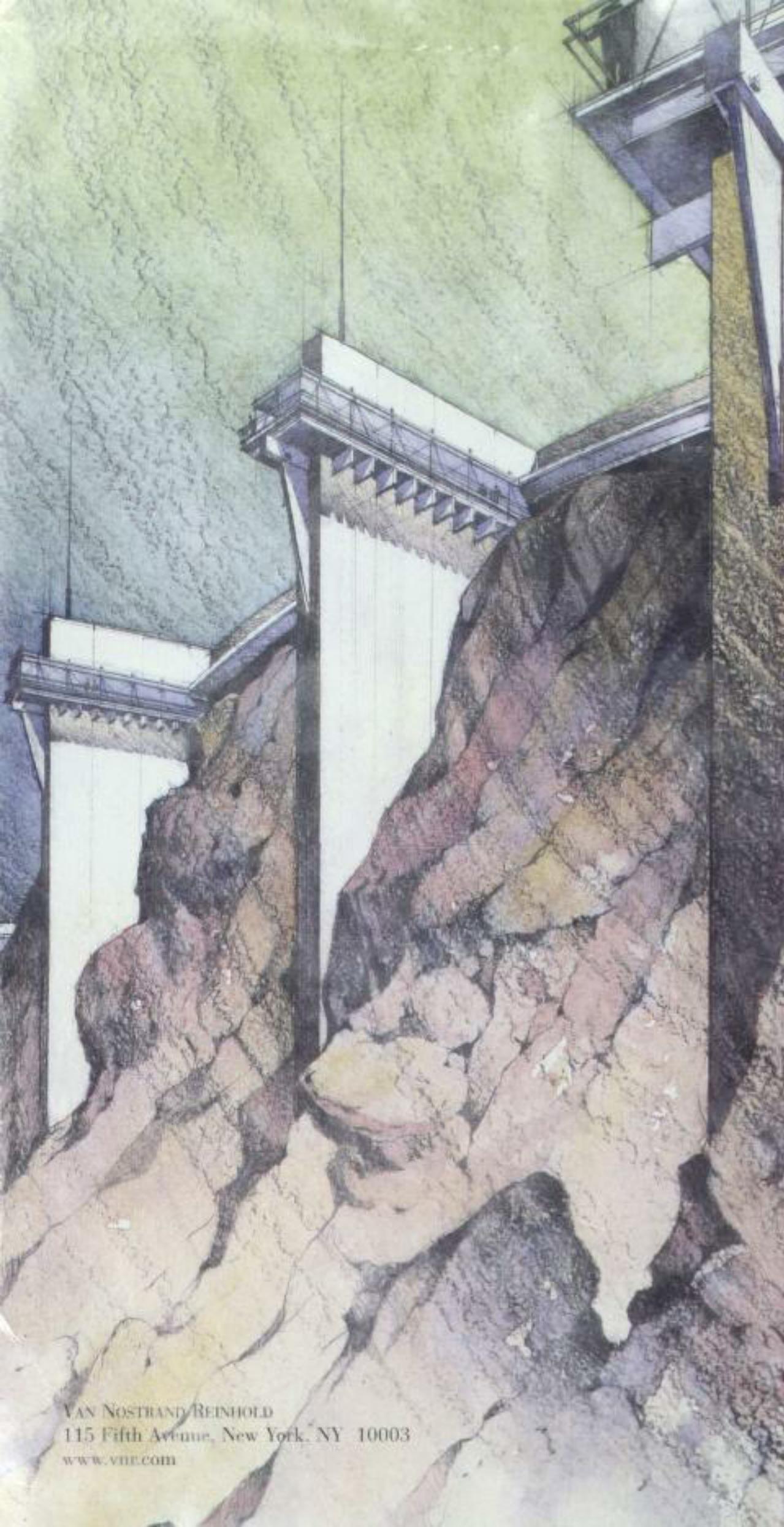
**WITHDRAWN**

No longer the property of the  
Boston Public Library.

This material benefits the Library.



BAKER &amp; TAYLOR



VAN NOSTRAND REINHOLD  
115 Fifth Avenue, New York, NY 10003  
[WWW.VNR.COM](http://WWW.VNR.COM)

*I find it highly engaging and very readable. Tom Schaller has amassed a wealth of material and references to engage the reader with aspects from history, perception and psychology, fine arts painting, architectural illustration, and on and on. This is a very inspirational work...it's a winner!*

—Harold Linton, Assistant Dean, College of Architecture and Design, Lawrence Technological University

*If erudition, originality, energy and output could be claimed to constitute heat, then Tom Schaller is the hottest perspective of the nineties.*

—Paul Stevenson Oles, FAIA

ISBN 0-442-00993-3

90000



9 780442 009939