

# Urban Planning Guide

Revised Edition

Prepared by the  
Task Committee to Prepare a Planning Guide  
of the  
Urban Planning and Development Division  
of the  
American Society of Civil Engineers



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## ABSTRACT

More than any other profession, civil engineers are concerned with infrastructure, the fabric of urban life. Planning for maintenance and expansion of the nation's infrastructure is the subject of this book. The focus of this manual is the practical use of planning tools to solve real life problems. It provides the reader with a broad overview of the planning process and what factors or issues are of particular concern. The first three chapters deal with planning and the planning process in general, describing the process that any planning study must follow from data collection to implementation. The rest of the book covers urban planning in specific areas including land use, housing, urban transportation, intercity highways, airports, railroads, ports, community services facilities, water resources, parks, wastewater management, solid wastes management, energy, environment, and capital improvement programs.

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# MANUALS AND REPORTS ON ENGINEERING PRACTICE

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Furthermore, material in this series, in distinction from a paper (which expresses only one person's observations or opinions), is the work of a committee or group selected to assemble and express information on a specific topic. As often as practicable the committee is under the general direction of one or more of the Technical Divisions and Councils, and the product evolved has been subjected to review by the Executive Committee of that Division or Council. As a step in the process of this review, proposed manuscripts are often brought before the members of the Technical Divisions and Councils for comment, which may serve as the basis for improvement. When published, each work shows the names of the committees by which it was compiled and indicates clearly the several processes through which it has passed in review, in order that its merit may be definitely understood.

In February 1962 (and revised in April, 1982) the Board of Direction voted to establish:

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\*Numbers 1,2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 32, 38, 43, and 48 are out of print.

## Dedication

This Manual of Practice is dedicated to Roland J. Frappier (December 13, 1947–December 7, 1984), a committed member of ASCE's Urban Planning and Development Division, who contributed significantly to the preparation of this publication, both as an author and as an ex-officio member of the Peer Committee. As Assistant Chief of the Rhode Island Statewide Planning Program, Roland exemplified dedication to the planning profession and will be missed by all who knew and worked with him.

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# Acknowledgments

In an undertaking of this nature and scale, there are such a large number of contributors that they cannot possibly all be named here. The work could never have been completed without unselfish and dedicated efforts by many, from authors to reviewers to typists. However, special recognition is deserved by a number of groups and individuals for their long-term commitment to this important effort.

First, to the authors, who each put a great deal of effort into the development of high quality chapters, which collectively add significantly to the base of ASCE publications. Special thanks are due to the authors for their dedication in faithfully incorporating the revisions suggested by the Peer Committee.

Second, to the Peer Committee, who reviewed the Planning Guide and without which this project would never have been completed. For a whole year, the Committee read, reread and “re-reread” a massive amount of material. Throughout, the Peer Committee maintained high standards, commenting on each chapter in detail. Their comments were consistently thoughtful, insightful, detailed and specific, making it easy for authors to respond. The members of the Peer Committee are as follows:

Ruth Fitzgerald—Chairman  
Wayne C. Allinson—UPD ExCom Representative  
William H. Claire  
George D. Barnes  
Daniel W. Varin  
Roland J. Frappier

We were indeed fortunate for the purposes of continuity that Bill Claire was able to serve on the Peer Committee for this effort, as he served as editor of the original *ASCE Planning Guide*.

Third, to the members of the Task Committee to Prepare a Planning Guide, listed below, who worked so hard to formulate the *Planning Guide* approach and to bring it to fruition. Many from this Task Committee also served as authors of various chapters.

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Thomas Debo	John Mackie	Paolo Ricci
Ruth Fitzgerald**	Robert McMahon	John Schoon
Sigurd Grava	James Meek	Gene Willeke
Richard Howe*	Michael Meyer	
James Hudson	John Morrison	

\*First Chairman

\*\*Second Chairman

Fourth, to the Executive Committee of the Urban Planning and Development Division, who did not hesitate to provide support to the *Planning Guide* effort despite many delays and changes during the process. Special acknowledgement is given to Richard S. Howe and Wayne C. Allinson, who provided wholehearted support for this effort during their terms as Chairmen of the Executive Committee. Dick Howe originally conceived the idea of this new *Planning Guide*, and first chaired the Task Committee charged with its development.

Final thanks belong to my employer and to the employers of all other major participants who supported our efforts for the duration of this project.

A. Ruth Fitzgerald  
CE Maguire, Inc.  
New Britain, Connecticut  
January, 1986



# Preface

In 1969, the *Urban Planning Guide* was published by ASCE as Manual of Practice No. 49. This timely publication attempted to set forth the planning precepts of the time and was a popular and widely read document. After more than a decade of use, ASCE's Urban Planning and Development Division decided to either update the 1969 *Urban Planning Guide* or replace it with a new Planning Guide expanded to cover more of the current complexities of the planning field. The decision was made at that time to pursue the latter route, and a Task Committee was appointed to formulate and carry out the process.

The current *Planning Guide* contains a total of eighteen chapters. The first three chapters deal with planning and the planning process in a generic way, describing the process that any planning study must follow, from data collection to development of implementation measures. The last fifteen chapters are devoted to various specific technical subareas of planning, such as urban transportation planning, solid waste planning, and the environmental assessment process.

Although the *Planning Guide* contains eighteen different chapters, fifteen of them covering technical "subareas" of planning which may be of interest to planners and civil engineers, it makes no claim to full comprehensiveness.

The strong focus of this *Planning Guide* is the practical use of planning tools to solve real life problems. It is intended to be a handbook for practitioners rather than an investigation of planning theory. As such, the information provided in each chapter is not intended to add a new dimension to the field or to provide a step-by-step "cookbook" for carrying out planning studies, but rather to provide the reader with a broad understanding or overview of how the planning process applies to that field and what factors or issues are of particular concern. It is hoped that this *Planning Guide* will not only be useful to practitioners, but that it will serve as a text for use in engineering and planning curricula.

More than any other profession, civil engineers are concerned with infrastructure, the fabric of urban life. Planning for the maintenance and expansion of the nation's infrastructure is the subject of this guide.

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