

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

A METHODOLOGY FOR SEISMIC DESIGN AND CONSTRUCTION OF SINGLE FAMILY DWELLINGS

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series, and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product.

This is a three volume set. This volume of the report presents the results of an indepth effort to develop design and construction practices for single family residences that minimize the potential economic loss in the life loss risk associated with earthquakes. The report:

- o Discusses the way structures behave when subject to seismic forces;
- o Sets forth suggested design criteria for conventional layouts of dwellings constructed of conventional materials;
- o Presents construction details that do not require the designer to perform analytical calculations;
- o Suggests procedures for efficient plan checking; and
- o Presents recommendations including details and schedules for use in the field by construction personnel and building inspectors.

Copies of the study may be obtained free of charge from the Division of Product Dissemination and Transfer, Assistant Secretary for Policy Development and Research, Department of Housing and Urban Development, Room 8126, 451 7th Street, S. W., Washington, D. C. 20410 (202) 755-5544. This publication is for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., Stock No. 0-731-951/155, 1977.

DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT

AUG 22 1978

WASHINGTON, D.C. 20410

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

A METHODOLOGY FOR SEISMIC DESIGN AND CONSTRUCTION OF SINGLE FAMILY DWELLINGS: COST IMPACT ANALYSIS

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series, and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product. Information on how to obtain the full report is provided below.

This report presents the results of a detailed analysis of the increased costs imposed by the earthquake resistive construction recommendations specified in the report titled "A Methodology for Seismic Design and Construction of Single Family Dwellings."

Copies of the study may be obtained free of charge from the Division of Product Dissemination and Transfer, Assistant Secretary for Policy Development and Research, Department of Housing and Urban Development, Room 8126, 451 7th Street, S. W., Washington, D. C. 20410 (202) 755-5544. The publication is for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., Stock No. 0-731/157, 1977.

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

A METHODOLOGY FOR SEISMIC DESIGN AND CONSTRUCTION OF SINGLE FAMILY DWELLINGS: SUPPLEMENTARY ENGINEERING ANALYSIS REPORT

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series, and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product. Information on how to obtain the full report is provided below.

This report presents the engineering basis for the report titled "A Methodology for Seismic Design and Construction of Single Family Dwellings." Included in this report are the engineering calculations, reasoning and/or reports of field observation that form the basis for the design and construction procedures recommended in the Methodology. The theory and design calculations given in this report include considerations of the overall structure, as well as specific construction detail. Discussions and calculations pertinent to the overall structure give the justification for the recommendations in the Methodology concerning shear wall and diaphragm layout for typical single family residences. Discussions in this report relevant to construction details are limited to those details which have not been previously used and are introduced by the Methodology or those details that represent a significant departure from previous construction practice.

Copies of the study may be obtained free of charge from the Division of Product Dissemination and Transfer, Assistant Secretary for Policy Development and Research, Department of Housing and Urban Development, Room 8126, 451 7th Street, S. W., Washington, D. C. 20410 (202) 755-5544. This report is available through the U. S. Government Printing Office, Washington, D. C. 20402, Stock No. 0-731-952/156, 1977.

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

HOUSING LISTENING POST

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series, and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product. Information on how to obtain the full report is provided below.

"The Housing Listening Post Final Report" describes the establishment and operation of a statewide housing information and referral service. This service was provided through a demonstration project contract between the Department of Housing and Urban Development and the State of Washington.

Primary purposes of the demonstration were to test the effectiveness of such a program in helping persons with housing or housing-related problems and to examine the use of volunteers, particularly elderly persons, in an information and referral service.

Included in the report is information on operations, administration, cost factors, community outreach, and expansion of the concept. The report describes the project's growth to eventually handle 1600 cases per month, and in the 29 months of the contract, project staff responded to 23,000 calls. Particularly important are the favorable results of an independent evaluation of the project, indicating that the Listening Post was a highly cost effective tool in rendering an important service.

The publication is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., Stock No. 023-000-00333-3, Report completed May 1976.

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

"IN THE BANK . . . OR UP THE CHIMNEY?" A DOLLARS AND CENTS GUIDE TO ENERGY-SAVING HOME IMPROVEMENTS

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series, and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product. Information on how to obtain the full report is provided below.

This book tells how to caulk the openings in your home, weatherstrip your doors and windows, install storm doors and windows, buy insulation, insulate your attic, determine need for a vapor barrier or more ventilation for your attic, insulate your walls, insulate your crawl space, insulate your floor, and insulate your basement walls. It also tells you how to save energy with your heating, air conditioning and water heating systems, as well as choosing a contractor and getting financing.

The book assists you in evaluating your home to determine exactly which of the energy-saving improvements would be best for you. A method is provided for you to calculate the cost on each of the improvements and by means of an Energy Check-list you can identify the yearly and net savings to be gained.

Copies of the detailed dollars and cents manual or an 8-page summary may be obtained free of charge from the Division of Product Dissemination and Transfer, Assistant Secretary for Policy Development and Research, Department of Housing and Urban Development, Room 8126, 451 7th St., S. W., Washington, D. C. 20410, (202) 755-5528, or from the Superintendent of Documents, Government Printing Office, Washington, D. C. 20402, Stock No. 0023-000-00-411-9.

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

A METHODOLOGY FOR SEISMIC EVALUATION OF EXISTING MULTI-STORY RESIDENTIAL BUILDINGS

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series, and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research project. Information on how to obtain the full report is provided below.

This series of three manuals describes a method of structural analysis, design and analysis of costs for the determination of strengthening existing multi-story residential buildings to conform to the basic earthquake force requirements of the 1973 Uniform Building Code. The complete report is presented in three volumes, namely: Volume I - Methodology, Volume II - Computer User's Manual, and Volume III - Examples. The examples in Volume III illustrate both simplified and more complex evaluation of stress distribution in different types of multi-story residences.

The manuals are for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. The Stock Numbers are as follows:

Volume I - Methodology: 023-000-00441-1
Volume II - Computer User's Manual: 023-000-00442-9
Volume III - Examples: 023-000-00443-7

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

HOUSING ALLOWANCE DEMAND EXPERIMENT — FOURTH ANNUAL REPORT AND PRELIMINARY FINDINGS

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series, and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product. Information on how to obtain the full report is provided below.

Section 504 of the Housing and Urban Development Act of 1970 as amended in 1974 authorized HUD to establish the Experimental Housing Allowance Program (EHAP). The program consists of three separate but related experimental elements each designed to focus on a principal cluster of issues: (1) the Demand Experiments which examine how households respond to various types and levels of cash assistance; (2) the Supply Experiments that measure how housing markets respond to the additional demand created by assisted households; and (3) the Administrative Agency Experiments which provide information on different administrative approaches.

The Housing Allowance Demand Experiment — Fourth Annual Report and Preliminary Findings were prepared by Abt Associates, Inc., primarily to summarize the findings based on analyses completed to date.

The Fourth Annual Report provides information on:

- o the design of the Demand Experiment;
- o research findings about household response in the first year of the experiment;
- o experimental operations and data collection activities; and
- o the development and management of the data base used for analysis.

Issues covered in the findings include the initial housing conditions of eligible households, factors which affect household participation, and the impact of providing cash assistance in terms of their expenditures for housing, changes in their housing conditions, decisions about moving and locational choices.

Preliminary Findings, a separately bound document, is an executive summary of these findings.

Copies of the reports may be obtained free of charge from the Division of Housing Research, Assistant Secretary for Policy Development and Research, Department of Housing and Urban Development, Room 8138, 451 7th Street, S.W., Washington, D. C. 20410 (202) 755-5900. The Fourth Annual Report completed December 1977, 128 pp. Preliminary Findings completed March 1978, 21 pp.

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

VACANCY DURATION AND HOUSING MARKET CONDITION

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product. Information on how to obtain the full report is provided below.

Section 504 of the Housing and Urban Development Act of 1970 as amended in 1974 authorized HUD to establish the Experimental Housing Allowance Program (EHAP). The program consists of three separate but related experimental elements, each designed to focus on a principal cluster of issues: (1) the Demand Experiments which examine how households respond to various types and levels of cash assistance; (2) the Supply Experiments that measure how housing markets respond to the additional demand created by assisted households; and (3) the Administrative Agency Experiments which provide information on different administrative approaches.

"Vacancy Duration and Housing Market Condition" was prepared for HUD by the Rand Corporation as part of the Supply Experiment. It is an example of how EHAP findings can provide basic information regarding the structure and dynamics of housing markets. Such information will assist in the formulation of more effective housing policy.

This report examines measures used to characterize housing markets as "tight" or "loose." It shows that the average vacancy rate, the measure typically used, has some serious flaws. It is a "snapshot" of the market at one point in time and therefore does not take into account the rate at which the vacancies are filled. Vacancy duration, on the other hand, has a time-oriented perspective. It is suggested as a more sensitive and accurate measure of market condition than vacancy rate.

The accuracy of the two measures is tested using data from the Supply Experiment. The tests showed that vacancy duration had a stronger relationship to market value of properties in test neighborhoods than did vacancy rate.

The report provides national averages for vacancy rate, annual turnover and vacancy duration for both owner-occupied and rental housing as well as breakdowns by region of the country.

Copies of the report may be obtained free of charge from the Division of Housing Research, Assistant Secretary for Policy Development and Research, Department of Housing and Urban Development, Room 8138, 451 7th Street, S. W., Washington, D. C. 20410 (202) 755-5900. Report completed January 1978, 54 pages.

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

EXECUTIVE SUMMARY PHASE ONE/BASE DATA FOR THE DEVELOPMENT OF ENERGY PERFORMANCE STANDARDS FOR NEW BUILDINGS

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product. Information on how to obtain the full report is provided below.

This report documents the activities carried out in the first phase in the development of energy performance standards for new buildings as mandated under "Energy Conservation Standards for New Buildings Act of 1976," Title III of Public Law 94-385. The objective of the first phase was to document how much energy buildings are currently designed to use.

The procedures used in the development of the Building and Climate Classification Systems as well as sample selection, data collection and analysis are summarized.

Findings on the energy performance, or how much energy buildings are currently designed to use, are presented for each building type and climate classification.

The Executive Summary may be obtained by writing:

Energy Performance Standards
Phase One Executive Summary
Division of Energy, Building Technology
and Standards, Room 8158
Housing and Urban Development
Washington, D. C. 20410

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

EVALUATION OF THE URBAN HOMESTEADING DEMONSTRATION PROGRAM -- FIRST ANNUAL REPORT

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product. Information on how to obtain the full report is provided below.

In October 1975, the U. S. Department of Housing and Urban Development initiated a 23-city demonstration program in urban homesteading under the authority of Section 810 of the Housing and Community Development Act of 1974. Under the program, HUD-owned, single-family homes (including owner-occupied structures with up to four dwelling units) are transferred to units of local government. The cities then convey the houses, at nominal cost, to individuals who agree to rehabilitate them to local standards and occupy them for a minimum of three years. A continuing independent evaluation of the demonstration is being conducted for HUD by Urban Systems Research and Engineering, Inc., who prepared the First Annual Report.

The report contains a complete description of how the program has been implemented by the 23 participating cities. It includes discussions of the procedures and criteria used to select homesteaders from among the more than 22,000 applications that were received for the approximately 1,000 houses made available in the first round of funding. The techniques for administering the program, rehabilitating the properties, and providing for the rehabilitation financing are also explained.

In addition to these procedural aspects of the program, the report describes the characteristics of the selected homesteader families, other residents of the homesteading neighborhoods, and general characteristics of the neighborhoods.

The final chapter discusses the research issues which will be addressed in the remainder of the evaluation. Besides monitoring and evaluating the various implementation strategies employed by the participating cities, the study will include an impact assessment of the effectiveness of homesteading as a technique for assisting in neighborhood stabilization and for providing relatively low-cost housing for families. These analyses will be presented in future reports on various aspects of the demonstration and its effects.

The First Annual Report may be obtained free of charge from the Division of Product Dissemination and Transfer, Office of Policy Development and Research, U. S. Department of Housing and Urban Development, 451 7th Street, S. W., Washington, D. C. 20410. The Publication is for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402 (Stock No. 023-000-00439-9). Microfilm or photocopies are available for sale through the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22151 (Stock Number PB 27447/AS). The report was completed October 1977; 90 + xii pp.

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

THE URBAN HOMESTEADING CATALOGUE

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series, and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product. Information on how to obtain the full report is provided below.

The Urban Homesteading Catalogue is a three-volume summary of the experience of the 23 cities participating in HUD's urban homesteading demonstration being conducted under Section 810 of the Housing and Community Development Act of 1974. While Section 810 defined broad guidelines for urban homesteading, each city was left to design its own local program. The Catalogue provides an overview of important issues of program design, as well as practical information about the day-to-day tasks of program operation. It highlights key questions and explains how local administrators have adapted the homesteading concept to improve conditions in their cities.

The Catalogue is designed as a resource for anyone designing, operating or studying an urban homesteading program. It was compiled from interviews with administrators who are personally involved with homesteading; it offers important insights and useful first-hand perspectives.

The three volumes of the Catalogue are organized as follows: Volume 1 contains sections on program management, financing and managing rehabilitation, legal issues, and homesteading locally-owned properties; Volume 2 discusses the selection of neighborhoods, properties and families for homesteading; and Volume 3 summarizes the homesteading concept by tracing the history and experience of homesteading, and it contains profiles of the 23 demonstration programs.

Copies of the Catalogue are available free of charge from the Division of Product Dissemination and Transfer, Office of Policy Development and Research, U.S. Department of Housing and Urban Development, 451 7th Street, S.W., Washington, D.C. 20410. The publication is available for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (Stock Numbers: Volume 1 -- 023-000-00415-1. Volume 2 -- 023-000-00416-0; Volume 3 -- 023-000-00415-8). The Catalogue was completed August 1977. Volume 1, 260 pp.; Volume 2, 139 pp.; Volume 3, 169 pp.

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

FIRE SAFETY SYSTEMS ANALYSIS FOR RESIDENTIAL OCCUPANCIES

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series, and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product. Information on how to obtain the full report is provided below.

This two volume report details the development of a model for estimating and comparing the levels of fire safety for alternative design configurations. The model is designed to permit estimation of equivalency of fire safety levels obtained from design alternatives to the U.S. Department of Housing and Urban Development Minimum Property Standards. The model was developed using the systems approach whereby the interaction of all the structural components are considered rather than individual component specifications. The heart of the systems approach is a fire development model which simulates fire growth utilizing each state transition model. Human behavior is also simulated, as well as the interaction of fire behavior and human response. The building fire safety model is briefly described in Volume I, the "Users Progress Report" and is developed in more detail in Volume II: "Technical Supplement." Also included in the report are the results of tests to demonstrate the feasibility of approach. Finally the relationship of the MPS to this systems approach is discussed. Inasmuch as the testing of this methodology utilized hypothetical data the results presented therein should not be applied to actual situations.

Copies of the study may be obtained free of charge from the Division of Product Dissemination and Transfer, Assistant Secretary for Policy Development and Research, Department of Housing and Urban Development, Room 8126, 451 7th Street, S.W., Washington, D.C. 20410 (202) 755-5544.

The publications are for sale from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 by ordering as follows:

Volume I - Users Progress Report: 732-092/183
Volume II - Technical Supplement : 732-093/184

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

ALL-WEATHER MASONRY CONSTRUCTION: FIELD TESTING OF MASONRY

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series, and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product. Information on how to obtain the full report is provided below.

A field testing program allowed technical documentation of prevailing cold and hot weather masonry construction practices while monitoring temperature, humidity, and solar radiation effects on masonry soon after its construction. Ten geographical areas ranging from cold, dry Calgary, Alberta, and cold, wet Toronto, Ontario, Canada, to hot, dry Phoenix, Arizona, and hot, moist Clearwater, Florida, were site tested. Extremes experienced and monitored ranged from -30° F to 140° F, ambient or within the masonry.

The report documents observations and the influence of ambient conditions of the methods of masonry construction and the performance of the masonry soon after construction. The efficacy of protective covers, the early freezing of masonry, and enclosed construction climate conditions are reported and discussed. Laboratory and field fabricated and stored test specimens and assemblages provide valuable information regarding temperature and relative humidity of masonry construction. Through-the-wall monitoring of new masonry construction reflects the suitability of test equipment, while providing correlatable results with assemblages.

Copies of the study may be obtained free of charge from the Division of Production Dissemination and Transfer, Assistant Secretary for Policy Development and Research, Department of Housing and Urban Development, Room 8126, 451 7th Street, S. W., Washington, D. C. 20410 (202) 755-5528. The report is available through the U. S. Government Printing Office, 1977, 0-731-307/66.

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

THE ALL-WEATHER HOME BUILDING MANUAL

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series, and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product. Information on how to obtain the full report is provided below.

The All-Weather Home Building Manual is intended to provide builders in all parts of the country with information to reduce the adverse effects of bad weather on home building. The purpose of this manual is to reduce the cost of slowdowns and shutdowns in the industry by providing information that will enable more builders to continue production during periods of bad weather.

The Manual is organized into four major sections to facilitate its use by home builders as both a general and specific reference source. The four sections are titled: Cold Weather, Hot and Dry Weather, Wet Weather, and Weather Information Sources.

The information in the manual is based on numerous on-site interviews with home builders during actual adverse building conditions in cold weather, in hot and dry weather, and in wet weather. The information is also based on a complete detailed review of all pertinent literature in the United States, Canada and European countries concerning building during adverse weather conditions, a survey of several thousand home builders, interviews with building technique experts and the extensive knowledge and experience of the personnel of the National Association of Home Builders (NAHB) Research Foundation, Inc.

Copies of the study may be obtained free of charge from the Division of Product Dissemination and Transfer, Assistant Secretary for Policy Development and Research, Department of Housing and Urban Development, Room 8126, 451 7th Street, S.W., Washington, D.C. 20410 (202) 755-5544. The Manual is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, Stock Number 023-000-00339-2.

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

ENERGY CONSERVATION CHOICES FOR THE CITY OF PORTLAND

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series, and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product. Information on how to obtain the full report is provided below.

As part of its State and Local Government Capacity Building Program, HUD funded the City of Portland, Oregon to develop and institute a comprehensive energy conservation plan for the City that would be transferable to other jurisdictions. Portland developed a comprehensive analysis of community energy use, identified numerous methods of improving the efficiency of that use and defined specific roles for local government in the conservation process. The City is actively implementing the plan estimated to produce energy savings of over 34% of its 1995 energy demand. The project reports are unique in both their depth and scope and provide one of the best sources of information on a comprehensive set of local government conservation choices, costs, benefits and impacts available anywhere in the Nation.

The eleven Energy Conservation Choices for the City of Portland reports are available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Va., 22161, (telephone (703) 557-4650).

Volume 1: Preliminary Energy Data and Analysis (NTIS Ordering No. PB-276779/HUD) details the collection of historic data on community energy use patterns in the various consumption sectors: residential, transportation, commercial, industrial and governmental. Data sources, methods of collection and the problems of working with secondary data are presented.

Volume 2: Energy Information Retrieval System (NTIS Ordering No. PB-276780/HUD) presents the design, developmental history and evaluation of an information retrieval system for energy conservation literature based on visual matching of key word descriptions of document contents. The system was developed as part of the energy use information base and enables city officials and citizens to obtain energy conservation information related to specific topics. Portland's planning and energy thesarus is presented.

Volume 3: Summary of Conservation Choices (NTIS Ordering No. PB-276781/ HUD)

Volume 3A: Residential Conservation Choices (NTIS Ordering No. PB-276782/ HUD)

Volume 3B: Transportation and Land Use Conservation Choices (NTIS Ordering No. PB-276783/HUD)

Volume 3C: Commercial Conservation Choices (NTIS Ordering No. PB-276784/HUD)

Volume 3D: Industrial Conservation Choices (NTIS Ordering No. PB-376785/HUD)

Volume 3E: Government Conservation Choices (NTIS Ordering No. PB-276686/HUD)

The Volume 3 series provides detailed analyses of over 85 conservation programs in the five major consumption sectors and a summary of 42 of those programs used to produce a comprehensive energy plan for Portland estimated to reduce the region's 1995 energy demand by 34%.

For each sector the appropriate volume explains how energy is currently used and analyzes the cost and savings of specific conservation programs. Summaries of the study methodologies are presented along with the impacts of future energy price increases and/or supply decreases in the case a city wide conservation program is not adopted.

Volume 4: Model Local Code Revisions for Energy Conservation (NTIS Ordering No. PB-276787/HUD) analyzes various types of municipal code provisions available for encouraging energy conservation. A checklist for ordinance drafters presents guidelines for police and taxing powers and a method for identifying "commerce clause" problems. Model ordinances such as reduction of minimum heating requirements, reduction of minimum window area requirements and vehicle life-cycle costing are presented.

Volume 5: Capital Budgeting and Energy Use (NTIS Ordering No. PB-276788/HUD) describes techniques for reducing energy use in Portland using the city's capital improvements planning and budgeting process. A simplified procedure for evaluating the energy impact of various capital improvements based on the type and location of the improvements and the use of energy zones based on the relative energy efficiency of different geographic areas of the city are described.

Volume 6: Project Overview (NTIS Ordering No. PB-276789) presents history of the project, costs, organizational and implementation lessons learned and summaries of the results of the other ten volumes.

Energy Conservation Choices for the City of Portland: Eleven Volume Set (NTIS Ordering No. PB-276778/HUD).

RESEARCH SUMMARY

Office of Policy Development and Research

U.S. Department of Housing and Urban Development

CAPACITY BUILDING: A SUMMARY OF STATE AND LOCAL APPROACHES

Research sponsored by the Office of Policy Development and Research results in a variety of studies, analyses, reports, data series, and other products. As part of our efforts to disseminate this material we are sending you this summary of a recent research product. Information on how to obtain the full report is provided below.

In the spring of 1974, HUD selected eight projects from a field of 71 proposals to carry out demonstrations of "capacity-building methods for local chief executives." The eight projects tested a variety of approaches to management improvement in local government, combining over \$1 million of their own resources with \$2.2 million in HUD contributions.

The Capacity-Building Demonstration Program is now complete. The cities of Boston and Houston, the Kettering Foundation and the Match Institute concentrated on building municipal capacity in policy formulation, resource allocation, citizen participation, and operations management. The South Carolina Governor's Office and the municipal leagues in California, Tennessee, and Texas worked with small and medium-sized cities, using different techniques to assess management needs, establish new procedures and transfer proven methods from one city to another.

Reports from the individual projects total 22 volumes, but three summary volumes are now available to help you find out about the demonstration and decide whether you want to order the individual project final reports.

Strategies for Management Change concentrates on programs to improve policy and research management in Houston, Boston, Cincinnati, Dayton, Petersburg (VA), and Prichard (AL). It describes the actions and decisions of key participants and identified what worked, what didn't, and what was learned.

Strategies for Providing Assistance discusses the problems in organizing and delivering management assistance in California, South Carolina, Tennessee, and Texas. It describes new ways of diagnosing policy and management problems, planning and implementing improvements, and transferring useful results from one city to another.

Index to Methods and Documents describes the methods and documents used by the individual demonstration projects. Entries are organized by project and by subject and cross-referenced to specific project documents for ease in finding interesting items.

728.1
(016)
H68r
c.3

This volume also gives instructions and forms for ordering any of the 22 project documents from the National Technical Information Service.

Copies of the reports may be obtained free of charge from the Division of Product Dissemination and Transfer, Room 8126, Assistant Secretary for Policy Development and Research, Department of Housing and Urban Development, 451 7th Street, S. W., Washington, D. C. 20410.

Each report is about 75 pages. They were produced in June 1977. They may also be purchased from the Government Printing Office, (GPO) Washington, D. C. 20402.

728.1 (016) H68r c.3

U.S. Dept. of Housing and Urban
Development.
Research summary.

DATE	ISSUED TO

July 1978
HUD-PDR-298-2