



# *M*ODERN REAL ESTATE

FOURTH EDITION

CHARLES H. WURTZBACH

MIKE E. MILES



# *M*ODERN REAL ESTATE

FOURTH EDITION

CHARLES H. WURTZEBACH  
THE PRUDENTIAL REALTY GROUP

MIKE E. MILES  
UNIVERSITY OF NORTH CAROLINA  
AT CHAPEL HILL



JOHN WILEY & SONS, INC

NEW YORK ■ CHICHESTER ■ BRISBANE ■ TORONTO ■ SINGAPORE

*Acquisitions Editor* John Woods  
*Production Manager* Joe Ford  
*Designer* Maddy Lesure/Carolyn Joseph  
*Production Supervisor* Elizabeth Austin  
*Copy Editor* Marjorie Shustak  
*Cover Photograph* Norman McGrath

Recognizing the importance of preserving what has been written, it is a policy of John Wiley & Sons, Inc. to have books of enduring value published in the United States printed on acid-free paper, and we exert our best efforts to that end.

Copyright © 1980, 1984, 1987, 1991, by John Wiley & Sons, Inc.

All rights reserved. Published simultaneously in Canada.

Reproduction or translation of any part of this work beyond that permitted by Sections 107 and 108 of the 1976 United States Copyright Act without the permission of the copyright owner is unlawful. Requests for permission or further information should be addressed to the Permissions Department, John Wiley & Sons.

***Library of Congress Cataloging in Publication Data:***

Wurtzebach, Charles H.

Modern real estate / Charles H. Wurtzebach, Mike E. Miles. — 4th ed.

p. cm.

Includes index.

ISBN 0-471-52591-X

1. Real estate business. 2. Real estate business—United States.

I. Miles, Mike E. II. Title.

HD 1375.W873 1991

333.33'0973—dc20

90-48555

CIP

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1





# P

## REFACE

The past two decades have been marked by a significant increase in the recognition given real estate both as a major investment vehicle and as a vital productive factor in our economy. This recognition has led to the acceptance of real estate as a field of study requiring both academic preparation, as evidenced by growth in college and university real estate programs, and practical experience. New educational programs sponsored by various professional real estate associations attest to the vigor with which the industry is promoting formal training both before and during a professional career.

This book is for individuals taking the Principles of Real Estate course at the college or university level. It also provides useful background reading for those entering careers in real estate and related industries without the benefit of formal real estate education. Additionally, individuals entering real estate-related careers, such as architecture, who lack a business background, will find *Modern Real Estate* a valuable source of information in a broad range of real estate areas.

As a classroom text, the book assumes some previous or concurrent exposure to the standard “core” business courses. Drawing on the student’s general business background, the book examines the unique features of real estate with a focus on *action* and *decision making*. The book concentrates on the “why” of decisions and the interrelationship among the key decision makers in the industry.

As the real estate business becomes more sophisticated, the real estate professional must make greater efforts to understand the essential workings of all aspects of the industry in order to make correct decisions in his or her specialized area. For example, the better sales associate is the one who knows real estate financing, law, and construction fundamentals as well as the fine details of real estate marketing. *Modern Real Estate* describes the workings and theoretical underpinnings of the major

fields within the real estate industry and clarifies the linkages and relationships of the different fields. In doing this, the book offers a survey of the real estate industry that molds an academic perception with guides for practical decision making. With this overview, the student may proceed in future study to develop expertise in any of the many specialty areas that make up the real estate industry.

Part 1 acquaints the student with the *spatial element* and the *interdisciplinary* nature of the real estate industry. The place of real property in the American economic system is traced. The theme or unifying concept of the book is portrayed as the “real estate game.” The reader learns the definition of a “winner” and is introduced to the players and their respective roles in the real estate marketplace. With this macroeconomic introduction as a basis, certain theories from regional and urban economics are analyzed to clarify the spatial element in real estate decisions. Consideration of the physical side of constructed space and our interaction with the spacial environment complete the analytical framework.

Part 2 introduces the student to the basic concepts of the American legal system and the essentials of real estate law that make up the formal rules of the real estate game. The legal concepts with which the real estate decision maker deals are explained.

Part 3 is a straightforward presentation of real estate appraisal with an emphasis on what produces *value*. The practical dimension of regional and urban economics is shown in the appraisal process, which itself is a link to the investment section.

Part 4 begins by briefly discussing the basics of marketing in general, and then moves to the unique aspects of real estate marketing. Brokerage is covered in Chapter 10, with the process of marketing the single-family home distinguished from the marketing and leasing of income properties. Appendix 10A gives the details of a real estate closing, and appendix 10B contains the Realtor Code of Ethics. The increasingly important field of asset management is the subject of Chapters 11 and 12. First the basics of property management are covered, then the additional considerations of institutional and corporate owners.

Part 5 first reviews the U.S. financial system and identifies the lending institutions that finance real estate. Financing mechanics from the borrower's perspective are covered first; then lender underwriting criteria and loan analysis are presented. The more complex operations of the secondary mortgage market are covered in Chapter 16.

Part 6 on taxation begins with a brief summary of income and property taxation and emphasizes real estate's unique position. The reader is then introduced to the major provisions of the Internal Revenue code specifically affecting real estate. This edition includes the significant tax law changes called for in the 1986 Tax Reform Act as well as the necessary historical perspective to fully appreciate the tax environment entering the 1990's. (Should any of the more significant currently proposed

tax law changes be enacted, Wiley will provide a short paperback update.)

Part 7 on investment brings together the previous material in a real estate investment model. The unique features of real estate are highlighted, this time in a risk-return framework. Chapter 20 reviews the principles of investment analysis. Chapter 21 develops the discounted cash-flow model that is an extension of our original definition of winning the real estate game. Chapter 22 covers the more advanced material involving real estate decision making in a "portfolio" framework. Finally, Chapter 23 examines the various ways in which the "bundle of rights" is packaged to suit different investors. This chapter deals with the emergence of real estate investment managers in the context of the theory developed in Chapters 20–22.

Part 8's topic is the asset creation side of the real estate industry: real estate development. The description of the development process, in Chapters 24 and 25, integrates material from previous parts on law, appraisal, marketing, finance, and investment. Chapter 26 presents a methodology for market and economic feasibility analysis, completing the presentation of the dynamic side of the real estate investment model.

Part 9 deals with public policy. In Chapter 27 we examine the very extensive role of government in real estate. In Chapter 28 we look at the long-term trends in the industry that have motivated, and have been motivated by, government's role. Chapter 29 covers several topics that we expect will be increasingly important in the years to come. In this way, our introduction to the real estate industry concludes with an "eye to the future," which is an essential part of good decision making.

Compound interest tables, a glossary, and an index provide comprehensive aids in understanding and using the concepts introduced in this book. Suggested readings and references are given at the end of each Part.

In total, the book gives sufficient depth and breadth to allow the reader to claim a general understanding of "the industry." If the reader plans detailed subsequent study in a particular area or if time is limited, certain chapters may be omitted with no loss of continuity. The more advanced chapters are Chapter 12, Asset Management: The Institutional and Corporate Perspective; Chapter 16, The Secondary Mortgage Markets; Chapter 19, Tax Credits, Installment Sales, Like-Kind Exchanges, and Other Considerations; Chapter 22, Real Estate and Modern Portfolio Theory; Chapter 23, Institutional Real Estate Investment; Chapter 26, Land Use Feasibility Analysis; Chapter 28, Long-Term Trends in Urban Structure and Land Use; and Chapter 29, New Ways to Play the Real Estate Game. If these chapters are left as "suggested future reading," the book will help any beginning student. Including all these chapters in a one-semester course constitutes a highly rigorous introduction to real estate.

We are happy to note that both men and women are active and successful in the real estate profession. It is gratifying to observe that women are entering the field in increasing numbers and assuming major decision-making roles. However, if every sentence in this book used "he or she," "him or her," and "his or hers" when referring to the real estate profession, the book would become difficult to read. Therefore, for ease of expression, "he," "his," and "him" are used in some places and "she," "hers," and "her" in others, and these refer to both female and male real estate professionals.

## **ACKNOWLEDGMENTS**

It would be impossible to recognize and thank all the individuals who have contributed to the development and preparation of this fourth edition. Our indebtedness extends to family, former students, and colleagues in academia and business.

We are particularly indebted to the contributions made by the following colleagues and friends who offered insight and suggestions throughout the evolution of this book: the late James A. Graaskamp, University of Wisconsin-Madison; Michael A. Goldberg, University of British Columbia; William B. Brueggeman, Southern Methodist University; Steve Sears, Texas Tech University; Terry Grissom, Texas Real Estate Research Center; Fred E. Case, University of California, Los Angeles; Kenneth M. Lusht, Pennsylvania State University; Raymond W. Lansford, University of Missouri, Columbia; Wallace F. Smith, University of California, Berkeley; Howard H. Stevenson, Harvard University; Harold A. Lubell, Assistant Attorney General of New York in charge of the Real Estate Financing Bureau; F. L. Wilson, Jr., Dickenson-Heffner, Baltimore, Maryland; Charles B. Akerson, Akerson Valuation Company, Boston, Massachusetts; Bill Poland, Bay West Development, San Francisco, California; John Hemphill, Vacation Resorts, Aspen, Colorado; Norman G. Millier, University of Cincinnati; Donald W. Bell, University of Hawaii; Roger R. Sindt, University of Nebraska; Karl L. Guntermann, Arizona State University; Thomas P. Boehm, University of Tennessee; Kerry D. Vandell, University of Wisconsin-Madison; Tom McCue, DePaul University; Marc T. Smith, Temple University; Douglas Bible, Louisiana State University; Eugene H. Fox, Northeast Louisiana University; Roger Cannaday, University of Illinois; and William Landgon, Florida State University.

Our special thanks in this edition go to David J. Hartzell, University of North Carolina at Chapel Hill, who did the rewrite of Chapter 16; David Shulman and all of the Salomon Brothers research team who are quoted extensively throughout the text; Jim Bichsel, executive director of the North Carolina Association of Realtors, for his help with the brokerage section; Paula Shanley and Anatole Pevner of Prudential Real Estate Investors, Inc., who handled drafting and researching important

sections of the text; and most importantly, Ginger Travis, our in-house editor through all four editions. She never got rich in real estate, but we love her anyway.

CHARLES H. WURTZEBACH  
MIKE E. MILES

*Newark, New Jersey*  
*Chapel Hill, North Carolina*





# *B*RIEF CONTENTS

## **PART 1 THE ANALYTICAL FRAMEWORK**

<b>1 THE AMERICAN REAL ESTATE INDUSTRY: AN OVERVIEW</b>	<b>3</b>
<b>2 REGIONAL AND URBAN ECONOMICS</b>	<b>34</b>
<b>3 SPATIAL ECONOMICS: RENT, SITUS, AND SUCCESSION THEORY</b>	<b>65</b>

## **J PART 2 THE LEGAL ENVIRONMENT**

<b>4 REAL ESTATE INTERESTS AND FORMS OF OWNERSHIP</b>	<b>89</b>
<b>5 TRANSFERRING REAL ESTATE INTERESTS</b>	<b>122</b>

## **PART 3 VALUATION AND THE APPRAISAL PROCESS**

<b>6 PRINCIPLES OF VALUATION</b>	<b>161</b>
<b>7 THE SALES COMPARISON APPROACH AND THE COST APPROACH</b>	<b>181</b>
<b>8 THE INCOME CAPITALIZATION APPROACH TO VALUATION</b>	<b>205</b>

---

**PART 4    MARKETING, BROKERAGE,  
            AND MANAGEMENT**

9	MARKETING	231
10	BROKERAGE	258
■	APPENDIX 10A. THE CLOSING PROCESS	285
■	APPENDIX 10B. REALTOR® CODE OF ETHICS	297
11	ASSET MANAGEMENT: THE PROPERTY MANAGEMENT PERSPECTIVE	302
12	ASSET MANAGEMENT: THE INSTITUTIONAL AND CORPORATE PERSPECTIVES	329
■	APPENDIX 12. CORPORATE VALUATION OF REAL ESTATE	345

**PART 5    REAL ESTATE FINANCE**

13	THE FINANCIAL SYSTEM AND REAL ESTATE FINANCE	367
■	APPENDIX 13. FINANCE'S CONTRIBUTION TO THE BASIC REAL ESTATE VALUATION MODEL	405
14	FINANCING MECHANICS: THE BORROWER'S PERSPECTIVE	408
15	MORTGAGE UNDERWRITING: THE LENDER'S PERSPECTIVE	428
16	THE SECONDARY MORTGAGE MARKETS	463

**✓ PART 6    TAXATION**

17	INCOME AND PROPERTY TAXATION	497
18	REAL ESTATE INCOME TAX DEDUCTIONS	520
19	TAX CREDITS, INSTALLMENT SALES, LIKE-KIND EXCHANGES, AND OTHER CONSIDERATIONS	542

**√ PART 7 INVESTMENT ANALYSIS**

<b>20 PRINCIPLES OF INVESTMENT</b>	<b>561</b>
<b>21 THE DISCOUNTED CASH-FLOW MODEL</b>	<b>576</b>
<b>22 REAL ESTATE AND MODERN PORTFOLIO THEORY</b>	<b>596</b>
<b>23 INSTITUTIONAL REAL ESTATE INVESTMENT</b>	<b>619</b>

**PART 8 REAL ESTATE DEVELOPMENT**

<b>24 DEVELOPMENT: THE PROCESS, THE PLAYERS, AND THE ATMOSPHERE</b>	<b>639</b>
<b>25 THE DEVELOPMENT PROCESS</b>	<b>663</b>
<b>26 LAND USE FEASIBILITY ANALYSIS</b>	<b>677</b>

**PART 9 PUBLIC POLICY AND PROSPECTS  
FOR THE FUTURE**

<b>27 GOVERNMENT INVOLVEMENT</b>	<b>709</b>
<b>28 LONG-TERM TRENDS IN URBAN STRUCTURE AND LAND USE</b>	<b>745</b>
<b>29 NEW WAYS TO PLAY THE REAL ESTATE GAME</b>	<b>764</b>

<b>■ COMPOUND INTEREST TABLES</b>	<b>A-1</b>
<b>■ GLOSSARY</b>	<b>G-1</b>
<b>■ INDEX</b>	<b>I-1</b>



# C O N T E N T S

## PART 1 THE ANALYTICAL FRAMEWORK

<b>1 THE AMERICAN REAL ESTATE INDUSTRY: AN OVERVIEW</b>	<b>3</b>
Real Estate as a Marketplace Game	3
The Real Estate Marketplace	4
Real Estate As More than Just a Game	5
<i>Box 1.1 New York Land Price Breaks Record, Yet Hurdle Remains</i>	6
<i>Box 1.2 Air Traffic and Private Property</i>	7
Real Estate Defined	7
Features of the Real Estate Asset	9
Features of the Real Estate Marketplace	12
<i>Box 1.3 Homeowners' Attitudes</i>	13
Real Estate and the General Economy	15
Real Estate and Wealth	18
Real Estate Demand and Supply	19
Marketplace Individuals and Institutions	22
The Participants	23
<i>Box 1.4 Population and Long-Term Demand Trends</i>	24
Real Estate Education	30
Summary	32
 <b>2 REGIONAL AND URBAN ECONOMICS</b>	 <b>34</b>
Spatial Economics in Real Estate Analysis	34
What Motivates a Regional Economy?	37
How Do Industries Choose a Regional Location?	41
What Tools Are Helpful in Analyzing Regional Growth?	43
<i>Box 2.1 Los Angeles' Growth Differs from that of Other Major Cities</i>	44

What Is Unique About an Urban Economy?	46
How Do Cities Grow?	51
Summing Up with an Example	56
Why Do Urban Areas Grow?	58
<i>Box 2.2 Fast Growing Metro Areas</i>	59
How Regional Theory and Urban Economic Theory Are Used	61
Summary	63

### **3 SPATIAL ECONOMICS: RENT, SITUS, AND SUCCESSION THEORY 65**

How Rent Is Determined	66
How Do Surrounding Land Uses Affect Rent?	69
How Do Land Use and Rents Change over Time?	73
Creativity—A Possible Step Beyond the Limits of Existing Trends: The Experience of Two Developers	77
Summary	81
<i>Box 3.1 Market Shifts in the 1990s</i>	83

## **PART 2 THE LEGAL ENVIRONMENT**

### **4 REAL ESTATE INTERESTS AND FORMS OF OWNERSHIP 89**

Physical Interests in Real Estate	90
<i>Box 4.1 Subsurface Rights</i>	92
<i>Box 4.2 Using Air Space</i>	93
Legal Interests in Real Estate	94
Freehold Estates	94
<i>Box 4.3 Dower and Curtesy Rights (Life Estates)</i>	98
Possessory Estates: Leaseholds	99
<i>Box 4.4 United Nations Plaza Building—New York City</i>	100
<i>Box 4.5 Types of Rental Payments</i>	103
Nonpossessory Interests	104
<i>Box 4.6 Right-of-Way Access Easement Destroyed When State Opens,     Then Closes Road</i>	107
Forms of Ownership	109
Two Special Forms of Ownership	113
Legal Entities for Owning Real Estate Interests	115
Current Trends in Real Estate Interests and Ownership	119
Summary	120

<b>5 TRANSFERRING REAL ESTATE INTERESTS</b>	<b>122</b>
The Concept of Title	123
<i>Box 5.1 An Uneasy Look at FIRST LUTHERAN and NOLLAN</i>	128
<i>Box 5.2 When Insuring Title Can Pay Off</i>	131
Transferring Title to Real Estate	135
<i>Box 5.3 How the "Stepped Up" Basis Benefits Heirs</i>	139
<i>Box 5.4 Boundary Disputes and Adverse Possession</i>	141
Contracts of Sale	143
<i>Box 5.5 Using Options</i>	147
<i>Box 5.6 An "Under the Table" Deal Falls Through</i>	149
Deeds and Their Recordation	150
Summary	154

### **PART 3 VALUATION AND THE APPRAISAL PROCESS**

<b>6 PRINCIPLES OF VALUATION</b>	<b>161</b>
Reasons for an Appraisal	162
Characteristics of Value	163
Forces Affecting Values	165
Value, Price, and Cost	166
<i>Box 6.1 Market Value</i>	167
Value Influences and Principles	168
The Meaning of Market Value	172
<i>Box 6.2 Highest and Best Use: A Concept</i>	173
<i>Box 6.3 Highest and Best Use: An Example</i>	174
The Valuation Process	175
<i>Box 6.4 Reconciliation Is Not Addition</i>	178
Summary	179

<b>7 THE SALES COMPARISON APPROACH AND THE COST APPROACH</b>	<b>181</b>
The Sales Comparison Approach	181
Steps in the Sales Comparison Approach	182
<i>Box 7.1 Choosing Valid Comparables</i>	183
The Cost Approach	190
Steps in the Cost Approach to Value	191
Reproduction and Replacement Cost	191
Estimating Accrued Depreciation	193
<i>Box 7.2 Instant Economic Obsolescence: The Time Factor</i>	198
Valuing the Site	199



Opinion of Value	199
Reporting the Opinion of Value on a Single-Family Property	199
Summary	202

## **8 THE INCOME CAPITALIZATION APPROACH TO VALUATION 205**

The Concept of Stabilized Net Operating Income	206
<i>Box 8.1 The More General Valuation Model</i>	206
<i>Box 8.2 Inconsistent Revenue and Expense Estimates</i>	209
Deriving a Capitalization Rate	211
<i>Box 8.3 Example of Income Approach to Value for Small Residential Property</i>	217
Problems with Simple Capitalization	218
<i>Box 8.4 Ellwood Formulation</i>	219
Summary	221
<i>Box 8.5 1991 Will Be a Big Year for Appraisal Firms</i>	222

## **PART 4 MARKETING, BROKERAGE, AND MANAGEMENT**

### **9 MARKETING 231**

Types of Real Estate Marketing Activities	232
Elements of a Marketing Plan	234
<i>Box 9.1 What Should a Classified Advertisement Contain?</i>	236
Marketing Residential Properties	237
<i>Box 9.2 Housing Demographics Are Changing</i>	238
Income Properties	239
<i>Box 9.3 Condominium Market Softens as Supply Increases</i>	240
<i>Box 9.4 Locating Prospective Tenants</i>	242
Special Properties	243
<i>Box 9.5 Most Expensive Retail Areas</i>	243
<i>Box 9.6 Different Approaches to Marketing</i>	244
<i>Box 9.7 Marketing Distressed Properties</i>	246
Professional Selling Has Come of Age	247
Summary	251
<i>Box 9.8 A Typical Issue of Land Use Digest</i>	252

### **10 BROKERAGE 258**

The Key Role Played by Brokers	258
<i>Box 10.1 Cash-and-Carry House Sales</i>	260

Defining Brokerage	260
<i>Box 10.2 Real Estate Licensing Examinations</i>	261
<i>Box 10.3 National Association of Realtors®</i>	262
<i>Box 10.4 The Fiduciary Relationship</i>	266
Listing Agreements	266
<i>Box 10.5 Protecting the Broker</i>	269
Compensating the Broker	271
<i>Box 10.6 Commission Splits</i>	273
Selling a Residential Property	274
Selling a Commercial Property	277
The Closing	278
Summary	280
<i>Box 10.7 Closing Example</i>	281
<i>Box 10.8 Buyer and Seller Closing Statement from Box 10.7</i>	282
<i>Box 10.9 Potential Closing Problems</i>	283
Appendix 10A. The Closing Process	285
Appendix 10B. Realtor® Code of Ethics	297
<b>11 ASSET MANAGEMENT: THE PROPERTY MANAGEMENT PERSPECTIVE</b>	<b>302</b>
Properties Requiring Management	303
<i>Box 11.1 Importance of Property Management</i>	304
<i>Box 11.2 Takeover Leases and Nonraid Clauses</i>	307
Property Management Functions	309
<i>Box 11.3 What Is a Resident Manager?</i>	311
<i>Box 11.4 Increasing Rental Income: Seven Case Histories</i>	313
<i>Box 11.5 The Cost of Turnover</i>	314
The Management Plan	317
<i>Box 11.6 Regional Industrial Vacancy Report</i>	319
<i>Box 11.7 Calculating Rentable Area: For Office Buildings BOMA Guidelines (Building Owners and Managers Association International)</i>	320
The Budget	322
The Management Contract	323
Management Associations	326
Summary	327
<b>12 ASSET MANAGEMENT: THE INSTITUTIONAL AND CORPORATE PERSPECTIVES</b>	<b>329</b>
Introduction	329
<i>Box 12.1 Stocks Drop Sharply on Real Estate Fears</i>	330
<i>Box 12.2 The Reasons You Do Not Need (and Are Not Likely to Develop) a Generalized Paradigm for Real Estate</i>	331

Changes Brought to Property Management by Institutional Investors	332
<i>Box 12.3 An Early Look at New Diversification Strategies</i>	333
The Corporate Perspective	335
<i>Box 12.4 Financing Alternatives</i>	337
<i>Box 12.5 Objectives of Corporate Real Estate Management</i>	338
What Does the Heightened Corporate Awareness Imply for the Management of the Real Estate Asset?	339
<i>Box 12.6 The Role of the Real Estate Professional in Corporate Planning and Strategy Implementation</i>	341
Summary	343
Appendix 12. Corporate Valuation of Real Estate	345

## PART 5 REAL ESTATE FINANCE

<b>13 THE FINANCIAL SYSTEM AND REAL ESTATE FINANCE</b>	<b>367</b>
An Intuitive Model of the Overall Financial System	367
Savers	368
Investors in Tangible Assets	369
<i>Box 13.1 Mortgage Debt Outstanding</i>	370
<i>Box 13.2 What Can Hyperinflation Do to Real Estate Finance?</i>	372
<i>Box 13.3 Summary and Implications of the Garn-St. Germain Depository Institutions Act of 1982</i>	375
Lending Institutions	378
Players in the Capital Markets	378
<i>Box 13.4 Savings and Loan Competition in the 1980s: A Prophecy at the Beginning of the Decade</i>	381
<i>Box 13.5 S&amp;L Sale: First Wave Hits Market</i>	383
<i>Box 13.6 How REITs Fell into Trouble</i>	387
<i>Box 13.7 Mortgage Banker Originations by Type of Loan</i>	389
<i>Box 13.8 The Interrelated Nature of Real Estate Finance and the American Financial System: An Example</i>	391
Government as Facilitator in Real Estate Finance	392
The Financing Cycle	394
<i>Box 13.9 Equal Credit Opportunity Act</i>	394
<i>Box 13.10 GE's Borrower Assistance Program: A New Way to Keep More Delinquent Borrowers in Their Homes</i>	395
<i>Box 13.11 Raw Land Financing</i>	396
<i>Box 13.12 Another Kind of Housing Finance</i>	399
Summary	403
Appendix 13. Finance's Contribution to the Basic Real Estate Valuation Model	405