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Business 550-705: The Real Estate Process. 1974-1988

Graaskamp, James A.
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→ Changed to 705 in 1975

Business 550 and 706-- Urban Land Economics
Information Sheet

Fall Semester 1974 | Prof. J.A. Graaskamp

1. Course Materials

Textbook: James R. Cooper and Karl L. Guntermann Real Estate and Urban Land Analysis, Heath-Lexington Press, 1974.

The textbook plus a complete set of mimeographed readings are available from the U.W. Real Estate Club in Room 91 Bascom Hall for $29.00. Book only $24.50 (vs. $27.50 at bookstore; mimeos only $4.50).

2. Projects

Two problems are assigned. The first problem is concerned with after-tax cash flow analysis of an apartment investment. The second problem is concerned with the feasibility of a particular land-use for a given site for an assumed investor.

All projects are due at the Monday lecture, not your quiz section, according to the following schedule.

Project I	Assigned Week 2 Due October 7 - Exam Day
Project II	Assigned Week 7 Due November 18

3. Grading

Grade Components:

Six weeks exam	100 points
Final exam	200 points
Project I	75 points
Project II	150 points
Evaluation by T.A.	25 points

Grades will be established by the modes of the above cummulative point distribution. Examinations will include questions submitted by the teaching assistants.

4. Quiz Sections

Quiz sections are used to teach technical computations and procedures and to provide guidance towards completion of the required projects. Quiz sections further provide the opportunity to clarify points of fact or meaning and to explore topics not presented in lecture. Quiz section material does appear on exams.

5. <u>Teaching Assistants</u>

Office - Room 91 Bascom Hall
Telephone - 263-2043
Office Hours as listed below and by appointment

Mike Robbins, Senior T.A.
6314 Hammersley Road
274-3970

Lynn Woodward
640 N. Henry
255-9783

Adena Spohn

Administrative problems or questions should be addressed to Mike Robbins.

BUSINESS 550 and 706-- URBAN LAND ECONOMICS
SYLLABUS

Fall Semester 1974 | Prof. J.A. Graaskamp

Monday August 26	INTRODUCTION TO THE REAL ESTATE PROCESS		
	A.	Textbook introduction by Prof. James R. Cooper	Text
Wednesday August 28	HISTORY OF CITY DEVELOPMENT AS A REFLECTION OF CULTURAL VALUES, TECHNOLOGY, AND POLITICAL STRUCTURE		
	A.	"The Dawn of Urbanization," Chap. 1, The Urban Pattern, by Arthur B. Gallion and Simon Eisner	Mimeo
	B.	"Descriptions of Real Estate," Chap. 7, Wisconsin Real Estate Brokers Manual (1972)	Mimeo
Quiz Section 1	Introduction and Legal Survey Techniques		
Wednesday Sept. 4	SPATIAL AND LOCATIONAL CONCEPTS OF URBAN LAND ECONOMICS		
	A.	"Land Use Prospectives," F. Stuart Chapin, Jr.; Part II, Chap. 3.	Text
	B.	"The Evolving Form and Organization of the Metropolis," Edgar M. Hoover, Part II, Chap 5	Text
	C.	"The Location of Economic Activity in Cities," L. Moses & H.F. Williamson, Part II, Chap 6	Text
Monday Sept. 9	ECONOMIC BASE OF URBAN DEVELOPMENT		
	A.	"Internal and External Factors in the Development of Urban Economy," Wilbur R. Thompson, Part I, Chap 1	Text
Quiz Section 2	Introduction to Project I		
Wednesday Sept. 11	EQUITY INVESTMENT AND LEVERAGE		
	A.	"Equity Investment," Real Estate Analysis, by Richard U. Ratcliff, pp. 103-141	Mimeo
	B.	"Valuation and Investment Analysis," James R. Cooper & Karl L. Guntermann, Part VII	Text
Monday Sept. 16	INTRODUCTION TO REAL ESTATE CASH FLOW CONCEPTS		
	A.	Role of Investment Real Estate in Portfolio Management, J. Graaskamp, pp. 1-18, 24-35	Handout
Quiz Section 3	Present Value Concepts		

Wednesday Sept. 18	INVESTMENT YIELD AND RISK IN REAL ESTATE	
	A. "An Introduction to Appraisal and Yield Analysis," By Cooper, Farrell, & Guntermann, Part VII, Chap. 38	Text
	B. Demonstration Appraisal Report, David Cunningham, Part VII, Chap. 41	Text
	C. "Using Computer Simulation to Minimize Risk in Urban Housing Development," Cooper & Morrison, Part VII, Chap. 39	Text
Monday Sept. 23	INTRODUCTION TO REAL ESTATE FINANCE (THE MORTGAGE)	
	A. "Mortgages and Other Lending Institutions," by Frederic E. Case, Part IV, Chap. 18	Text
	B. "Non-Possessory R.E. Interests,"by Frederic E. Case, Part IV, Chap. 19	Text
Quiz Section 4	Present Value Concepts Continued	
Wednesday Sept. 25	INTRODUCTION TO REAL ESTATE FINANCE (THE INSTITUTUION)	
	A. "Financing Real Estate," by Smith, Tschappat and Racster, Real Estate and Urban Development, Chap. 14 pp. 295-329	Mimeo
	B. "The Federal Government & the Mortgage Lender," by Frederick W. Deming, Real Estate Review, Summer 1971	Mimeo
Monday Sept. 30	THE REAL ESTATE TAX	
	A. "An Appraisal of the Property Tax," by Dick Netzer, Part III, Chap. 13	Text
	B. "Property Tax: Review Boards, Trends," Wisconsin Taxpayer, June 1973	Handout
	C. "Do Single Family Homes Pay Their Way?" Urban Land, Sept. 1968	Mimeo
Quiz Section 5	Assistance on Project I	
Wednesday Oct. 2	THE INCOME TAX INFLUENCE ON REAL ESTATE INVESTMENT	
	A. Role of Investment Real Estate in Portfolio Management, J. Graaskamp, pp. 19-24	Handout
Quiz Section 6	Review for Six Week Exam	
Monday Oct. 7	ONE HOUR SIX WEEK EXAM	
Wednesday Oct. 9	INTRODUCTION TO REAL ESTATE LAW	
	A. "The Legal Environment of Urban Space Use," by James R. Cooper, Part IV	Text

Wednesday Oct. 9	INTRODUCTION TO REAL ESTATE LAW CONTINUED	
	B. "Property Rights," by Frederic E. Case, Part IV, Chap. 17	Text
	C. "The Property Interface," Chap. 19, Pollution Property, and Prices, by J.H. Dales	Mimeo
Monday Oct. 14	GOVERNMENT REGULATION OF REAL ESTATE AT THE LOCAL LEVEL	
	A. "Zoning, Subdivision Approval, Restrictive Covenants, and Other Land Use Controls," Wisconsin Real Estate Law, Chap. 12	Mimeo
	B. "Ruth Golden et al. vs. Planning Board of the Town of Ramapo et al.," Part IV, Chap. 22	Text
	C. "Gautreaux v. Chicago Housing Authority," Part IV, Chap. 20	Text
	D. Legal Notes - "The No Growth Explosion and Petaluma," Urban Land, June, 1974	Mimeo
Quiz Section 7	Introduction to Project II	
Wednesday Oct. 16	GOVERNMENT REGULATION OF REAL ESTATE AT THE STATE LEVEL	
	A. "Federal, State, and Local Finance in a Metropolitan Context," by Dick Netzer	Mimeo
	B. "Saving Valued Spaces and Places Through Development Rights Transfer," by Ellis Gans	Mimeo
	C. "A Proposal for the Separation and Marketability of Development Rights...," by Jerome G. Rose, Real Estate Law Journal, Winter 1974	Mimeo
Monday Oct. 21	THE HISTORY OF HUD	
	A. "Every Man's HUD," by Charles L. Edson, Real Estate Review, Winter 1972	Mimeo
	B. "Federal Housing Administration Programs Relating to Apartment Property Financing," Federal Housing Administration, Part VI, Chap. 37	Text
	C. "Unlearned Lessons in the History of Federal Housing Aid," by M. Carter McFarland, City, Winter 1972	Mimeo
	D. "The Proposed Better Communities Act," Challenge, July 1973	Mimeo
Quiz Section 8	Dane County Courthouse	
Wednesday Oct. 23	PUBLIC URBAN RENEWAL	
	A. "The Concept and Causes of Urban Blight," G.E. Breger, Land Economics, November 1967	Mimeo
	B. "The Shape of the Nations's Housing Problems," The President's Committee on Urban Housing, Part VI, Chap. 32	Text
	C. "The Nature of Redevelopment Benefits," by Jerome Rothenberg, Part VI, Chap 33	Text

Wednesday Oct. 23	PUBLIC URBAN RENEWAL CONTINUED	
	D. "The Economics of Urban Renewal," by Otto A. Davis and Andrew B. Whinston, Part VI, Chap. 34	Text
	E. "Urban Renewal: A Strategy for Information and Analysis," by Lowden Wingo, Jr., Part IV, Chap. 36	Text
Monday Oct. 28	HOUSING AND THE LOW INCOME FAMILY	
	A. "Low Income Housing: Goals, Actors and Economics," by O'Block	Mimeo
	B. "An Economic Analysis of the Housing and Urban Development Act of 1968," <u>Urban Analysis</u>, by Kilbridge, O'Block, and Teplitz, Chap. 9 pp. 64-82	Mimeo
Quiz Section 9	Minimod and Project II	
Wednesday Oct. 30	CITY BUILDING - PUBLIC VIEWPOINT	
	A. "The Future of the Cities," National Advisory Commission on Civil Disorders, Part III, Chap. 16	Text
	B. "Where Do We Grow From Here?," by Robert Cahn, <u>Forum</u>, December 1973	Mimeo
Monday Nov. 4	REAL ESTATE AND TRANSPORTATION POLICY	
	A. "Transportation and the City," <u>Architectural Forum</u>, Oct. 1963	Mimeo
	B. "The Journey to Work in our Metropolitan Areas," by James R. Cooper, Part III, Chap. 10	Text
	C. "Traffic Congestion: Price Rationing and Capital Planning," by Wilbur R. Thompson, Part III, Chap. 14	Text
Quiz Section 10	Assistance on Project II, and Transportation Policy	
Wednesday Nov. 6	REAL ESTATE AND URBAN POLLUTION	
	A. <u>Solid Waste</u>, League of Women Voters	Handout
	B. "Land, Water, and Ownership," by J.H. Dales, <u>Economics of the Environment</u>	Mimeo
	C. "Cost-Benefit Analysis and the Economics of Air Pollution," Karl L. Guntermann, Part III, Chap. 11	Text
Monday Nov. 11	REAL ESTATE AND ENVIRONMENTAL IMPACT	
	A. Environmental Impact Statements: A Current Overview," by Gladstone and Witherspoon, <u>Environmental Comment</u>, June 1974	Mimeo
Quiz Section 11	Assistance on Project II	

Wednesday Nov. 13	RATIONAL LAND USE PLANNING AND CASH FLOW	
	A. "The Land-Use Crisis," House & Home, August 1972, pp. 57-73.	Mimeo
	B. " Density Impact Zoning Model," Lenard L. Wolffe, Density: Five Perspectives, pp. 26-31	Mimeo
	C. "Here's a New System for Figuring Project Feasibility," House & Home, October 1973	Mimeo
Monday Nov. 18	REAL ESTATE AND SOCIAL DISORGANIZATION	
	A. "Abandoned," Glenn A. Clayton, Journal of Housing, June 1974	Mimeo
	B. "Alternatives to Fear," Progressive Architecture, October 1972	Mimeo
Quiz Section 12	Rational Land Use	
Wednesday Nov. 20	CITY BUILDING - PRIVATE VIEWPOINT	
	A. "The Current Investment Climate and Strategies in Real Estate," by Anthony Downs & M. Leanne Lachman, Real Estate Review, Summer 1972	Mimeo
	B. "Great Cities for the Great Society," James R. Rouse	Mimeo
Monday Nov. 25	THE CONSUMER VIEWPOINT	
	A. "Real Estate Markets, Demand and Supply Analysis," by Frederic E. Case, Part V, Chap. 24	Text
	B. Chart on Housing Trade-Offs (Lecture Handout)	Mimeo
	C. "The Tenant Point of View," Owens Corning Fiberglas Company, Urban Land Institute, February 1970	Mimeo
Quiz Section 13	Consumer and Marketing Viewpoint	
Wednesday Nov. 27	THE DEVELOPMENT - MARKETING VIEWPOINT	
	A. "Development of Shopping Centers," by Willard G. Rouse, Part VIII, Chap. 44	Text
	B. "Caveat Emptor in Real Estate Equities," by Samuel L. Hayes III and Leonard M. Harlan, Real Estate Appraiser, July-August, 1972	Mimeo
	THURSDAY QUIZ SECTIONS SHOULD REPORT TO MONDAY, TUESDAY SECTIONS	
Quiz Section 14	Return and Discuss Project II	
Monday Dec. 2	THE BUSINESS OF BUILDING NEW TOWNS	
	A. "Columbia: The $50 Million Gamble," Gurney Breckenfeld, Columbia and the New Cities, Chapter 10	Mimeo
	B. "New Business from New Towns?," by Mahlon Apgar IV, Appraisal Journal, January 1973	Mimeo
	C. "The First (and Last?) Meeting of the Regional New Towns Committee," by James A. Clapp, City, Winter	Mimeo

Wednesday Dec. 4	THE BUSINESS OF RECYCLING OLD TOWNS	
	A. "Philadelphia Is Turning Old Town Into New Town," by Jack Bryan, Journal of Housing, May 1972	Mimeo
	B. "Applying New City Principles to Old Cities," by Wilfred Owen, Part VI, Chap. 35	Text
	C. "The Costs of Preservation," by John J. Costonis, Architectural Forum, Jan.-Februay 1974, section I, pp. 61-67.	Mimeo
Quiz Section 15	Review for Final Exam	
	TWO HOUR FINAL EXAM AS PER TIMETABLE	

Business 550 and 705 -- Urban Land Economics
Information Sheet

Fall Semester 1975 Prof. James A. Graaskamp

1. Course Materials

No textbook; course mimeo material available in Room 91 for $25. Make check payable to UW Real Estate Club.

2. Projects

Two projects are assigned. The first project is concerned with after-tax cash flow analysis of an apartment investment. The second project is concerned with the feasibility of a particular land-use for a given site for an assumed investor. The second project is to be completed by teams of two students.

All projects are due at the Monday lecture, not your quiz section, according to the following schedule.

Project I	Assigned Week 2 Due Monday, October 6
Project II	Assigned Week 7 Due Monday, December 1

3. Grading

Grading components:

Six weeks exam	100 points - 20%
Final exam	150 points - 30%
Project I	50 points - 10%
Project II	200 points - 40%
Total	500 points

Grades will be established by the modes of the above cumulative point distribution. Examinations will include questions submitted by the teaching assistants.

4. Quiz Sections

Quiz sections are used to teach technical computations and procedures and to provide guadance towards completion of the required projects. Quiz sections further provide the opportunity to clarify points of fact or meaning and to explore topics not presented in lecture. Each quiz section is 75 minutes long because students felt 50 minutes was inadequate. Quiz section material does appear on exams.

5. Faculty

Prof.	James A. Graaskamp	Room 118 Commerce	262-6378
"	James C. Canestaro	Room 264A Bascom Hall	262-8912
"	Craig Stanley	Room 210B Commerce	262-1625

6. Teaching Assistants

Office - Room 91 Bascom Hall
Telephone - 263-2043
Office hours as listed below and by appointment.

Mike Robbins, Senior TA	6314 Hammersley Road	274-3970
James R. DeLisle	Rt. 1, Cross Plains	798-2943

Administrative problems or questions should be addressed to Jim DeLisle.

BUSINESS 550 and 705 -- URBAN LAND ECONOMICS
SYLLABUS

Fall Semester 1975 | Prof. James A. Graaskamp

Wednesday Sept. 3 — 1 INTRODUCTION TO THE REAL ESTATE PROCESS

Quiz Section 1 — Does not meet first week.

Monday Sept. 8 — 2 HISTORY OF CITY DEVELOPMENT AS A REFLECTION OF CULTURAL VALUES, TECHNOLOGY, AND POLITICAL SCIENCE

A. "The Dawn of Urbanization," Chap. 1, The Urban Pattern," by Arthur B. Gallion and Simon Eisner. — Mimeo

Wednesday Sept. 10 — 3 SPATIAL AND LOCATIONAL CONCEPTS OF URBAN LAND ECONOMICS

A. "Land Use Perspectives," F. Stuart Chapin, Jr. — Mimeo

~~B. "A Theory of the Urban Land Market," Wm. Alonso — Mimeo~~

C. "The Evolving Form and Organization of the Metropolis," Edgar M. Hoover — Mimeo

D. "Nelson's Principles of Store Location," William Applebaum, Guide to Store Location Research, pp. 25-28 — Mimeo

Quiz Section 2 — Present Value Theory

A. "Descriptions of Real Estate," Chap. 7, Wisconsin Real Estate Brokers Manual (1972) — Mimeo

B. "Equity Investment," Real Estate Analysis, Richard U. Ratcliff, pp. 103-141 — Mimeo

Monday Sept. 15 — 4 ECONOMIC BASE OF URBAN DEVELOPMENT

A. "Internal and External Factors in the Development of Urban Economy," Wilbur R. Thompson — Mimeo

B. "Economic Base Studies," Richard B. Andrews — Mimeo

Wednesday Sept. 17 — 5 SEGMENTATION OF REAL ESTATE MARKETS BY LOCATION AND USER PROFILE

A. "City and Neighborhood Analysis," The Appraisal Journal, April 1967 — Mimeo

Quiz Section 3 — Present Value and Cash Flow Concepts

Monday Sept. 22 — 6 INTRODUCTION TO REAL ESTATE CASH FLOW CONCEPTS

A. Role of Investment Real Estate in Portfolio Management, J. Graaskamp, pp. 1-18, 24-35 — Handout

Wednesday Sept. 24		INVESTMENT YIELD AND RISK IN REAL ESTATE	
	A.	"An Introduction to Appraisal and Yield Analysis," Cooper, Farrell, & Guntermann	Mimeo
	B.	"Using Computer Simulation to Minimize Risk in Urban Housing Development," Cooper & Morrison	Mimeo
Quiz Section 4		Cash Flow and Depreciation	
Monday Sept. 29		INTRODUCTION TO REAL ESTATE FINANCE (THE MORTGAGE)	
	A.	The Role of Investment Real Estate in Portfolio Management, J. Graaskamp, pp. 7-10	Handout
Wednesday Oct. 1		INTRODUCTION TO REAL ESTATE FINANCE (THE INSTITUTION)	
	A.	"Financing Real Estate," Smith, Tschappat and Racster, Real Estate and Urban Development, Chap. 14 pp. 296-329	Mimeo
Quiz Section 5		Cash Flow and Reversion	
Monday Oct. 6		THE REAL ESTATE TAX - Problem I due	
	A.	"An Appraisal of the Property Tax," Dick Netzer	Mimeo
	B.	"Property Tax: Assessments, Appeals, and Trends," Wisconsin Taxpayer, June 1974	Handout
Wednesday Oct. 8		THE INCOME TAX INFLUENCE ON REAL ESTATE INVESTMENT	
	A.	The Role of Investment Real Estate in Portfolio Management, J. Graaskamp, pp. 19-24	Handout
Quiz Section 6		Review for Six-week exam	
Monday Oct. 13		ONE HOUR SIX WEEKS EXAM - Introduce Problem 2	
Wednesday Oct. 15		INTRODUCTION TO REAL ESTATE LAW	
	A.	"Property Rights," Frederic E. Case	Mimeo
	B.	"The Property Interface," Chap. 19, Pollution Property and Prices, J.H. Dales	Mimeo
	C.	"Interests in Realty," - Flow Chart Outline	Mimeo
Quiz Section 7		Introduction to Problem 2; Overview, Foundation	
Monday Oct. 20		GOVERNMENT REGULATIONS OF REAL ESTATE AT THE LOCAL LEVEL	
	A.	"Zoning, Subdivision Approval, Restrictive Covenants, and Other Land Use Controls," Wisconsin Real Estate Law, Chap. 12	Mimeo
	B.	"The City of Petaluma Residential Development Control," Frank Gray Management & Control of Growth	ULI Mimeo

Oct. 20 (cont.) C. Legal Notes - "The No Growth Explosion and Petaluma," Urban Land, June 1974 — Mimeo

D. The Mount Laurel Decision: Wishful Thinking? Jerome Rose - Mimeo Real Estate Law Journal

Wednesday Oct. 22 — THE HISTORY OF HUD

A. "Every Man's HUD," Charles L. Edson, Real Estate Review, Winter 1972 — Mimeo

B. "Unlearned Lessons in the History of Federal Housing Aid," M. Carter McFarland, City, Winter 1972 — Mimeo

Quiz Section 8 — Legal Survey Technique and Return Six-week exam

Monday Oct. 27 — THE EMERGING ROLE OF FEDERAL & STATE LAND USE PROGRAMS

A. Readings to be assigned

Wednesday Oct. 29 — PUBLIC URBAN RENEWAL

A. "The Concept and Causes of Urban Blight," G.E. Breger, Land Economics, November 1967 — Mimeo

B. "The Nature of Redevelopment Benefits," Jerome Rothenberg — Mimeo

Quiz Section 9 — Site and Building Envelop

Monday Nov. 3 — HOUSING AND THE LOW INCOME FAMILY

A. "An Economic Analysis of the Housing and Urban Development Act of 1968," Urban Analysis, Kilbridge, O'Block and Teplitz. — Mimeo

B. "Shopping for a Home" — Handout

C. "The Tenant Point of View," Owens Corning Fiberglass Co., Urban Land Institute, Feb. 1970 — Mimeo

D. "Say Goodbye to the Great American Dream" Savings + Loan News July 1975

Wednesday Nov. 5 — CITY BUILDING - PUBLIC VIEWPOINT

A. "The Future of the Cities," National Advisory Commission on Civil Disorders. — Mimeo

B. "Where Do We Grow From Here?," Robert Cahn, Forum, December 1973 — Mimeo

Quiz Section 10 — Alternative Use Analysis

Monday Nov. 10 — PUBLIC PRIORITIES - PRIVATE WINDFALL AND WIPEOUT

A. "The Transfer of Development Rights: A Preview of an Evolving Concept," Jerome G. Rose Real Estate Law Journal, Spring 1975 — Mimeo

B. "The Costs of Preservation," John J. Costonis, Architectural Forum, Jan-Feb 1974, Section I, pps. 61-67 — Mimeo

Wednesday Nov. 12	THE CITIES AS A SET OF SERVICE ENTERPRISE DELIVERY SYSTEMS	
	A. Readings to be assigned	
Quiz Section 11	Relationship of User to Community Economics	
Monday Nov. 17	REAL ESTATE AND TRANSPORTATION POLICY	
	A. "Transportation and the City," <u>Architectural Forum</u>, October 1963	Mimeo
	B. "Attacking the Mass Transit Mess," <u>Business Week</u>, June 3, 1972	Mimeo
	C. "Traffic Congestion: Price Rationing and Capital Planning," Wilbur R. Thompson	Mimeo
Wednesday Nov. 19	REAL ESTATE AND ENVIRONMENTAL IMPACT	
	A. "Environmental Impact Statements: A Current Overview," Gladstone and Witherspoon, <u>Environmental Comments</u>, June 1974	Mimeo
	B. "ERTS Puts the Whole Earth Under a Microscope," Gene Bylinski, <u>Fortune</u>, Feb. 1975	Mimeo
Quiz Section 12	Minimod Analysis for Project 2	
Monday Nov. 24	RATIONAL LAND USE PLANNING AND CASH FLOW	
	A. "The Land-Use Crisis," <u>House and Home</u>, Aug. 1972, pp. 57-73	Mimeo
	B. "Density, Impact Zoning Model," Leonard L. Wolffe, <u>Density: Five Perspectives</u>, pp. 26-31	Mimeo
	C. "Here's a New System for Figuring Project Feasibility," <u>House and Home</u>, October 1973	Mimeo
Wednesday Nov. 26	REAL ESTATE AND SOCIAL DISORGANIZATION	
	A. "Abandoned," Glenn A. Clayton, <u>Journal of Housing</u>, June 1974	Mimeo
	B. "Alternatives to Fear," <u>Progressive Architecture</u>, October 1972	Mimeo
Quiz Section 13	Special Help Project 2 (Note - Tuesday only)	
Monday Dec. 1	PERCEPTION OF CITY STRUCTURE AS SOCIAL ORGANIZATION Problem 2 due	
	A. Readings to be assigned	

Wednesday Dec. 3	THE BUSINESS OF BUILDING NEW TOWNS	
	A. "Columbia: The $50 Million Gamble," Gurney Breckenfeld, Columbia and the New Cities, May 1972	Mimeo
	B. "The First (and Last?) Meeting of the Regional New Towns Committee," James A. Clapp, City, Winter 1970	Mimeo
Quiz Section 14	Conference with Professor Graaskamp in each quiz section	
Monday Dec. 8	FAILURE OF GOVERNMENT SPONSORED NEW TOWNS	
	A. Title VII	
	B. New Towns in Town - Why a Federal Program Failed Martha Derthick	Mimeo
Wednesday Dec. 10	THE BUSINESS OF RECYCLING OLD TOWNS	
	A. "Philadelphia is Turning Old Town into New Town," Jack Bryan, Journal of Housing, May 1972	Mimeo
	B. "Applying New City Principles to Old Cities," Wilfred Owen	Mimeo
Quiz Section 15	Hand back Project 2 and discuss; Final Review	
Monday Dec. 15	URBAN ENTERPRISE CAREERS AND THE SCHOOL OF BUSINESS	
	A. "Entrepreneurs and Urban Renewal," Jewell Bellush and Murray Hausknecht	Mimeo

Business 550 and 705 -- Urban Land Economics
Information Sheet

Spring Semester 1975

Prof. James Graaskamp
Prof. James Canestaro

1. Course Materials

Textbook: James R. Cooper and Karl L. Guntermann Real Estate and Urban Land Analysis, Heath-Lexington Press, 1974.

The textbook plus a complete set of mimeographed readings are available from the U.W. Real Estate Club in Room 91 Bascom Hall for $30.00. Book only $24.50 (vs. $27.50 at bookstore; mimeos only$5.50).

2. Projects

Two problems are assigned. The first problem is concerned with after-tax cash flow analysis of an apartment investment. The second problem is concerned with the feasibility of a particular land-use for a given site for an assumed investor.

All projects are due at the Monday lecture, not your quiz section, according to the following schedule.

Project I	Assigned Week 2 Due Monday, February 17
Project II	Assigned Week 7 Due Monday, April 14

3. Grading

Grade Components:

Six weeks exam	100 points
Final exam	200 points
Project I	75 points
Project II	150 points
Evaluation by T.A.	25 points

Grades will be established by the modes of the above cummulative point distrubution. Examinations will include questions submitted by the teaching assistants.

4. Quiz Sections

Quiz sections are used to teach technical computations and procedures and to provide guidance towards completion of the required projects. Quiz sections further provide the opportunity to clarify points of fact or meaning and to explore topics not presented in lecture. Quiz section material does appear on exams.

5. Faculty

Prof. James A. Graaskamp	School of Business, Room 118	262-6378
Prof. James Canestaro	Bascom Hall, Room 264A	262-8912

6. Teaching Assistants

Office - Room 91 Bascom Hall
Telephone - 263-2043
Office Hours as listed below and by appointment

Mike Robbins, Senior T.A.	6314 Hammersley Road	274-3970
James DeLisle	202B Breese Terrace	238-3518

Administrative problems or questions should be addressed to Mike Robbins.

BUSINESS 550 and 705 -- URBAN LAND ECONOMICS
SYLLABUS

Spring Semester 1975

Prof. James Graaskamp
Prof. James Canestaro

Monday Jan. 13	INTRODUCTION TO THE REAL ESTATE PROCESS	
	A. Textbook introduction by Prof. James R. Cooper	Text
Wednesday Jan. 15	HISTORY OF CITY DEVELOPMENT AS A REFLECTION OF CULTURAL VALUES, TECHNOLOGY, AND POLITICAL STRUCTURE	
	A. "The Dawn of Urbanization," Chap. 1, The Urban Pattern," by Arthur B. Gallion and Simon Eisner	Mimeo
	B. "Descriptions of Real Estate," Chap. 7, Wisconsin Real Estate Brokers Manual (1972)	Mimeo
Quiz Section 1	Projects I and II handouts	
Monday Jan. 20	SPATIAL AND LOCATIONAL CONCEPTS OF URBAN LAND ECONOMICS	
	A. "Land Use Prospectives," F. Stuart Chapin,Jr.; Part II, Chap. 3	Text
	B. "The Evolving Form and Organization of the Metropolis," Edgar M. Hoover, Part II, Chap. 5	Text
	C. "The Location of Economic Activity in Cities," L. Moses & H.F. Williamson, Part II, Chap. 6	Text
Wednesday Jan. 22	ECONOMIC BASE OF URBAN DEVELOPMENT	
	A. "Internal and External Factors in the Development of Urban Economy," Wilbur R. Thompson, Part I, Chap. 1	Text
	B. "Economic Base Studies," Richard B. Andrews	Mimeo
Quiz Section 2	Present Value Theory	
	A. "Equity Investment," Real Estate Analysis, Richard U. Ratcliff, pp. 103-141	Mimeo
Monday Jan. 27	REAL ESTATE MARKETS WITHIN URBAN AREAS	
	A. "Real Estate Markets, Demand and Supply Analysis," Frederic E. Case, Chap. 24	Text
	B. "City and Neighborhood Analysis," The Appraisal Journal, April 1967	Mimeo
Wednesday Jan. 29	INTRODUCTION TO REAL ESTATE CASH FLOW CONCEPTS	
	A. Role of Investment Real Estate in Portfolio Management, J. Graaskamp, pp. 1-18, 24-35	Handout
Quiz Section 3	Present Value and Cash Flow Concepts	

Monday Feb. 3	INVESTMENT YIELD AND RISK IN REAL ESTATE	
	A. "An Introduction to Appraisal and Yield Analysis," Cooper, Farrell, & Guntermann, Part VII, Chap. 38	Text
	B. Demonstration Appraisal Report, David Cunningham, Part VII, Chap. 41	
	C. "Using Computer Simulation to Minimize Risk in Urban Housing Development," Cooper & Morrison, Part VII, Chap. 39	Text
Wednesday, Feb. 5	INTRODUCTION TO REAL ESTATE FINANCE (THE MORTGAGE)	
	A. "Mortgages and Other Lending Institutions," Frederic E. Case, Part IV, Chap. 18	Text
	B. "Non-Possessory Real Estate Interests," Frederic E. Case, Part IV, Chap. 19	Text
Quiz Section 4	Cash Flow and Depreciation	
Monday Feb. 10	INTRODUCTION TO REAL ESTATE FINANCE (THE INSTITUTION)	
	A. "Financing Real Estate," Smith, Tschappat and Racster, Real Estate and Urban Development, Chap. 14 pp. 296-329	Mimeo
	B.	
Wednesday Feb. 12	THE REAL ESTATE TAX	
	A. "An Appraisal of the Property Tax," Dick Netzer, Part III, Chap. 13	Text
	B. "Property Tax: Assessments, Appeals, and Trends," Wisconsin Taxpayer, June 1974	
Quiz Section 5	Cash Flow and Reversion	
Monday Feb. 17	THE INCOME TAX INFLUENCE ON REAL ESTATE INVESTMENT	
	A. Role of Investment Real Estate in Portfolio Management, J. Graaskamp, pp. 19-24	Handout
Quiz Section 6	Review for Six Weeks Exam held Monday night February 17 at 7:15 p.m. Discussion sections for balance of week are cancelled.	
Wednesday Feb. 19	ONE HOUR SIX WEEKS EXAM	
Monday, Feb. 24	INTRODUCTION TO REAL ESTATE LAW	
	A. "The Legal Environment of Urban Space Use," James R. Cooper, Part IV	Text

Monday, Feb. 24 — INTRODUCTION TO REAL ESTATE LAW CONTINUED

B.	"Property Rights," Frederic E. Case, Part IV, Chap. 17	Text
C.	"The Property Interface," Chap. 19, <u>Pollution Property, and Prices</u>, J.H. Dales	Mimeo
D.	"Interests in Realty," - Flow Chart Outline	Mimeo

Wednesday, Feb. 26 — GOVERNEMENT REGULATION OF REAL ESTATE AT THE LOCAL LEVEL

A.	"Zoning, Subdivision Approval, Restrictive Covenants, and Other Land Use Controls," <u>Wisconsin Rèal Estate Law</u>, Chap. 12	Mimeo
B.	"Ruth Golden et al. vs. Planning Board of the Town of Ramapo et al.," Part IV, Chap. 22, p. 327	Text
C.	"Gautreaux Vs. Chicago Housing Authority," Part IV, Chap. 20, p. 305	Text
D.	Legal Notes - "The No Growth Explosion and Petaluma," <u>Urban Land</u>, June 1974	Mimeo

Quiz Section 7 — Legal Survey Technique and Introduction to Project II

Monday Mar. 3 — THE HISTORY OF HUD

A.	"Every Man's HUD," Charles L. Edson, <u>Real Estate Review</u>, Winter 1972	Mimeo
B.	"Federal Housing Administration Programs Relating to Apartment Property Financing," Federal Housing Administration, Part VI, Chap. 37	Text
C.	"Unlearned Lessons in the History of Federal Housing Aid," M. Carter McFarland, <u>City</u>, Winter 1972	Mimeo
D.	"The Proposed Better Communities Act," <u>Challenge</u>, July, 1973	Mimeo

Quiz Section 8 — Mini-Mod and Project Site Analysis Approach

Wednesday Mar. 5 — PUBLIC URBAN RENEWAL

A.	"The Concept and Causes of Urban Blight," G.E. Breger, <u>Land Economics</u>, November 1967	Mimeo
B.	"The Shape of the Nation's Housing Problems," The President's Committee on Urban Housing, Part VI, Chap. 32	Text
C.	"The Nature of Redevelopment Benefits," Jerome Rothenberg, Part VI, Chap. 33	Text
D.	"The Economics of Urban Renewal," Otto A. Davis & Andrew B. Whinston, Part VI, Chap. 34	Text
E.	"Urban Renewal: A Strategy for Information and Analysis," Lowden Wingo, Jr., Part IV, Chap. 36	Text

Quiz Section 9 — Dane County Courthouse

Monday Mar. 10	HOUSING AND THE LOW INCOME FAMILY		
	A.	"An Economic Analysis of the Housing and Urban Development Act of 1968," Urban Analysis, Kilbridge, O'Block, and Teplitz, Chap. 9, pp. 64-82	Mimeo
Wednesday, Mar. 12	CITY BUILDING - PUBLIC VIEWPOINT		
	A.	"The Future of the Cities," National Advisory Commission on Civil Disorders, Part III, Chap. 16, p. 245	Text
	B.	"Where Do We Grow From Here?," Robert Cahn, Forum, December 1973	Mimeo
Monday, Mar. 17	PUBLIC PRIORITIES - PRIVATE WINDFALL AND WIPEOUT		
	A.	"A Proposal for the Separation and Marketability of Development Rights. . .", Jerome G. Rose, Real Estate Law Journal, Winter 1974	Mimeo
	B.	"The Costs of Preservation," John J. Costonis, Architectural Forum, Jan.-Feb., 1974, Section 1, pps. 61-67	Mimeo
Wednesday, Mar. 19	REAL ESTATE AND TRANSPORTATION POLICY		
	A.	"Transportation and the City," Architectural Forum, October 1963	Mimeo
	B.	"The Journey to Work in our Metropolitan Areas," James R. Cooper, Part III, Chap. 10	Text
	C.	"Traffic Congestion: Price Rationing and Capital Planning," Wilbur R. Thompson, Part III, Chap. 14	Text
Quiz Section 10	Assistance on Project II, Neighborhood and Site Analysis		
Monday, Mar. 24	REAL ESTATE AND URBAN POLLUTION		
	A.	"Land, Water, and Ownership," J.H. Dales, Economics of the Environment	Mimeo
	B.	"Cost-Benefit Analysis and the Economics of Air Pollution," Karl L. Guntermann, Part III, Chap. 11	Text
Wednesday, Mar. 26	REAL ESTATE AND ENVIRONMENTAL IMPACT		
	A.	"Environmental Impact Statements: A Current Overview," Gladstone and Witherspoon, Environmental Comment, June 1974	Mimeo
Quiz Section 11	Land Development Impact Model		
Spring Recess Friday, March 28 - Sunday, April 6			
Monday, April 7	RATIONAL LAND USE PLANNING AND CASH FLOW		
	A.	"The Land-Use Crisis," House & Home, August 1972, pp. 57-73	Mimeo

Monday, April 7	RATIONAL LAND USE PLANNING AND CASH FLOW CONTINUED	
	B. "Density Impact Zoning Model," Lenard L. Wolffe, <u>Density: Five Perspectives</u>, pp. 26-31	Mimeo
	C. "Here's a New System for Figuring Project Feasibility," <u>House & Home</u>, October 1973	Mimeo
Wednesday, April 9	REAL ESTATE AND SOCIAL DISORGANIZATION	
	A. "Abandoned," Glenn A. Clayton, <u>Journal of Housing</u>, June 1974	Mimeo
	B. "Alternatives to Fear," <u>Progressive Architecture</u>, October 1972	Mimeo
Quiz Section 12	Mini-Mod Analysis for Project II	
Monday, April 14	PERCEPTION OF CITY STRUCTURE AS SOCIAL ORGANIZATION	
Wednesday, April 16	THE USER VIEWPOINT	
	A. "Nelson's Principles of Store Location," William Applebaum, <u>Guide to Store Location Research</u>, pp. 25-28	Mimeo
	B. "Industrial Land Development," Stuart P. Walsh, Chap. 45, pp. 717-732	Text
	C. Shopping for a Home	Handout
	D. "The Tenant Point of View," Owens Corning Fiberglas Company, <u>Urban Land Institute</u>, February, 1970	Mimeo
	E. The Rational Manager Charles Kepner	
Quiz Section 13	Cash Flow Problem	
Monday, April 21	THE DEVELOPMENT - MARKETING VIEWPOINT	
	A. "The Current Investment Climate for Real Estate Investment and Development," Anthony Downs & M. Leanne Lachman, <u>Real Estate Review</u>, Spring 1974	Mimeo
	B. "Development of Shopping Centers," Willard G. Rouse, Part VIII, Chap. 44	Text
Quiz Section 14	Conference with Prof. Graaskamp in each quiz section	
Wednesday, April 23	THE BUSINESS OF BUILDING NEW TOWNS	
	A. "Columbia: The $50 Million Gamble," Gurney Breckenfeld, <u>Columbia and the New Cities</u>, Chap. 10	Mimeo
	B. "New Business from New Towns?," Mahlon Apgar IV, <u>Appraisal Journal</u>, January 1973	Mimeo
	C. "The First (and Last?) Meeting of the Regional New Towns Committee," James A. Clapp, <u>City</u>, Winter, 1970	Mimeo

Monday, April 28	THE BUSINESS OF RECYCLING OLD TOWNS	
	A. "Philadelphia is Turning Old Town into New Town," Jack Bryan, <u>Journal of Housing</u>, May 1972	Mimeo
	B. "Applying New City Principles to Old Cities," Wilfred Owen, Part VI, Chap. 35	Text
Wednesday, April 30	THE CITY AS A SET OF SERVICE ENTERPRISE DELIVERY SYSTEMS	
Quiz Section 15	Hand Back Project II and Discuss	
	TWO HOUR FINAL EXAM AS PER TIMETABLE	

Lecture Schedule -- 550 and 705
Spring Semester 1975

Jan. 13 - Monday	Introduction to the Real Estate Process -- G.
Jan. 15 - Wednesday	History of City Development as a Reflection of Cultural Values, Technology, and Polictical Structure (New Graphics) -- G.
Quiz Section 1	Projects I and II handouts
Jan. 20 - Monday	Spatial and Locational Concepts of Urban Land Economics -- G.
Jan. 22 - Wednesday	Economic Base of Urban Development -- G.
Quiz Section 2	Present Value Theory
Jan. 27 - Monday	Real Estate Markets Within Urban Areas (New Graphics) -- G.
Jan. 29 - Wednesday	Introduction to Real Estate Cash Flow Concepts -- G.
Quiz Section 3	Present Value and Cash Flow Concepts
Feb. 3 - Monday	Investment Yield and Risk in Real Estate -- G.
Feb. 5 - Wednesday	Introduction to Real Estate Finance (The Mortgage) -- Canestaro
Quiz Section 4	Cash Flow and Depreciation
Feb. 10 - Monday	Introduction to Real Estate Finance (The Institution) -- G.
Feb. 12 - Wednesday	The Real Estate Tax -- G.
Quiz Section 5	Cash Flow and Reversion
Feb. 17 - Monday	The Income Tax Influence on Real Estate Investment -- G.
Feb. 19 - Wednesday	One Hour Six Weeks Exam
Quiz Section 6	Review for Six Weeks Exam held Monday night February 17 at 7:15 p.m. Discussion sections for balance of week are cancelled.
Feb. 24 - Monday	Introduction to Real Estate Law -- G.
Feb. 26 - Wednesday	Government Regulation of Real Estate at the Local Level -- G.
Quiz Section 7	Legal Survey Technique and Introduction to Project II
Mar. 3 - Monday	The History of HUD -- G.
Mar. 5 Wednesday	Public Urban Renewal -- G.
Quiz Section 8	Mini-MOd and Project Site Analysis Approach

Lecture Schedule -- 550 and 705
Spring Semester 1975

Mar. 10 - Monday	Housing and the Low Income Family -- Canestaro
Mar. 12 - Wednesday	City Building - Public Viewpoint -- G.
Quiz Section 9	Dane County Courthouse
Mar. 17 - Monday	Public Priorities - Private Windfall and Wipeout -- G.
Mar. 19 - Wednesday	Real Estate and Transportation Policy -- Canestaro
Quiz Section 10	Assistance on Project II, Neighborhood and Site Analysis
Mar. 24 - Monday	Real Estate and Urban Pollution -- Canestaro
Mar. 26 - Wednesday	Real Estate and Environmental Impact -- Robbins
Quiz Section 11	Land Development Impact Model

Spring Recess Friday, March 28 - Sunday, April 6

Apr. 7 - Monday	Rational Land Use Planning and Cash Flow -- G.
Apr. 9 - Wednesday	Real Estate and Social Disorganization -- G.
Quiz Section 12	Mini-Mod Analysis for Project II
Apr. 14 - Monday	Perception of City Structure as Social Organization -- Canestaro
Apr. 16 - Wednesday	The User Viewpoint
Quiz Section 13	Cash Flow Problem
Apr. 21 - Monday	The Development - Marketing Viewpoint -- G.
Apr. 23 - Wednesday	The Business of Building New Towns -- G.
Quiz Section 14	Conference with Prof. Graaskamp in each quiz section
Apr. 28 - Monday	The Business of Recycling Old Towns -- Canestaro
Apr. 30 - Wednesday	The City as a Set of Service Enterprise Delivery Systems -- G.
Quiz Section 15	Hand Back Project II and Discuss

Business 550 and 705

THE REAL ESTATE PROCESS

Information Sheet

Fall Semester 1977

1. Course Materials

No textbook; course mineo material available in 118 Commerce for $15.00. Make check payable to UW Real Estate Club.

2. Projects

Two projects are assigned. The first, in two parts, is concerned with cash flow analysis of an apartment investment. The second, in six parts, is concerned with the feasibility of a particular land use for a given site for an assumed investor. The second project is to be completed by teams of two students.

3. Grading

Grading components:	Six week exam	100 points
	Final exam	200 points
	Project 1	75 points
	Project 2	225 points
	Total	600 points

Grades will be established by the modes of the above cumulative point distribution. Examinations will include questions submitted by the teaching assistant.

4. Quiz Sections

Quiz sections are used to teach technical computations and procedures and to provide guidance towards completion of the required projects. Quiz sections further provide the opportunity to clarify points of fact or meaning and to explore topics not presented in lecture. Each quiz section is 75 minutes long because students felt 50 minutes was inadequate. Quiz section material does appear on exams.

5. Faculty

Lect. Michael L. Robbins	Room 118 Commerce	262-0787
Prof. Craig Stanley	Room 210B Commerce	262-1625

6. Teaching Assistant

Terry Grissom

Business 550 and 705

THE REAL ESTATE PROCESS

Syllabus

Michael L. Robbins, Instructor

1. INTRODUCTION TO THE REAL ESTATE PROCESS

   A. Role of Investment Real Estate in Portfolio Management, J. A. Graaskamp, pp. 1-18.

2. A FRAMEWORK FOR IMPACT ANALYSIS (JAG)

   A. "The Down of Urbanization", Chap. 1, The Urban Pattern, A. B. Gallion and S. Eisner.

   B. "The Property Interface", Chap. 19, Pollution Property and Prices, J. H. Dales.

3. THE SOCIAL IMPACT OF REAL ESTATE

   A. "Internal and External Factors in the Development of Urban Economy", W. R. Thompson.

   B. This Scene of Man, James E. Vance, Jr., 1977, pp. 324-339.

4. AGGREGATE SPATIAL AND LOCATIONAL PATTERNS OF URBAN LAND DEVELOPMENT

   A. "Land Use Perspectives", F. S. Chapin, Jr.

5. ECONOMIC BASE CONCEPTS

   A. "Economic and Fiscal Impacts of a New Autonomous Enterprise in an Area", excerpted from Industrial Location as a Factor in Regional Economic Development, Economic Development Administration, U.S. Dept. of Commerce.

6. ECONOMIC BASE DEMO

7. CONCEPTS OF SITUS AND LINKAGE

   A. "The Locational Basis of Real Estate Value", Chap. 4, Real Estate Analysis, Richard U. Ratcliff.

8. THE NATURE OF PROPERTY RIGHTS

   A. "Property Rights", F. E. Case.

   B. "Descriptions of Real Estate", Chap. 7, Wisconsin Real Estate Brokers Manual, 1976.

9. THE REAL ESTATE TAX AND ASSESSMENT

   A. "Property Tax: Trends, Assessment, and Appeals", The Wisconsin Taxpayer, June 1977.

10. THE REAL ESTATE TAX AND LAND USE ISSUES (JAG)

11. 6 WEEK EXAM

12. REAL ESTATE FINANCE--THE MORTGAGE

   A. "Financing Real Estate", Smith, Tschappat and Racster, Real Estate and Urban Development, Chap. 13, pp. 315-351.

13. THE MORTGAGE--VOCABULARY

   A. "Real Estate Financing", Messner, Schreiber and Lyon, Marketing Investment Real Estate, Chap. 6, pp. 62-79.

14. THE MORTGAGE--METHODS OF REPAYMENT

15. HISTORICAL DEVELOPMENT OF THE MORTGAGE

16. REAL ESTATE AND THE FEDERAL INCOME TAX

   A. The Role of Investment Real Estate in Portfolio Management, J. A. Graaskamp, pp. 19-24.

17. TAX PLOY'S IN REAL ESTATE

18. CASH FLOW AND HOUSING LOCATION CHOICE

   A. "Housing Is Now Beyond Reach of Average Family", Journal of Housing, March 1977, pp. 130-131.

   B. "What Has Happened to the American Family's Ability to Buy New Homes?", Urban Land, June 1976.

   C. "High Price of Government in Housing", Professional Builder, May 1977, pp. 136-143.

   D. "Cash Assistance Housing Program is Nation's Largest Social Study", State and County Administrator, June 1977, pp. 19-20.

19. SITE TO REGION ANALYSIS

    A. "Development Strategy", Chap. 5, Industrial Development Handbook, ULI, 1975, pp. 159-169.

20. RETAIL ANALYSIS--PART I

    A. "Nelson's Principles of Store Location", W. Applebaum, Guide to Store Location Research, pp. 25-28.

21. RETAIL ANALYSIS--PART II

22. OPERATING INCOME--EXPENSE DETERMINATION

23. RISK AND YIELD ANALYSIS

    A. MRCAP User Manual, Michael L. Robbins, pp. 90-101.

24. LIMITATIONS ON LOCAL LAND USE CONTROL

    A. "Zoning, Subdivision Approval, Restrictive Covenants, and Other Land Use Controls", Wisconsin Real Estate Law, Chap. 12.

25. REAL ESTATE AND SOCIAL IMPACT

    A. "Abandoned", G. A. Clayton, Journal of Housing, June 1974.

    B. "Alternatives to Fear", Progressive Architecture, October 1972.

26. REGIONAL LAND USE PLANNING AND CASH FLOW

    A. "The Land-Use Crisis", House and Home, August 1972, pp. 57-73.

    B. "Density, Impact Zoning Model", Leonard L. Wolffe, Density's Five Perspectives, pp. 26-31.

    C. "Here's a New System for Figuring Project Feasibility", House and Home, October 1973.

27. EVALUATION OF FEDERAL AND STATE LAND USE CONTROLS (JAG)

    A. "Who Pays for Transfer of Development Rights", J. B. Shlaes.

    B. "Impressions on the Marketability of TDR's, or Toward the Science of Cubernetics in the Space Age", James A. Graaskamp, The Appraisal Journal, July 1977, pp. 435-444.

C. "Five Land-Use Reforms", Arthur P. Solomon, Journal of Housing, June 1977, pp. 275-281.

28. THE BUSINESS OF REBUILDING OLD TOWNS

A. "Entrepreneurs and Urban Renewal", J. Bellush and M. Hausknecht.

B. "The Concept and Causes of Urban Blight", G. E. Breger, Land Economics, November 1967.

C. "The Devil Theory of Redlining", Pierre de Vise, Real Estate Issues, Summer 1977, pp. 1-12.

29. REAL ESTATE AND AESTHETIC IMPACT

A. "The City Image and Its Elements", Chap. III, <u>Image of the City</u>, Kevin Lynch.

30. THE BUSINESS OF BUILDING NEW TOWNS (JAG)

A. "Columbia: The $50 Million Gamble", G. Breckenfeld, <u>Columbia and the New Cities</u>, May 1972.

B. "The First (and Last?) Meeting of the Regional New Towns Committee", J. A. Clapp, <u>City</u>, Winter 1970.

31. LESSONS LEARNED FROM NEW TOWNS (JAG)

Business 550 & 705
THE REAL ESTATE PROCESS

Fall Semester 1981 — Instructor: Prof. J. Graaskamp

1. Course Materials:

Textbook: MODERN REAL ESTATE, Arnold, Wurtzebach, & Miles; Warren, Gorham & Lamont, New York., 1979. Available at the University Book Store.

Mimeo materials packet. Available at _____

A. Reading packet $
B. Feasibility packet & Problem book
C. Lecture outline

2. Problem Sets:

Six problem sets are assigned to replace the field project which formerly dominated this course. The first two problems are application of the building codes and land use ordinances; the next two problems are a review of money present value concepts; problem #5 is an after tax cash flow exercise; and problem #6 is a feasibility matrix to determine most probable use. Each exercise must be handed in by each student. Late papers will be penalized 50%; papers more than a week late will be forfeited.

3. Grading:

Grading components:	Six weeks exam	100 points
	Twelve weeks exam	100 "
	Final exam	200 "
	Problems 1-6 (50 points ea)	300 "
		700 points

Grades will be established to reflect the modes of the distribution of cumulative point totals for each student. Each exam will have four parts to emphasize textbook, mimeo readings, problem exercises and questions submitted by teaching assistants.

4. Quiz Sections:

Each quiz section will be 75 minutes long and will be used to teach technical computations and procedures and to clarify definitions or implications of text and lectures. Each teaching assistant will have complete responsibility for receiving assignments and maintaining records for student grades, attendance, etc. and will be consulted on borderline grade determinations. Office hours will be posted outside of Room 118 and 203.

Prof. James A. Graaskamp
Room 118, Commerce 262-6378

Teaching Assistants:
Jill Sommer
Peter Tedesco

THE REAL ESTATE PROCESS
Business 550 & 705
Topic Schedule - Fall 1981

Aug. 31, Mon.	INTRODUCTION TO THE REAL ESTATE PROCESS
Sept. 2, Wed.	A FRAMEWORK FOR LAND USE DECISIONS
Quiz Section No. 1	INTRODUCTION
Sept. 9, Wed.	HISTORICAL FORM AND FUNCTION OF THE CITY
Quiz Section No. 2	LEGAL DESCRIPTION AND RECORDING OF DATA
Sept. 14, Mon.	STATIC ATTRIBUTES OF A REAL ESTATE PARCEL
Sept. 16, Wed.	LEGAL ATTRIBUTES OF A REAL ESTATE PARCEL
Quiz Section No. 3	PROBLEM NO. 1: DEFINITION OF BUILDING ENVELOPE
Sept. 21, Mon.	LINKAGE ATTRIBUTES OF A REAL ESTATE PARCEL
Sept. 23, Wed.	DYNAMIC ATTRIBUTES OF A REAL ESTATE PARCEL
Quiz Section No. 4	PROBLEM NO. 2: DEFINITION OF ENVELOPE MODIFIED
Sept. 28, Mon.	ECONOMIC BASE ANALYSIS
Sept. 30, Wed.	REAL ESTATE MARKET SEGMENTATION
Quiz Section No. 5	INTRODUCTION TO PRESENT VALUE CONCEPTS
Oct. 5, Mon.	THE CONSUMER CASH FLOW CONSTRAINT
Oct. 7, Wed.	THE PUBLIC INFRASTRUCTURE AND THE REAL ESTATE TAX
Quiz Section No. 6	PROBLEM NO. 3: PRESENT VALUE EXERCISES REVIEW FOR SIX WEEKS EXAM
Oct. 12, Mon.	LAND USE PATTERNS AND PUBLIC SOLVENCY
Oct. 14, Wed.	SIX WEEKS EXAM
Quiz Section No. 7	FRONT DOOR BACK DOOR WORKSHEETS
Oct. 19, Mon.	ENVIRONMENTAL ATTRIBUTES OF A REAL ESTATE PARCEL
Oct. 21, Wed.	REAL ESTATE FINANCE - THE MORTGAGE
Quiz Section No. 8	PROBLEM NO. 4: CALCULATION OF MORTGAGE PAYMENTS
Oct. 26, Mon.	REAL ESTATE FINANCE - THE INSTITUTIONS
Oct. 28, Wed.	SOURCES OF REAL ESTATE CAPITAL IN THE FUTURE

Quiz Section No. 9	INTRODUCTION TO CASH FLOW PROBLEM NO. 5
Nov. 2, Mon.	REAL ESTATE AND THE FEDERAL INCOME TAX
Nov. 4, Wed.	REAL ESTATE AND THE FEDERAL INCOME TAX CONT'D
Quiz Section No. 10	CALCULATION OF DEPRECIATION AND TAX ON RESALE
Nov. 9, Mon.	PRINCIPLES OF REAL ESTATE RISK MANAGEMENT
Nov. 11, Wed.	TWELVE WEEKS EXAM
Quiz Section No. 11	PROBLEM NO. 5 DUE REVIEW OF CASH FLOW COMPUTATIONS
Nov. 16, Mon.	LIMITATIONS OF LOCAL LAND USE CONTROLS
Nov. 18, Wed.	EVALUATION OF FEDERAL AND STATE LAND USE CONTROL
Quiz Section No. 12	SAMPLE FEASIBILITY - MOST FITTING USE
Nov. 23, Mon.	CASH FLOW AND HOUSING CHOICE
Nov. 25, Wed.	FLEXIBLE ZONING, LAND PLANNING, AND CASH FLOW
Thanksgiving	NO QUIZ SECTIONS
Nov. 30, Mon.	THE COMMERCIAL DEVELOPMENT PROCESS
Dec. 2, Wed.	VALUES IN CONFLICT: WHO PAYS AND WHO BENEFITS?
Quiz Section No. 13	PROBLEM NO. 6: FEASIBILITY MATRIX
Dec. 7, Mon.	THE BUSINESS OF BUILDING NEW TOWNS
Dec. 9, Wed.	THE BUSINESS OF REBUILDING OLD TOWNS
Quiz Section No. 14	REVIEW FOR FINAL EXAM
Dec. 11, Mon.	THE CITIZEN CRITIC OF THE REAL ESTATE ART FORM

THE REAL ESTATE PROCESS - BUS 550 & 705
Reading Assignments

Fall Semester 1981 — Prof. James A. Graaskamp

Class Period	Readings	Source
Aug. 31, Mon.	INTRODUCTION TO THE REAL ESTATE PROCESS	
	A. Chap. 1 & 2, MODERN REAL ESTATE	Text
Sept. 2, Wed.	A FRAMEWORK FOR LAND USE DECISIONS	
	A. FUNDAMENTALS OF REAL ESTATE DEVELOPMENT, J. A. Graaskamp, ULI, 1981, pp. 1-11.	Monograph
Sept. 7, Mon.	* * * LABOR DAY * * *	
Sept. 9, Wed.	HISTORICAL FORM AND FUNCTION OF THE CITY	
	A. Chap. 3 & 9, COMMUNITY AND PRIVACY, 1963, S. Chermayeff & C. Alexander, pp. 54-61, 124-138.	Mimeo
	B. "Dawn of Urbanization," <u>History of the City</u>	Mimeo
Quiz Sec. #2	LEGAL DESCRIPTION AND RECORDING OF DATA	
	A. Chap. 12, "Zoning, Subdivision Approval, Restrictive Covenants, and Other Land Use Controls," pp. 12-1 - 12-8.	Mimeo
	B. Chap. 7, "Descriptions of Real Estate," pp. 7-1 - 7-16	Mimec
Sept. 14, Mon.	STATIC ATTRIBUTES OF A REAL ESTATE PARCEL	
	A. III, pp. 1-13, <u>Feasibility Handbook</u>.	Handout
Sept. 16, Wed.	LEGAL ATTRIBUTES OF A REAL ESTATE PARCEL	
	A. Chap. 4 & 5, MODERN REAL ESTATE	Text
Quiz Sec. #3	PROBLEM NO. 1: DEFINITION OF BUILDING ENVELOPE	
Sept. 21, Mon.	LINKAGE ATTRIBUTES OF A REAL ESTATE PARCEL	
	A. "The Locational Basis of Real Estate Value," Chap. 4, REAL ESTATE ANALYSIS, R. U. Ratcliff.	Mimeo

Bus. 550, Fall 1981

Sept. 23, Wed.	DYNAMIC ATTRIBUTES OF A REAL ESTATE PARCEL	
	A. "Alternatives to Fear," PROGRESSIVE ARCHITECTURE, October 1972.	Mimeo
Quiz Sec. #4	PROBLEM NO. 2: DEFINITION OF ENVELOPE MODIFIED	
Sept. 28, Mon.	ECONOMIC BASE ANALYSIS	
	A. Chap. 3, MODERN REAL ESTATE	Text
	B. "Another Perspective on Growth Management," R. Ellson, URBAN LAND, Jan. 1979, pp. 3-8.	Mimeo
Sept. 30, Wed.	REAL ESTATE MARKET SEGMENTATION	
	A. Chap. 9, MODERN REAL ESTATE	Text
	B. Chap. 7, "Residential Land Uses," PROPERTY DEVELOPMENT, J. McMahan, 1976, pp. 131-151.	Mimeo
Quiz Sec. #5	INTRODUCTION TO PRESENT VALUE CONEPTS	
Oct. 5, Mon.	THE CONSUMER CASH FLOW CONSTRAINT	
	A. Review Exhibits 2 and 3 in FUNDAMENTALS OF REAL ESTATE DEVELOPMENT, J. A. Graaskamp.	Monograph
	B. FUNDAMENTALS OF REAL ESTATE DEVELOPMENT, PP. 23-30.	Monograph
Oct. 7, Wed.	THE PUBLIC INFRASTRUCTURE AND THE REAL ESTATE TAX	
	A. Chap. 15, pp. 319-329, MODERN REAL ESTATE	Text
Quiz Sec. #6	PROBLEM SET NO. 3 DUE: REVIEW FOR SIX WEEKS EXAM	
Oct. 12, Mon.	LAND USE PATTERNS AND PUBLIC SOLVENCY	
	A. "Explicit Property Tax Policies & the Promotion of Specific Land-Use & Economic Development Objectives: A Review," Robert Denne, ASSESSORS JOURNAL, March 1976	Mimeo
Oct. 14, Wed.	* * * SIX WEEKS EXAM * * *	
Quiz Sec. No. 7	FRONT DOOR-BACK DOOR WORKSHEETS	
Oc.t 19, Mon.	ENVIRONMENTAL ATTRIBUTES OF A REAL ESTATE PARCEL	
	A. Chap. 23, MODERN REAL ESTATE	Text
	B. Chap. 5, "World Trade Center Impacts," THE WORLD TRADE CENTER, L. Ruchelman, 1977, pp. 113-140.	Mimeo

Oct. 21, Wed.	REAL ESTATE FINANCE - THE MORTGAGE	
	A. Chaps. 13 & 14, MODERN REAL ESTATE	Text
Quiz Sec. #8	PROBLEM NO. 4: CALCULATION OF MORTGAGE PAYMENTS	
Oct. 26, Mon.	REAL ESTATE FINANCE - THE INSTITUTIONS	
	A. Chap. 12, MODERN REAL ESTATE	Text
Oct. 28, Wed.	SOURCES OF REAL ESTATE CAPITAL IN THE FUTURE	
	A. Chap. 19, MODERN REAL ESTATE	Text
	B. "Lenders Rush Into Ownership," Business Week, April 13, 1981	Mimeo
Quiz Sec. #9	INTRODUCTION TO CASH FLOW PROBLEM NO. 5	
Nov. 2, Mon.	REAL ESTATE AND THE FEDERAL INCOME TAX	
	A. pp. 229-334, and Chap. 16, MODERN REAL ESTATE	Text
Nov. 4, Wed.	REAL ESTATE AND THE FEDERAL INCOME TAX CONT'D	
	A. Chaps. 17 & 18, MODERN REAL ESTATE	Text
Quiz Sec. #10	CALCULATION OF DEPRECIATION AND TAX ON RESALE	
Nov. 9, Mon.	PRINCIPLES OF REAL ESTATE RISK MANAGEMENT	
	A. pp. 11-23, FUNDAMENTALS OF REAL ESTATE DEVELOPMENT, J. A. Graaskamp.	Monograph
Nov. 11, Wed.	* * * TWELVE WEEKS EXAM * * *	
Quiz Sec. No. 11	PROBLEM NO. 5 DUE: REVIEW OF CASH FLOW COMPUTATIONS	
Nov. 16, Mon.	LIMITATIONS OF LOCAL LAND USE CONTROLS	
	A. Chap. 22, MODERN REAL ESTATE	Text
	B. "Developing in a Cooperative Environment," J. E. Vitt, URBAN LAND, Nov. 1978, pp. 3-6.	Mimeo
	C. "Developing in a Hostile Environment," R. C. Nahas & N. Eskind, URBAN LAND, Nov. 1978, pp. 7-10.	Mimeo
	D. 'What's the Hidden Factor in Land Use Regulation?" F. J. Popper, URBAN Land, Dec. 1978, pp. 4-6.	Mimeo

Nov. 18, Wed.	EVALUATION OF FEDERAL AND STATE LAND USE CONTROL	
	A. "The Supreme Court and Land Use: Some New Twists," Banta, Duerksen, & Jordan, ENVIRONMENTAL COMMENT, July 1979, pp. 6-9.	Mimeo
	B. "The States: Trends in Environmental Management II," ENVIRONMENTAL COMMENT, Oct. 1977, pp. 3-7.	Mimeo
	C. "Impact of Federal Programs on State Land-Use Planning," M. Miles & R. Mann.	Mimeo
	D. "Who Pays for the Wild Rivers?" M. Rosner & R. Barrows, January 1976.	Mimeo
Quiz Sec. #12	SAMPLE FEASIBILITY - MOST FITTING USE	
	A. Chap. 20 & 21, Appendix 21A, MODERN REAL ESTATE	Text
Nov. 23, Mon.	CASH FLOW AND HOUSING CHOICE	
	A. "New Rental Housing: Confronting the 'Investment Gap,'" T. J. Cain & M. W. Scott, URBAN LAND, May 1981, pp. 3-7.	Mimeo
	B. "Inclusionary Zoning: A Workable Option for Affordable Housing?" B. Taylor, URBAN LAND, March 1981, pp. 6-12.	Mimeo
	C. "Say Goodbye to the Great American Dream," U.S. SAVINGS & LOAN LEAGUE NEWS.	Mimeo
Nov. 25, Wed.	FLEXIBLE ZONING, LAND PLANNING, AND CASH FLOW	
	A. "A Lot More Than Just an Ordinance: The Breckenridge Development Code," K. Wickersham, Jr., URBAN LAND, Jan. 1979, pp. 9-13.	Mimeo
	B. "Density, Impact Zoning Model," L. L. Wolffe, DENSITY'S FIVE PERSPECTIVES, pp. 26-31.	Mimeo
	C. "Here's a New System for Figuring Project Feasibility," HOUSE AND HOME, October 1973.	Mimeo
Thanksgiving	NO QUIZ SECTIONS	
Nov. 30, Mon.	THE COMMERCIAL DEVELOPMENT PROCESS	
	A. "Richmond, California: A Case Study in Economic Development," L. Burris, URBAN LAND, May 1980, pp. 9-17.	Mimeo
	B. Chap. 3, "Financial Obstacles to Energy Conservation."	Mimeo
	C. "Economics of Building Design," Rosalie Ruegg, & Harold Marshall, SOLAR AGE, July 1981.	Mimeo

Dec. 2, Wed.	VALUES IN CONFLICT: WHO PAYS AND WHO BENEFITS?	
	A. Chap. 4 and 6, THE ENVIRONMENTAL HUSTLER, pp. 52-59, 71-93.	Mimeo
	B. "The Economics of Petaluma," C. Gruen; "Legal Notes," R. Scott; "The City of Petaluma," F. Gray.	Mimeo
	C. "The Costs of Preservation, J. Costonis, FORUM, Jan/Feb 1974, pp. 61-67.	Mimeo
Quiz Sec. #13	PROBLEM NO. 6: FEASIBILITY MATRIX	
Dec. 7, Mon.	THE BUSINESS OF BUILDING NEW TOWNS	
	A. "The First (and Last?) Meeting of the Regional New Towns Committee," J. A. Clapp, CITY, Winter 1971, pp. 42-27.	Mimeo
	B. Chap. 10, "Columbia: The $50-Million Gamble," COLUMBIA AND THE NEW CITIES, pp. 224-276.	Mimeo
Dec. 9, Wed.	THE BUSINESS OF REBUILDING OLD TOWNS	
	A. "Philadelphia Is Turning Old Town into New Town," J. Bryan, JOURNAL OF HOUSING, 1972, pp. 231-235.	Mimeo
	B. "New Towns In-Town: Why a Federal Program Failed," M. Derthick, Washington, D.C. The Urban Institute, 1972, Chaps. 1 and 6.	Mimeo
Quiz Section #14	REVIEW FOR FINAL EXAM	
Dec. 11, Mon.	THE CITIZEN CRITIC OF THE REAL ESTATE ART FORM	
	A. "Five Land-Use Reforms," A. P. Solomon, JOURNAL OF HOUSING, 1977, pp. 276-281.	Mimeo

Business 550 & 705
THE REAL ESTATE PROCESS

Fall Semester 1982 Instructor: Prof. J. Graaskamp

1. Course Materials:

Textbook: MODERN REAL ESTATE, Arnold Wurtzebach, & Miles: Warren, Gorham & Lamont, New York., 1979. Available at the University Book Store.

Mimeo materials packet. Available in Room 118 Commerce.

A. Reading packet 12.00 plus 3.25 = 15.25
B. Feasibility packet & problem book
C. Lecture outline

2. Problem Sets:

Six problem sets are assigned to replace the field project which formerly dominated this course. The first two problems are application of the building codes and land use ordinances; the next two problems are a review of money present value concepts; problem #5 is an after tax cash flow exercise; and problem #6 is a feasibility matrix to determine most probable use. Each exercise must be handed in by each student. Late papers will be penalized 50%; papers more than a week late will be forfeited.

3. Grading:

Grading components:	Six weeks exam	100 points
	Twelve weeks exam	100 "
	Final Exam	200 "
	Problems 1-6 (50 pts. ea.)	300 "
		700 points

Grades will be established to reflect the modes of the distribution of cumulative point totals for each student. Each exam will have four parts to emphasize textbook, mimeo readings, problem exercises and questions submitted by teaching assistants.

4. Quiz Sections:

Each quiz section will be 75 minutes long and will be used to teach technical computations and procedures and to clarify definitions or implications of text and lectures. Each teaching assistant will have complete responsibility for receiving assignments and maintaining records for student grades, attendance, etc., and will be consulted on border-line grade determinations. Office hours will be posed outside of Room 118 and Bascom 56 263-2649

Professor James A. Graaskamp
Room 118, Commerce, 262-6378

Teaching Assistants:

THE REAL ESTATE PROCESS
Business 550 & 705
Topic Schedule - Fall 1982

Aug. 30, M	INTRODUCTION TO THE REAL ESTATE PROCESS
Sept. 1, W	A FRAMEWORK FOR LAND USE DECISIONS
Quiz Section No. 1	INTRODUCTION
Sept. 6, M	* * HOLIDAY * *
Sept. 8, W	HISTORICAL FORM AND FUNCTION OF THE CITY
Quiz Section No. 2	LEGAL DESCRIPTION AND RECORDING OF DATA
Sept. 13, M	STATIS ATTRIBUTES OF A REAL ESTATE PARCEL
Sept. 15, W	LEGAL ATTRIBUTES OF A REAL ESTATE PARCEL
Quiz Section No. 3	PROBLEM NO. 1: DEFINITION OF BUILDING ENVELOPE
Sept. 20, M	LINKAGE ATTRIBUTES OF A REAL ESTATE PARCEL
Sept. 22, W	DYNAMIC ATTRIBUTES OF A REAL ESTATE PARCEL
Quiz Section No. 4	PROBLEM NO. 2: FRONT DOOR BACK DOOR WORK SHEETS
Sept. 27, M	ECONOMIC BASE ANALYSIS
Sept. 29, W	REAL ESTATE MARKET SEGMENTATION
Quiz Section No. 5	INTRODUCTION TO PRESENT VALUE CONCEPTS
Oct. 4, M	THE CONSUMER CASH FLOW CONSTRAINT
Oct. 6, W	THE PUBLIC INFRASTRUCTURE AND THE REAL ESTATE TAX
Quiz Section No. 6	PROBLEM NO. 3: PRESENT VALUE EXERCISES REVIEW FOR SIX WEEKS EXAM
Oct. 11, M	LAND USE PATTERNS AND PUBLIC SOLVENCY
Oct. 13, W	SIX WEEKS EXAM
Quiz Section No. 7	PROBLEM NO. 4: CALCULATION OF MORTGAGE PAYMENTS
Oct. 18, M	ENVIRONMENTAL ATTRIBUTES OF A REAL ESTATE PARCEL
Oct. 20, W	REAL ESTATE FINANCE - THE MORTGAGE
Quiz Section No. 8	INTRODUCTION TO CASH FLOW PROBLEMS NO.5
Oct. 25, M	REAL ESTATE FINANCE - THE INSTITUTIONS
Oct. 27, W	SOURCES OF REAL ESTATE CAPITAL IN THE FUTURE

Quiz Section No. 9	INCOME TAX CALCULATIONS: DEPRECIATION AND DISPOSITION
Nov. 1, M	REAL ESTATE AND THE FEDERAL INCOME TAX
Nov. 3, W	REAL ESTATE AND THE FEDERAL INCOME TAX CONT'D
Quiz Section No. 10	CALCULATION OF DEPRECIATION AND TAX ON RESALE
Nov. 8, M	PRINCIPLES OF REAL ESTATE RISK MANAGEMENT
Nov. 10, W	TWELVE WEEKS EXAM
Quiz Section No. 11	PROBLEM NO. 5 DUE REVIEW OF CASH FLOW COMPUTATIONS
Nov. 15, M	LIMITATIONS OF LOCAL LAND USE CONTROLS
Nov. 17, W	EVALUATION OF FEDERAL AND STATE LAND USE CONTROL
Quiz Section No. 12	SAMPLE FEASIBILITY - MOST FITTING USE
Nov. 22, M	VLAUES IN CONFLICT: WHO PAYS AND WHO BENEFITS?
Nov. 24, W	FLEXIBLE ZONING, LAND PLANNING, AND CASH FLOW
Quiz Section No. 13	PROBLEM NO. 6: FEASIBILITY MATRIX
Nov. 29, M	PUBLIC MANIPULATION OF CASH FLOW: THE COMMERCIAL PROCESS
Dec. 1, W	PUBLIC MANIPULATION OF CASH FLOW: THE EMPLOYMENT PROCESS
Quiz Section No. 14	ASSISTANCE WITH FEASIBILITY RATIOS
Dec. 6, M	THE BUSINESS OF BUILDING NEW TOWNS
Dec. 8, W	THE BUSINESS OF REBUILDING OLD TOWNS
Quiz Section No. 15	REVIEW FOR FINAL EXAM
	<u>FINAL EXAM</u>

THE REAL ESTATE PROCESS - BUS 550 & 705
Reading Assignments

Fall Semester 1982 — Prof. James A. Graaskamp

Class Period	Readings	Source
Aug. 30, M	INTRODUCTION TO THE REAL ESTATE PROCESS	
	A. Chap. 1 & 2, MODERN REAL ESTATE	Text
Sept. 1, W	A FRAMEWORK FOR LAND USE DECISIONS	
	A. FUNDAMENTAL OF REAL ESTATE DEVELOPMENT J. A. Graaskamp, ULI, 1981, pp. 1-11.	Monograph
Sept. 6, M	* * HOLIDAY * *	
Sept. 8, W	HISTORICAL FORM AND FUNCTION OF THE CITY	
	A. Chap. 3 & 9, COMMUNITY AND PRIVACY, 1963, S. Chermayeff & C. Alexander, pp. 54-61, 124-138.	Mimeo
	B. "Dawn of Urbanization," History of the City	Mimeo
Quiz Sec. #2	LEGAL DESCRIPTION AND RECORDING OF DATA	
	A. Chap. 12, "Zoning, Subdivision Approval, Restrictive Covenants and Other Land Use Controls," pp. 12-1 - 12-8.	Mimeo
	B. Chap. 7, "Descriptions of Real Estate," pp. 7-1 - 7-16	Mimeo
Sept. 13, M	STATIC ATTRIBUTES OF A REAL ESTATE PARCEL	
	A. 111, pp. 1-13, Feasibility Handbook.	Handout
	B. "Determining a Building's Site Size Requirements," R. Stern, URBAN LAND, May 1981, pp. 12-15	Mimeo
Sept. 15, W	LEGAL ATTRIBUTES OF A REAL ESTATE PARCEL	
	A. Chap. 4 & 5, MODERN REAL ESTATE	Text
Quiz Sec. #3	PROBLEM NO. 1: DEFINITION OF BUILDING ENVELOPE	
Sept. 20, M	LINKAGE ATTRIBUTES OF A REAL ESTATE PARCEL	
	A. "The Locational Basis of Real Estate Value," Chap. 4, REAL ESTATE ANALYSIS, R. U. Ratcliff.	Mimeo

Bus. 550, Fall, 1982

Sept. 22, W	DYNAMIC ATTRIBUTES OF A REAL ESTATE PARCEL	
	A. "Alternatives to Fear," PROGRESSIVE ARCHITECTURE Oct. 1972.	Mimeo
Quiz Sec. #4	PROBLEM NO. 2: FRONT DOOR BACK DOOR WORK SHEETS	
Sept. 27, M	ECONOMIC BASE ANALYSIS	
	A. Chap. 3, MODERN REAL ESTATE	Text
	B. "Another Perspective on Growth Management," R. Ellson, URBAN LAND, Jan. 1979, pp. 3-8	Mimeo
Sept. 29, W	REAL ESTATE MARKET SEGMENTATION	
	A. Chap. 9, MODERN REAL ESTATE	Text
	B. Chap. 7, "Residential Land Uses," PROPERTY DEVELOPMENT, J. McMahan 1976, pp. 131-151.	Mimeo
Quiz Sec. #5	INTRODUCTION TO PRESENT VALUE CONCEPTS	
Oct. 4, M	THE CONSUMER CASH FLOW CONSTRAINT	
	A. Review Exhibits 2 and 3 in FUNDAMENTALS OF REAL ESTATE DEVELOPMENT, J. A. Graaskamp	Monograph
	B. FUNDAMENTALS OF REAL ESTATE DEVELOPMENT, pp. 23-30	Monograph
Oct. 6, W	THE PUBLIC INFRASTRUCTURE AND THE REAL ESTATE TAX	
	A. Chap. 15, pp. 319-329, MODERN REAL ESTATE	Text
Quiz Sec. #6	PROBLEM SET NO. 3 DUE: REVIEW FOR SIX WEEKS EXAM	
Oct. 11, M	LAND USE PATTERNS AND PUBLIC SOLVENCY	
	A. "Explicit Property Tax Policies & the Promotion of Specific Land-Use & Economic Development Objectives: A Review," Robert Denne, ASSESSORS JOURNAL, March 1976	Mimeo
Oct. 13, W	* * SIX WEEKS EXAM * *	
Quiz Sec. No. 7	PROBLEM NO. 4: CALCULATION OF MORTGAGE PAYMENTS	
Oct. 18, M	ENVIRONMENTAL ATTRIBUTES OF A REAL ESTATE PARCEL	
	A. Chap. 23, MODERN REAL ESTATE	Text
	B. Chap. 5, "World Trade Center Impacts," THE WORLD TRADE CENTER, L. Ruchelman, 1977, pp. 113-140.	Mimeo

Oct. 20, W	REAL ESTATE FINANCE - THE MORTGAGE	
	A. Chaps. 13 & 14, MODERN REAL ESTATE	Text
Quiz Sec. #8	INTRODUCTION TO CASH FLOW PROBLEM NO. 5	
Oct. 25, M	REAL ESTATE FINANCE - THE INSTITUTIONS	
	A. Chap. 12, MODERN REAL ESTATE	Text
Oct. 27, W	SOURCES OF REAL ESTATE CAPITAL IN THE FUTURE	
	A. Chap. 19, MODERN REAL ESTATE	Text
	B. "Lenders Rush into Ownership," <u>Business Week</u>, April 13, 1981	Mimeo
Quiz Sec. #9	INCOME TAX CALCULATIONS: DEPRECIATION AND DISPOSITION	
Nov. 1, M	REAL ESTATE AND THE FEDERAL INCOME TAX	
	A. pp. 229-334, and Chap. 16, MODERN REAL ESTATE	Text
Nov. 3, W	REAL ESTATE AND THE FEDERAL INCOME TAX CONT'D	
	A. Chaps. 17 & 18, MODERN REAL ESTATE	Text
Quiz Sec. #10	CALCULATION OF DEPRECIATION AND TAX ON RESALE	
Nov. 8, M	PRINCIPLES OF REAL ESTATE RISK MANAGEMENT	
	A. pp. 11-23, FUNDAMENTALS OF REAL ESTATE DEVELOPMENT, J. A. Graaskamp	Monograph
Nov. 10, W	* * TWELVE WEEKS EXAM * *	
Quiz Sec. No. 11	PROBLEM NO. 5 DUE: REVIEW OF CASH FLOW COMPUTATIONS	
Nov. 15, M	LIMITATIONS OF LOCAL LAND USE CONTROLS	
	A. Chap. 22, MODERN REAL ESTATE	Text
	B. "Developing in a Cooperative Environment," J. E. Vitt, URBAN LAND, Nov. 1978, pp. 3-6	Mimeo
	C. "Developing in a Hostile Environment," R. C. Nahas & N. Eskind, URBAN LAND, Nov. 1978, pp. 7-10.	Mimeo
	D. "What's the Hidden Factor in Land Use Regulation?" F. J. Popper, URBAN LAND, Dec. 1978, pp. 4-6.	Mimeo

Nov. 17, W	EVALUATION OF FEDERAL AND STATE LAND USE CONTROL	
	A. "The Supreme Court and Land Use: Some New Twists," Banta, Duerksen, & Jordan, ENVIRONMENTAL COMMENT, July 1979, pp. 6-9.	Mimeo
	B. "The States: Trends in Environmental Management 11," ENVIRONMENTAL COMMENT, Oct. 1977, pp. 3-7	Mimeo
	C. "Impact of Federal Programs on State Land-Use Planning," M. Miles & R. Mann.	Mimeo
	D. "Who Pays for the Wild Rivers?" M. Rosner & R. Burrows, January 1976.	Mimeo
	E. "Structuring the Implementation of Transferable Development Rights," G. Raymond, URBAN LAND, August 1981, pp. 19-25.	
Quiz Sec. #12	SAMPLE FEASIBILITY - MOST FITTING USE	
	A. Chap. 20 & 21, Appendix 21A, MODERN REAL ESTATE	Text
Nov. 22, M	VALUES IN CONFLICT: WHO PAYS AND WHO BENEFITS?	
	A. Chap. 4 & 6, THE ENVIRONMENTAL HUSTLER, pp. 52-59, 71-93	Mimeo
	B. "The Economics of Petaluma," C. Gruen; "Legal Notes," R. Scott; "The City of Petaluma," F. Gray	Mimeo
	C. "The Costs of Preservation," J. Costonis, FORUM, Jan/Feb 1974, pp. 61-67.	Mimeo
	D. "New Rental Housing: Confronting the 'Investment Gap,'" T. J. Cain & M. W. Scott, URBAN LAND, May 1981, pp. 3-7.	
	E. "Say Goodbye to the Great American Dream," U.S. SAVINGS & LOAN LEAGUE NEWS	Mimeo
Nov. 24, W	FLEXIBLE ZONING, LAND PLANNING, AND CASH FLOW	
	A. "A Lot More Than Just an Ordinance: The Breckenridge Development Code," K. Wickersham, Jr., URBAN LAND, Jan. 1979, pp. 9-13.	Mimeo
	B. "Density, Impact Zoning Model," L. L. Wolffe, DENSITY'S FIVE PERSPECTIVES, pp. 26-31.	Mimeo
	C. "Inclusionary Zoning: A Workable Option for Affordable Housing?" B. Taylor, URBAN LAND, March 1981, pp. 6-12.	Mimeo

	D. "Here's a New System for Figuring Project Feasibility," HOUSE AND HOME, Oct. 1973.	Mimeo
	E. "Computers in Land Use Planning," URBAN LAND	Mimeo
Quiz Sec. #13	PROBLEM NO. 6: FEASIBILITY MATRIX	
Nov. 29, M	PUBLIC MANIPULATION OF CASH FLOW: THE COMMERCIAL PROCESS	
	A. Chap. 3, "Financial Obstacles to Energy Conservation"	Mimeo
	B. "Economics of Building Design," Rosalie Ruegg, & Harold Marshall, SOLAR AGE, July 1981	Mimeo
	C. Chap. 6, "Coping with the Risks of Commercial Development," Helprin, WONDERFUL WORLD OF REAL ESTATE	Mimeo
	D. "Developing an Office Building"	Mimeo
Dec. 1, W	PUBLIC MANIPULATION OF CASH FLOW: THE EMPLOYMENT PROCESS	
	A. "Richmond, California: A Case Study in Economic Development," L. Burris, URBAN LAND, May 1980, pp. 9-17	Mimeo
	B. "A Developer's Guide to Urban Development Action Grants," E. Stevenson, REAL ESTATE REVIEW, Winter, 1981, pp. 80-86.	Mimeo
	C. "Tax Incremental Financing in Wisconsin: A History and Analysis," R. Paul, June, 1980.	Mimeo
Quiz Sec. #14	ASSISTANCE WITH FEASIBILITY RATIOS	
Dec. 6, M	THE BUSINESS OF BUILDING NEW TOWNS	
	A. "The First (and Last?) Meeting of the Regional New Towns Committee," J. A. Clapp, CITY, Winter 1971, pp. 42-27	Mimeo
	B. Chap. 10, "Columbia: The $50-Million Gamble," COLUMBIA AND THE NEW CITIES, pp. 224-276.	Mimeo
Dec. 8, W	THE BUSINESS OF REBUILDING OLD TOWNS	
	A. "Philadelphia is Turning Old Town into New Town," J. Bryan, JOURNAL OF HOUSING, 1972, pp. 231-235.	Mimeo
	B. "New Towns In-Town: Why a Federal Program Failed," M. Derthick, Washington, D.C. The Urban Institute, 1972, Chaps. 1 & 6.	Mimeo
Quiz Sec. #15	REVIEW FOR FINAL EXAM	
	FINAL EXAM	

THE REAL ESTATE PROCESS
Business 550/705

Spring Semester, 1987 — Professor J. Graaskamp

I. Course Materials:

A. Textbook: Modern Real Estate, 2nd Ed., Mike Miles and Charles Wurtzebach, John Wiley & Sons, New York, 1984, 677 pp. Available at the University Book Store and Brown's Book Store.

B. Mimeo materials packet: Available at Bob's Copy Shop, 1314 W. Johnson (in the Randall Tower across from Union South).

C. Lecture outlines and handouts: Will be distributed throughout the semester -- a course fee will be charged to cover xeroxing costs.

II. Problem Sets:

Six problem sets are assigned to simulate sequential financial feasibility analysis. The first two problems sets are applications of land use ordinances and the building codes; the next two problem sets provide a review of present value concepts and an introduction to their use in real estate analysis; problem set #5 is an after-tax cash flow exercise; and problem set #6 involves financial ratio analysis using MRCAP, the Real Estate Department's computerized after-tax cash flow model.

III. Grading:

Grading components:	Midterm Exam I	100 points
	Midterm Exam II	100 points
	Final Exam	200 points
	Problems 1-6 (50 pts. ea.)	300 points
		700 points

Grades will be established to reflect the modes of the distribution of cumulative point totals at the end of the course. Each exam will have four or five parts to emphasize lectures, textbook, mimeo readings, problem set exercises and questions submitted by teaching assistants.

IV. Discussion Sections:

Each discussion section session will be 75 minutes long and will be used to teach technical computations and procedures and to clarify definitions or implications of assigned readings and lectures. Each teaching assistant will have complete responsibility for receiving assignments and maintaining records for student grades, attendance, etc., and will be consulted for borderline grade determinations. Office hours will be announced in class.

THE REAL ESTATE PROCESS
Business 550/705
Lecture Topic Schedule -- Spring 1987

Date	Topic
INTRODUCTION	
Jan. 21, W	Introduction to the Real Estate Process: A Framework for Land Use Decisions
Jan. 26, M	Introduction (continued)
SITE ANALYSIS	
Jan. 28, W	Physical and Legal-Political Attributes
Feb. 2, M	Linkage, Dynamic, and Environmental Attributes
URBAN ANALYSIS	
Feb. 4, W	Historical City Forms and Functions
Feb. 9, M	Spatial and Locational Concepts of Urbanization
Feb. 11, W	Economic Base Analysis
Feb. 16, M	Real Estate and Social Disorganization
Feb. 18, W	*** MIDTERM EXAM I ***
SPACE CONSUMER GROUP	
Feb. 23, M	Real Estate Market Segmentation
Feb. 25, W	The Consumer Cash Flow Constraint
PUBLIC INFRASTRUCTURE GROUP	
March 2, M	The Public Infrastructure and the Real Estate Tax
March 4, W	Land Use Patterns and Public Infrastructure Solvency
SPACE FINANCE GROUP	
March 9, M	Real Estate Finance: The Mortgage
March 11, W	Real Estate Finance: The Institutions
March 23, M	Real Estate and the Federal Income Tax
March 25, W	Real Estate and the Federal Income Tax (continued)
March 30, M	Principles of Real Estate Risk Management
April 1, W	*** MIDTERM EXAM II ***
PUBLIC POLICY ISSUES	
April 6, M	Limitations of Local Land Use Controls
April 8, W	Evaluation of Federal and State Land Use Controls
April 13, M	Consumer Protection and Land Use
April 15, W	Fiscal Impact of New Development
April 20, M	Public Sector Reallocation of Cash Flows
CASE STUDIES	
April 22, W	The Business of Building New Towns
April 27, M	The Business of Building New Towns (continued)
April 29, W	The Business of Rebuilding Old Towns I
May 4, M	The Business of Rebuilding Old Towns II
May 6, W	Review

*** FINAL EXAM as scheduled during Final Exams Week ***

THE REAL ESTATE PROCESS
Business 550/705
Discussion Section Schedule -- Spring 1987

Week	Topic
Jan. 20 - 23	Orientation
Jan. 26 - 30	Legal Description and the Recording of Data
Feb. 2 - 6	Introduction to Land Use Controls and Site Size Requirements
Feb. 9 - 13	Definition of Building Envelopes
Feb. 16 - 20	Six Functions of a Dollar
Feb. 23 - 27	Present Value Equations
March 2 - 6	Real Estate Mathematics
March 9 - 13	Frontdoor/Backdoor Analysis
March 23 - 27	Calculation of Depreciation and Taxes Due on Sale
March 30-April 3	After-Tax Discounted Cash Flow Analysis
April 6 - 10	Financial Ratio Analysis
April 13 - 17	Computerized Real Estate Analysis
April 20 - 24	Profit Centers in Real Estate Development
April 27 - May 1	Public Sector Financing Mechanisms
May 4 - 8	Review Session

THE REAL ESTATE PROCESS
Business 550/705

Reading Assignments

Date	Readings	Source
Jan. 21, W	INTRODUCTION TO THE REAL ESTATE PROCESS: A FRAMEWORK FOR LAND USE DECISIONS	
	A. Chap. 1, Modern Real Estate.	Text
Jan. 26, M	INTRODUCTION (continued)	
	A. Graaskamp, J. Fundamentals of Real Estate Development, ULI, 1981, pp. 1-11.	Mimeo
	B. Chap. 25, Modern Real Estate	Text
Jan. 28, W	PHYSICAL ATTRIBUTES	
	A. Lynch, K. "Analyzing a Locality," Chap. 2 of Site Planning, 2nd Ed., 1971, pp. 9-24.	Mimeo
	LEGAL-POLITICAL ATTRIBUTES	
	A. Chaps. 4 and 5, Modern Real Estate	Text
	B. Jaffe, A. and C. Sirmans. "The Evolving Economics of Property Rights," Chap. 7 of Real Estate Investment Decision-Making, 1982, pp. 134-163.	Mimeo
Feb. 2, M	LINKAGE, DYNAMIC, AND ENVIRONMENTAL ATTRIBUTES	
	A. Ratcliff, R. "The Locational Basis of Real Estate Value," Chap. 4 of Real Estate Analysis, 1961, pp. 62-80.	Mimeo
	B. Ruchelman, L. "World Trade Center Impacts," Chap. 5 of World Trade Center, 1977, pp. 113-140.	Mimeo
	C. Henry, D. "Novel Idea for Trade Center," New York Times, July 13, 1983, p. 37.	Mimeo
Feb. 4, W	HISTORICAL CITY FORMS AND FUNCTIONS	
	A. Gideon, A. "The Dawn of Urbanization," Chap. 1 of The Urban Pattern, pp. 3-11.	Mimeo
	B. Gideon, A. "The Classical City," Chap. 2 of The Urban Pattern, pp. 12-32.	Mimeo
	C. Chermayeff, S. and C. Alexander. "The Dissolving City," Chap. 3 of Community and Privacy, 1963, pp. 54-61.	Mimeo
	D. Hurtt, Steven. "The American Continental Grid: Form and Meaning," Threshold, Fall 1983, pp. 32-40.	Mimeo
Feb. 9, M	SPATIAL AND LOCATIONAL CONCEPTS OF URBANIZATION	
	A. Chap. 3, Modern Real Estate	Text
	B. Ellson, R. "Another Perspective on Growth Management," Urban Land, Jan. 1979, pp. 3-8.	Mimeo

Date	Readings	Source
Feb. 11, W	ECONOMIC BASE ANALYSIS	
	A. Chap. 2, Modern Real Estate	Text
	B. Peterson, E. "Interview with San Antonio's Mayor Henry Cisneros," Business Facilities, July/August 1983, pp. 21-23, 71.	Mimeo
	C. Rice, J. and J. Roet. "Spotlight on San Antonio," Urban Land, March 1984, pp. 2-7.	Mimeo
Feb. 16, M	REAL ESTATE AND SOCIAL DISORGANIZATION	
	A. Chermayeff, S. and C. Alexander. "Anatomy of Urbanism," Chap. 9 of Community and Privacy, 1963, pp. 124-138.	Mimeo
	B. Batterman, L. "Alternatives to Fear," Progressive Architecture, October 1972.	Mimeo
Feb. 18, W	*** MIDTERM EXAM I ***	
Feb. 23, M	REAL ESTATE MARKET SEGMENTATION	
	A. Graaskamp, J. Fundamentals of Real Estate Development ULI, 1981, pp. 23-30.	Mimeo
	B. McMahan, J. "Residential Land Uses," Chap. 7 of Property Development, 1976, pp. 131-151.	Mimeo
Feb. 25, W	THE CONSUMER CASH FLOW CONSTRAINT	
	A. Review Exhibits 2 and 3 in Graaskamp's Fundamentals of Real Estate Development	Mimeo
March 2, M	THE PUBLIC INFRASTRUCTURE & THE REAL ESTATE TAX	
	A. "The Property Tax: What's Wrong with It?" Part II of State and Local Tax Revolt: New Directions for the '80s, pp. 16-33.	Mimeo
	B. pp. 376-379 of Chap. 16, Modern Real Estate	Text
March 4, W	LAND USE PATTERNS AND PUBLIC INFRASTRUCTURE SOLVENCY	
	A. "Taxes and Land Use," Part V of State and Local Tax Revolt: New Directions for the '80s, pp. 146-170.	Mimeo
	B. Rosner, M. and R. Barrows. "Who Pays for the Wild Rivers?", January 1976, 7 pp.	Mimeo
March 9, M	REAL ESTATE FINANCE: THE MORTGAGE	
	A. Chap. 13, Modern Real Estate	Text
March 11, W	REAL ESTATE FINANCE: THE INSTITUTIONS	
	A. Chaps. 15 and 22, Modern Real Estate	Text
March 23, M	REAL ESTATE AND THE FEDERAL INCOME TAX	
	A. Chap. 16, Modern Real Estate	Text
March 25, W	REAL ESTATE AND THE FEDERAL INCOME TAX (continued)	
	A. Chaps. 17 and 18, Modern Real Estate	Text

Date	Readings	Source
March 30, M	PRINCIPLES OF REAL ESTATE RISK MANAGEMENT	
	A. Graaskamp, J. Fundamentals of Real Estate Development, ULI, 1981, pp. 11-23.	Mimeo
April 1, W	*** MIDTERM EXAM II ***	
April 6, M	LIMITATIONS OF LOCAL LAND USE CONTROLS	
	A. Shirvani, Hamid. "Implementation: Legal Mechanisms,"Chap. 9 of The Urban Design Process, 1985, pp. 167-184.	Mimeo
	B. Popper, F. "What's the Hidden Factor in Land Use Regulation," Urban Land, December 1978, pp. 4-6.	Mimeo
	C. Vitt, J. "Developing in a Cooperative Environment," Urban Land, November 1978, pp. 3-6.	Mimeo
	D. Nahas, R. and N. Eskind. "Developing in a Hostile Environment," Urban Land, November 1978, pp. 7-10.	Mimeo
	F. CEEED. "Zoning: The Anachronism," 14 pp.	Mimeo
April 8, W	EVALUATION OF FEDERAL AND STATE LAND USE CONTROLS	
	A. Porter, D. "Government Policies, Programs, and Regulations Affecting Development," Chap. 27 of ...	Mimeo
	B. Chap. 26, Modern Real Estate	Text
	C. Basile, R. "The States: Trends in Environmental Management II," Environmental Comment, October 1977, pp. 3-7.	Mimeo
	D. Miles, M. and R. Mann. "Impact of Federal Programs on State Land Use Planning," pp. 33-43.	Mimeo
April 13, M	CONSUMER PROTECTION AND LAND USE	
	A. "Raising Housing Costs by Environmental Politics," Chap. 4 of The Environmental Hustler, pp. 52-59.	Mimeo
	B. "Environmental Merit Doesn't Win Votes," Chap. 6 of The Environmental Hustler, pp. 71-93.	Mimeo
	C. Taylor, B. "Inclusionary Zoning: A Workable Option for Affordable Housing?", Urban Land, March 1981, pp. 6-12.	Mimeo
	D. Wolfe, L. "A Density Impact Zoning Model," in Density's Five Perspectives, pp. 26, 28-31.	Mimeo
	E. Raymond, G. "Structuring the Implementation of Transferable Development Rights," Urban Land, August 1981, pp. 19-25.	Mimeo
	F. Castonis, J. "The Costs of Production," Forum, Jan./Feb. 1974, pp. 61-67.	Mimeo

Date	Readings	Source
April 15, W	FISCAL IMPACT OF NEW DEVELOPMENT	
	A. Helprin. "Coping with the Risks of Commercial Development," Chap. 6 of <u>Wonderful World of Real Estate</u>, pp. 51-61.	Mimeo
	B. "Characteristics of Private Development Projects," Chap. II of ..., pp. 9-21.	Mimeo
	C. "The Development Process," Chap. III of ..., pp. 23-30.	Mimeo
	D. Three articles on the use of computers in land use planning, Environmental Comment, October 1981, pp. 4-14.	Mimeo
	E. "Financial Obstacles to Energy Conservation," Chap. 3 of ..., pp. 25-34.	Mimeo
	B. "Energy-conscious Architectural Design," Chap.4 of . . ., pp. 35-45.	Mimeo
	C. Ruegg, R. and H. Marshall. "Economics of Building Design," Solar Age, July 1981, pp. 22-25.	Mimeo
April 20, M	PUBLIC SECTOR REALLOCATION OF CASH FLOWS	
	A. Shirvani, Hamid. "Implementation: Financial Mechanisms," Chap. 10 of <u>The Urban Design Process</u>, 1985, pp. 185-202.	Mimeo
	B. Paul, R. "Tax Incremental Financing in Wisconsin: A History and Analysis," June 1980, 22 pp.	Mimeo
	C. Stevenson, E. "A Developer's Guide to Urban Development Action Grants," Real Estate Review, Winter 1981, pp. 80-86.	Mimeo
	D. Witherspoon, R. "Codevelopment: City Rebuilding by Business and Government," ULI, 1982, pp. 5-48.	Mimeo
April 22, W	THE BUSINESS OF BUILDING NEW TOWNS	
	A. "Columbia: The $50-Million Gamble," in <u>Columbia and the New Cities</u>, pp. 224-276.	Mimeo
April 27, M	THE BUSINESS OF BUILDING NEW TOWNS (continued)	
April 29, W	THE BUSINESS OF REBUILDING OLD TOWNS I	
	A. Stellar, Jr., J. D. "A MXD Takes Off: Baltimore's Inner Harbor," Urban Land, March 1982, pp. 10-19.	Mimeo
May 4, M	THE BUSINESS OF REBUILDING OLD TOWNS II	
May 6, W	Review	

*** FINAL EXAM -- as scheduled during Final Exams Week ***

DISCUSSION SECTION READING ASSIGNMENTS

Date	Readings	Source
Jan. 20 - 23	ORIENTATION A. Graaskamp, J. <u>Fundamentals of Real Estate Development</u>, ULI, 1981, pp. 1-11.	Mimeo
Jan. 26 - 30	LEGAL DESCRIPTIONS AND RECORDING OF DATA A. Greer, G. and M. Farrell. "Real Estate Descriptions and Property Records," Chap. 8 of <u>Contemporary Real Estate: Theory and Practice</u>, 1983, pp. 131-145.	Mimeo
Feb. 2 - 6	INTRODUCTION TO LAND USE CONTROLS AND SITE SIZE REQUIREMENTS A. "Zoning, Subdivision Approval, Restrictive Covenants, and Other Land Use Controls," Chap. 12 of ... B. Stern, R. "Determining a Building's Site Size Requirement," Urban Land, May 1981, pp. 12-15. *** BRING TO CLASS *** Problem set #1 will be distributed and will be due at the beginning of lecture on Monday, February 9.	Mimeo Mimeo
Feb. 9 - 13	DEFINITION OF BUILDING ENVELOPES A. Madison Zoning Code Excerpts *** BRING TO CLASS *** Problem set #2 will be distributed and will be due at the beginning of lecture on Monday, February 23.	Mimeo
Feb. 16 - 20	SIX FUNCTIONS OF A DOLLAR A. Mimeo on present value concepts. *** BRING TO CLASS** B. Chap. 14, <u>Modern Real Estate</u>	Mimeo Text
Feb. 23 - 27	PRESENT VALUE EQUATIONS A. Mimeo on present value concepts (continued) *** BRING TO CLASS ***	Mimeo
March 2 - 6	REAL ESTATE MATHEMATICS A. Review mimeo on prsent value concepts *** BRING TO CLASS *** Problem set #3 will be distributed and will be due at the beginning of lecture on Monday, March 23.	Mimeo
March 9 - 13	FRONTDOOR/BACKDOOR ANALYSIS A. Robbins, M. "Frontdoor/Backdoor: A Preliminary Risk Analysis Methodology," (read first 11 pages) Problem set #4 will be distributed and will be due at the beginning of lecture on Monday, March 30.	Mimeo

Date	Readings	Source
March 23 - 27	CALCULATION OF DEPRECIATION AND TAXES DUE ON SALE A. Chaps. 19 and 20, Modern Real Estate b. Review Chap. 17, Modern Real Estate	 Text Text
March 30 - April 3	AFTER-TAX DISCOUNTED CASH FLOW ANALYSIS A. Review Chaps. 19 and 20, Modern Real Estate. Problem set #5 will be distributed and will be due at the beginning of lecture on Monday, April 13.	 Text
April 6 - 10	FINANCIAL RATIO ANALYSIS	
April 13 - 17	COMPUTERIZED REAL ESTATE ANALYSIS Problem set #6 will be distributed and will be due at the beginning of lecture on Monday, April 27.	
April 20 - 24	PROFIT CENTERS IN REAL ESTATE DEVELOPMENT A. Chaps. 23 and 24, Modern Real Estate. B. Davidson-Powers, C. "One Magnificent Mile," Inland Architect, May-June 1984, pp. 25-29. *** BRING TO CLASS ***	 Text Mimeo
April 27 - May 1	PUBLIC SECTOR FINANCING MECHANISMS A. Review articles assigned for April 20. B. Dowall, D. "Applying Real Estate Financial Analysis to Planning and Development Control," APA Journal, Winter 1985, pp. 84-94. *** BRING TO CLASS ***	 Mimeo
May 4 - 8	REVIEW SESSION	

THE REAL ESTATE PROCESS
Business 550/705

Fall Semester, 1987 Professor J. Graaskamp

I. COURSE MATERIALS

A. Textbook: <u>Modern Real Estate</u>, 3rd Edition, Charles H. Wurtzebach and Mike E. Miles. New York: John Wiley & Sons, 1987.

B. Reading Packet: Available at Bob's Copy Shop, 1314 W. Johnson (in the Randall Tower across from Union South).

C. Class handouts will be distributed throughout the semester and a course fee will be charged to cover copying costs.

II. PROBLEM SETS

A. Six problem sets will be assigned during the semester. The problem sets are designed to increase each student's awareness and understanding of real estate analysis and decision-making.

B. Problem sets are due at the beginning of class on the assigned due dates. Late problem sets will forfeit 10 points automatically and will only be accepted during the next 24 hours.

C. Most of the potential points that can be earned on each problem set are awarded for a clear, organized presentation of all of the steps taken to arrive at the correct solution. It is essential that all work is shown -- each student is attempting to convince the instructor that he or she has mastered the material covered by the problem set and can explain the process clearly to someone less knowledgeable.

III. GRADING

Grading Components:

Midterm Exam I	100 points
Midterm Exam II	100 points
Final Exam	200 points
Problem Sets 1-6 (50 points each)	<u>300 points</u>
Total Course	700 points

Lecture Topic Schedule -- Fall 1987

Date	Topic
INTRODUCTION	
Sept. 2, W	Introduction to the Real Estate Process: A Framework for Land Use Decisions
Sept. 9, W	Introduction (continued)
SITE ANALYSIS	
Sept. 14, M	Physical and Legal-Political Attributes
Sept. 16, W	Linkage, Dynamic, and Environmental Attributes
URBAN ANALYSIS	
Sept. 21, M	Historical City Forms and Functions
Sept. 23, W	Spatial and Locational Concepts of Urbanization
Sept. 28, M	Economic Base Analysis
Sept. 30, W	Real Estate and Social Disorganization
SPACE CONSUMER GROUP	
Oct. 5, M	Real Estate Market Segmentation
Oct. 7, W	The Consumer Cash Flow Constraint
Oct. 12, M	**** MIDTERM EXAM I ****
Oct. 14, W	The Public Infrastructure and the Real Estate Tax
PUBLIC INFRASTRUCTURE GROUP	
Oct. 19, M	Real Estate Tax (cont.)
Oct. 21, W	Land Use and Public Infrastructure Solvency
SPACE FINANCE GROUP	
Oct. 26, M	Real Estate Finance: The Mortgage
Oct. 28, W	Real Estate Finance: The Institutions
Nov. 2, M	Real Estate and the Federal Income Tax
Nov. 4, W	Real Estate and the Federal Income Tax (cont.)
Nov. 9, M	Principles of Real Estate Risk Management
Nov. 11, W	Principles of Real Estate Risk Management (cont.)
Nov. 16, M	**** MIDTERM EXAM II ****
PUBLIC POLICY ISSUES	
Nov. 18, W	Limitations of Local Land Use Control
Nov. 23, M	Evaluation of Federal and State Land Use Controls
Nov. 25, W	Consumer Protection and Land Use
Nov. 30, M	Fiscal Impact of New Development
Dec. 2, W	Public Sector Reallocation of Cash Flows
CASE STUDIES	
Dec. 7, M	The Business of Building New Towns
Dec. 9, W	The Business of Building New Towns (cont.)
Dec. 14, M	The Business of Rebuilding Old Towns

**** FINAL EXAM as scheduled during Final Exams Week ****

READING ASSIGNMENTS

Date	Readings	Source
Sept. 2, W	INTRODUCTION TO THE REAL ESTATE PROCESS: A FRAMEWORK FOR LAND USE DECISIONS	
	A. Chapter 1	Text
Sept. 9, W	INTRODUCTION (cont.)	
	A. Graaskamp, J. <u>Fundamentals of Real Estate Development</u>, ULI, 1981, pp. 1 - 11.	Mimeo
	B. Chapter 25	Text
	C. Boykin, James H. "Why Real Estate Projects Fail," Real Estate Review, Spring 1985, pp. 88 - 91.	Mimeo
Sept. 14, M	PHYSICAL ATTRIBUTES	
	A. Lynch, K. "Analyzing a Locality," Chapter 2 of <u>Site Planning</u>, 2nd Ed., 1971, pp. 9 - 24.	Mimeo
	B. Brogden, Felicity. "The Spatial Environment: Natural Elements," part of "Site Planning and Design," Chapter 6 of <u>Introduction to Architecture</u>, James C. Synder and Anthony J. Catanese, eds. New York: McGraw-Hill Company 1979, pp. 131 - 139.	Mimeo
	LEGAL-POLITICAL ATTRIBUTES	
	A. Chapters 4 and 5	Text
	B. Gallion, Arthur B. and Simon Eisner. "The Basis of Planning," Chapter 17 of <u>The Urban Pattern: City Planning and Design</u>, 5th Ed. New York: Van Nostrand Reinhold Company, 1986, pp. 221 - 243.	Mimeo
Sept. 16, W	LINKAGE, DYNAMIC, AND ENVIRONMENTAL ATTRIBUTES	
	A. Ratcliff, R. "The Locational Basis of Real Estate Values," Chapter 4 of <u>Real Estate Analysis</u>, 1961, pp. 62 - 80.	Mimeo
	B. Healy, Kevin J. "Developing the Right Approach to Environmental Review Problems," Real Estate Review, Spring 1986, pp. 75 - 78.	Mimeo
Sept. 21, M	HISTORICAL CITY FORMS AND FUNCTIONS	
	A. Gallion, Arthur B. and Simon Eisner. "Colonial Expansion: America," Chapter 6 of <u>The Urban Pattern: City Planning and Design</u>, 5th Ed., New York: Van Nostrand Reinhold Company, 1986, pp. 50 - 59.	Mimeo
	B. Bender, Thomas. "The American City: What Shaped Its Development?" <u>Cities: The Forces That Shape Them</u>, Lisa Taylor Ed., New York: Rizzoli International Publications, Inc. 1982, pp. 50 - 52.	Mimeo
Sept. 23, W	SPATIAL AND LOCATIONAL CONCEPTS OF URBANIZATION	
	A. Chapters 2 and 3	Text

Sept. 28, M	ECONOMIC BASE ANALYSIS		
	A. Chapter 2	Text	
	B. Peterson, E. "Interview with San Antonio's Mayor Henry Cisneros," Business Facilities, July/August 1983, pp. 21 - 23, 71.	Mimeo	
	C. Rice, J. and J. Roef. "Spotlight on San Antonio," Urban Land, March 1984, pp. 2 - 7.	Mimeo	
Sept. 30, W	REAL ESTATE AND SOCIAL DISORGANIZATION		
	A. Chermayeff, S. and C. Alexander. "Anatomy of Urbanism," Chapter 9 of <u>Community and Privacy</u>, 1963, pp. 124 - 138.	Mimeo	
	B. Batterman, L. "Alternatives to Fear," Progressive Architecture, October 1972.	Mimeo	
Oct. 5, M	REAL ESTATE MARKET SEGMENTATION		
	A. Graaskamp, J. <u>Fundamentals of Real Estate Development</u>, ULI, 1981, pp. 23 - 30.	Mimeo	
	B. McMahan, J. "Residential Land Uses," Chap. 7 of <u>Property Development</u>, 1976, pp. 131-151.	Mimeo	
Oct. 7, W	THE CONSUMER CASH FLOW CONSTRAINT		
	A. Review Exhibits 2 and 3 in Graaskamp's <u>Fundamentals of Real Estate Development</u>	Mimeo	
Oct. 12, M	EXAM I		
Oct. 14, W	THE PUBLIC INFRASTRUCTURE AND THE REAL ESTATE TAX		
Oct. 19, M	PUBLIC INFRASTRUCTURE AND THE REAL ESTATE TAX (cont.)		
	A. Pp. 439 - 443 of Chapter 16	Text	
	B. Part II of State and Local Tax Revolt: New Directions for the 80's, pp. 16 - 33.	Mimeo	
Oct. 21, W	LAND USE AND PUBLIC INFRASTRUCTURE SOLVENCY		
	A. Part V of State and Local Tax Revolt: New Directions for the 80's, pp. 146 - 148.	Mimeo	
	B. Odell, Rice. "Can We Afford To Maintain Our Urban Infrastructure?" Urban Land, January 1982, pp. 3 - 8.	Mimeo	
	C. <u>Development Trends 1987</u>, the Urban Land Institute, 1987, pp. 20 - 25.	Mimeo	
Oct. 26, M	REAL ESTATE FINANCE: THE MORTGAGE		
	A. Chapter 13	Text	
Oct. 28, W	REAL ESTATE FINANCE: THE INSTITUTIONS		
	A. Chapters 12, 15, and 22	Text	
	B. Flick, Frederick. "Real Estate Finance Blazes New Trails," Real Estate Today, April 1987, pp. 22 - 26.	Mimeo	

Nov.	2, M	REAL ESTATE AND THE FEDERAL INCOME TAX A. Chapters 16, 17, and 18	Text
Nov.	4, W	REAL ESTATE AND THE FEDERAL INCOME TAX (cont.) A. Schwartz, Sheldon. "Real Estate and the Tax Reform Act of 1986," Real Estate Review, Winter 1987, pp. 28 - 38.	Mimeo
Nov.	9, M	PRINCIPLES OF REAL ESTATE RISK MANAGEMENT A. Graaskamp, J. <u>Fundamentals of Real Estate Development</u>, ULI, 1981, pp. 11 - 23. B. Chapter 21 C. Hornick, Peter. "Applications of Portfolio Theory to Real Estate," Real Estate Review, Summer 1983, pp. 88 - 92. D. <u>Development Trends 1987</u>, the Urban Land Institute, 1987, pp. 8 and 9.	Mimeo Text Mimeo Mimeo
Nov.	11, W	PRINCIPLES OF REAL ESTATE RISK MANAGEMENT (cont.) A. Switzer, Michael H. "Using Due Diligence in Shopping Center Purchases," Real Estate Review, Fall 1986, pp. 88 - 92. B. Van Lieshout, John M. "Breaking the Bank: Liability Under Superfund," Real Estate Review, Fall 1986, pp. 51 - 55. C. Forte, Joseph. "A Lender's Guide to Environmental Liability Risk Management," Mortgage Banking, May 1987, pp. 53, 55 - 56, 59 - 60.	Mimeo Mimeo Mimeo
Nov.	16, M	EXAM II	
Nov.	18, W	LIMITATIONS OF LOCAL LAND USE CONTROLS A. Chapter 26 B. Shirvani, Hamid. "Implementation: Legal Mechanisms," Chapter 9 of <u>The Urban Design Process</u>, 1985, pp. 167 - 184. C. Popper, Frank J. "What's the Hidden Factor in Land Use Regulations?" Urban Land, December 1978, pp. 4 - 6. D. Vitt, Joseph E. "Developing in a Cooperative Environment," Urban Land, November 1978, pp. 3 - 6. E. Nahas, Ronald C. and Neil Eskind. "Developing in a Hostile Environment," Urban Land, November 1978, pp. 7 - 10.	Text Mimeo Mimeo Mimeo Mimeo
Nov.	23, M	EVALUATION OF FEDERAL AND STATE LAND USE CONTROLS A. Miles, M. and R. Mann. "Impact of Federal Programs on State Land Use Planning," pp. 33 - 43. B. <u>Development Trends 1987</u>, the Urban Land Institute, 1987, pp. 13 - 19.	Mimeo Mimeo

Nov. 25, W CONSUMER PROTECTION AND LAND USE

A. "Environmental Merit Doesn't Win Votes," Chapter 6 of <u>The Environmental Hustler</u>, pp. 52 - 59. Mimeo

B. Wolfe, L. "A Density Impact Zoning Model," in <u>Density's Five Perspectives</u>, pp. 26, 28 - 31. Mimeo

C. Raymond, G. "Structuring the Implementation of Transferable Development Rights," Urban Land, August 1981, pp. 19 - 25. Mimeo

Nov. 30, M FISCAL IMPACT OF NEW DEVELOPMENT

A. "Characteristics of Private Development Projects," Chapter 11 of ..., pp. 9 - 21. Mimeo

B. Rahenkamp, J. and R. Goodwin, "Computer-Based Project Feasibility Analysis," EC, October, 1981, pp. 8 - 11. Mimeo

C. "Financial Obstacles to Energy Conservation," Chapter 3 of ..., pp. 35 - 45. Mimeo

D. Ruegg, R. and H. Marshall. "Economics of Building Design," Solar Age, July 1981, pp. 22 - 25. Mimeo

Dec. 2, W PUBLIC SECTOR REALLOCATION OF CASH FLOWS

A. Carmack, Paula, "Joint Public/Private Ventures," Real Estate Review, Fall 1985, pp. 62 - 65. Mimeo

B. Portnoy, Ian and Bradford Perkins. "Developing With a Public Agency Partner." Real Estate Review, Spring 1985, pp. 75 - 79. Mimeo

C. Witherspoon, R. "Codevelopment: City Rebuilding by Business and Government," ULI, 1982, pp. 5-48. Mimeo

D. <u>Development Trends 1987</u>, the Urban Land Institute, 1987, pp. 10 and 11 Mimeo

Dec. 7, M THE BUSINESS OF BUILDING NEW TOWNS

A. "Columbia: The $50-Million Gamble," in <u>Columbia and the New Cities</u>, pp. 224 - 276. Mimeo

B. Grubisisch, T. and McCandless, P. <u>Reston The First Twenty Years</u>, Reston Publishing Company, Inc. Reston Virginia, 1985. Mimeo

Dec. 9, W THE BUSINESS OF BUILDING NEW TOWNS (cont.)

Dec. 14, M THE BUSINESS OF REBUILDING OLD TOWNS

A. Stellar, Jr. "A MXD Takes Off: Baltimore's Inner Harbor," Urban Land, March 1982, pp. 10 - 19. Mimeo

B. Kirschbraun, Thomas C. and Peter J. Denitz. "Back to the Future Retail Redevelopment in Older Neighborhoods," Urban Land, March 1986, pp. 2 - 5. Mimeo

C. Barnes, W. Anderson. "Ghirardelli Square Keeping a First First," Urban Land, May 1986, pp. 6 - 10. Mimeo

****** FINAL EXAM as scheduled during Final Exams Week ******

THE REAL ESTATE PROCESS
Business 550/705
Discussion Section Schedule -- Fall 1987

Week	Topic
Sept. 7 - 11	Orientation and Legal Descriptions
Sept. 14 - 18	The Recording of Data
Sept. 21 - 25	Introduction to Land Use Controls and Site Size Requirements
Sept. 28 - Oct. 2	Definition of Building Envelopes
Oct. 5 - 9	Six Functions of a Dollar
Oct. 12 - 16	Time Value of Money Equations
Oct. 19 - 23	Time Value of Money Cont.
Oct. 26 - 30	Frontdoor / Backdoor Analysis
Nov. 2 - 6	Frontdoor / Backdoor Analysis Cont.
Nov. 9 - 13	After-Tax Discounted Cash Flow Analysis
Nov. 16 - 20	After-Tax Discounted Cash Flow Analysis Cont.
Nov. 23 - 27	Financial Ratio Analysis
Nov. 30 - Dec. 4	Computerized Real Estate Analysis
Dec. 7 - 11	Review

DISCUSSION SECTION READING ASSIGNMENTS

Date	Readings	Source
Sept. 7 - 11	ORIENTATION AND LEGAL DESCRIPTIONS	
	A. Graaskamp, J. Fundamentals of Real Estate Development, ULI, 1981, pp. 1 - 11.	Mimeo
	B. Chapters 4 and 5	Text
Sept. 14 - 18	THE RECORDING OF DATA	
	A. Continue readings from previous week	
	PS #1 will be distributed and will be due at the beginning of lecture on Sept. 28	
Sept. 21 - 25	INTRODUCTION TO LAND USE CONTROLS AND SITE SIZE REQUIREMENTS	
	A. Stern, R. "Determining a Building's Site Size Requirement," Urban Land, May 1981, pp. 12 - 15.	Mimeo
	B. Carlini, James. "Measuring a Building's IQ," Real Estate Review, Fall 1985, pp. 87 - 90.	Mimeo
Sept. 28 - Oct. 2	DEFINITIONS OF BUILDING ENVELOPES	
	A. Madison Zoning Code Excerpts	Mimeo
	PS #2 will be distributed and will be due at the beginning of lecture on Oct. 7	
Oct. 5 - 9	SIX FUNCTIONS OF A DOLLAR	
	A. Mimeo in the reading packet	Mimeo
	B. Chapter 14	Text
Oct. 12 - 16	TIME VALUE OF MONEY (TVM) EQUATIONS	
	A. Mimeo on TVM concepts cont.	Mimeo
	PS #3 will be distributed and will be due at the beginning of lecture on Oct. 26	
Oct. 19 - 23	TVM CONTINUED	
	A. Mimeo on TVM concepts cont.	Mimeo
Oct. 26 - 30	FRONTDOOR/BACKDOOR ANALYSIS	
	A. Robbins, M. "Frontdoor/Backdoor: A Preliminary Risk Analysis Methodology."	Mimeo
	PS #4 will be distributed and will be due at the beginning of lecture on Nov. 11	
Nov. 2 - 6	FRONTDOOR/BACKDOOR ANALYSIS CONTINUED	
Nov. 9 - 13	AFTER-TAX DISCOUNTED CASH FLOW ANALYSIS	
	A. Chapters 19 and 20	Text
	PS #5 will be distributed and will be due at the beginning of lecture on Dec. 2	
Nov. 16 - 20	ATCF CONTINUED	
Nov. 23 - 27	FINANCIAL RATIO ANALYSIS	
Nov. 30 - Dec. 4	COMPUTERIZED REAL ESTATE ANALYSIS	
	PS #6 will be distributed and will be due at the beginning of lecture on Dec. 14	
Dec. 7 - 11	REVIEW	

THE REAL ESTATE PROCESS
Business 550/705

Spring Semester, 1988 — Professor J. Graaskamp

I. COURSE MATERIALS

A. Textbook: <u>Modern Real Estate</u>, 3rd Edition, Charles H. Wurtzebach and Mike E. Miles. New York: John Wiley & Sons, 1987.

B. Reading Packet: Available at Bob's Copy Shop, 1314 W. Johnson (in the Randall Tower across from Union South).

C. Class handouts will be distributed throughout the semester and a course fee (not to exceed $7) will be charged to cover copying costs.

II. PROBLEM SETS

A. Six problem sets will be assigned during the semester. The problem sets are designed to increase each student's awareness and understanding of real estate analysis and decision-making.

B. Problem sets are due at the beginning of class on the assigned due dates. Late problem sets will forfeit 10 points automatically and will only be accepted during the next 24 hours.

C. Most of the potential points that can be earned on each problem set are awarded for a clear, organized presentation of all of the steps taken to arrive at the correct solution. It is essential that all work is shown -- each student is attempting to convince the instructor that he or she has mastered the material covered by the problem set and can explain the process clearly to someone less knowledgeable.

III. GRADING

Grading Components:

Midterm Exam I	100 points
Midterm Exam II	100 points
Final Exam	200 points
Problem Sets 1-6 (50 points each)	300 points
Total Course	700 points

Lecture Topic Schedule -- Spring 1988

Date	Topic
INTRODUCTION	
Jan. 20, W	Introduction to the Real Estate Process: A Framework for Land Use Decisions
Jan. 25, M	Introduction (continued)
SITE ANALYSIS	
Jan. 27, W	Physical and Legal-Political Attributes
Feb. 1, M	Linkage, Dynamic, and Environmental Attributes
URBAN ANALYSIS	
Feb. 3, W	Historical City Forms and Functions
Feb. 8, M	Spatial and Locational Concepts of Urbanization
Feb. 10, W	Economic Base Analysis
Feb. 15, M	Real Estate and Social Disorganization
SPACE CONSUMER GROUP	
Feb. 17, W	Real Estate Market Segmentation
Feb. 22, M	The Consumer Cash Flow Constraint
Feb. 24, W	**** MIDTERM EXAM I ****
Feb. 29, M	The Public Infrastructure and the Real Estate Tax
PUBLIC INFRASTRUCTURE GROUP	
March 2, W	Real Estate Tax (cont.)
March 7, M	Land Use and Public Infrastructure Solvency
SPACE FINANCE GROUP	
March 9, W	Real Estate Finance: The Mortgage
	Spring Break March 14 to March 18
March 21, M	Real Estate Finance: The Institutions
March 23, W	Real Estate and the Federal Income Tax
March 28, M	Real Estate and the Federal Income Tax (cont.)
March 30, W	Principles of Real Estate Risk Management
April 4, M	Principles of Real Estate Risk Management (cont.)
April 6, W	**** MIDTERM EXAM II ****
PUBLIC POLICY ISSUES	
April 11, M	Limitations of Local Land Use Control
April 13, W	Evaluation of Federal and State Land Use Controls
April 18, M	Consumer Protection and Land Use
April 20, W	Fiscal Impact of New Development
April 25, M	Public Sector Reallocation of Cash Flows
CASE STUDIES	
April 27, W	The Business of Building New Towns
May 2, M	The Business of Building New Towns (cont.)
May 5, W	The Business of Rebuilding Old Towns

**** FINAL EXAM as scheduled during Final Exams Week ****

READING ASSIGNMENTS

Date	Readings	Source
Jan. 20, W	INTRODUCTION TO THE REAL ESTATE PROCESS: A FRAMEWORK FOR LAND USE DECISIONS	
	A. Chapter 1	Text
Jan. 25, M	INTRODUCTION (cont.)	
	A. Graaskamp, J. <u>Fundamentals of Real Estate Development</u>, ULI, 1981, pp. 1 - 11.	Mimeo
	B. Chapter 25	Text
	C. Boykin, James H. "Why Real Estate Projects Fail," Real Estate Review, Spring 1985, pp. 88 - 91.	Mimeo
Jan. 27, W	PHYSICAL ATTRIBUTES	
	A. Lynch, K. "Analyzing a Locality," Chapter 2 of <u>Site Planning</u>, 2nd Ed., 1971, pp. 9 - 24.	Mimeo
	B. Brogden, Felicity. "The Spatial Environment: Natural Elements," part of "Site Planning and Design," Chapter 6 of <u>Introduction to Architecture</u>, James C. Synder and Anthony J. Catanese, eds. New York: McGraw-Hill Company 1979, pp. 131 - 139.	Mimeo
	LEGAL-POLITICAL ATTRIBUTES	
	A. Chapters 4 and 5	Text
	B. Gallion, Arthur B. and Simon Eisner. "The Basis of Planning," Chapter 17 of <u>The Urban Pattern: City Planning and Design</u>, 5th Ed. New York: Van Nostrand Reinhold Company, 1986, pp. 221 - 243.	Mimeo
Feb. 1, M	LINKAGE, DYNAMIC, AND ENVIRONMENTAL ATTRIBUTES	
	A. Ratcliff, R. "The Locational Basis of Real Estate Values," Chapter 4 of <u>Real Estate Analysis</u>, 1961, pp. 62 - 80.	Mimeo
	B. Healy, Kevin J. "Developing the Right Approach to Environmental Review Problems," Real Estate Review, Spring 1986, pp. 75 - 78.	Mimeo
Feb. 3, W	HISTORICAL CITY FORMS AND FUNCTIONS	
	A. Gallion, Arthur B. and Simon Eisner. "Colonial Expansion: America," Chapter 6 of <u>The Urban Pattern: City Planning and Design</u>, 5th Ed., New York: Van Nostrand Reinhold Company, 1986, pp. 50 - 59.	Mimeo
	B. Bender, Thomas. "The American City: What Shaped Its Development?" <u>Cities: The Forces That Shape Them</u>, Lisa Taylor Ed., New York: Rizzoli International Publications, Inc. 1982, pp. 50 - 52.	Mimeo

Feb.	8, M	SPATIAL AND LOCATIONAL CONCEPTS OF URBANIZATION A. Chapters 2 and 3 B. Strenlieb, George. <u>The Central City</u>, Chapters 5, 6 and 7. pp. 87 - 121.	 Text Mimeo
Feb.	10, W	ECONOMIC BASE ANALYSIS A. Chapter 2 B. Peterson, E. "Interview with San Antonio's Mayor Henry Cisneros," Business Facilities, July/August 1983, pp. 21 - 23, 71. C. Rice, J. and J. Roef. "Spotlight on San Antonio," Urban Land, March 1984, pp. 2 - 7.	 Text Mimeo Mimeo
Feb.	15, M	REAL ESTATE AND SOCIAL DISORGANIZATION A. Chermayeff, S. and C. Alexander. "Anatomy of Urbanism," Chapter 9 of <u>Community and Privacy</u>, 1963, pp. 124 - 138. B. Batterman, L. "Alternatives to Fear," Progressive Architecture, October 1972.	 Mimeo Mimeo
Feb.	17, W	REAL ESTATE MARKET SEGMENTATION A. Graaskamp, J. <u>Fundamentals of Real Estate Development</u>, ULI, 1981, pp. 23 - 30. B. McMahan, J. "Residential Land Uses," Chap. 7 of <u>Property Development</u>, 1976, pp. 131-151.	 Mimeo Mimeo
Feb.	22, M	THE CONSUMER CASH FLOW CONSTRAINT A. Review Exhibits 2 and 3 in Graaskamp's <u>Fundamentals of Real Estate Development</u>	 Mimeo
Feb.	24, W	EXAM I	
Feb.	29, M	THE PUBLIC INFRASTRUCTURE AND THE REAL ESTATE TAX	
March	2, W	PUBLIC INFRASTRUCTURE AND THE REAL ESTATE TAX (cont.) A. Pp. 439 - 443 of Chapter 16 B. Part II of State and Local Tax Revolt: New Directions for the 80's, pp. 16 - 33.	 Text Mimeo
March	7, M	LAND USE AND PUBLIC INFRASTRUCTURE SOLVENCY A. Part V of State and Local Tax Revolt: New Directions for the 80's, pp. 146 - 148. B. Odell, Rice. "Can We Afford To Maintain Our Urban Infrastructure?" Urban Land, January 1982, pp. 3 - 8. C. <u>Development Trends 1987</u>, the Urban Land Institute, 1987, pp. 20 - 25.	 Mimeo Mimeo Mimeo
March	9, W	REAL ESTATE FINANCE: THE MORTGAGE A. Chapter 13	 Text

March 21, M	REAL ESTATE FINANCE: THE INSTITUTIONS A. Chapters 12, 15, and 22 B. Flick, Frederick. "Real Estate Finance Blazes New Trails," Real Estate Today, April 1987, pp. 22 - 26.	Text Mimeo
March 23, W	REAL ESTATE AND THE FEDERAL INCOME TAX A. Chapters 16, 17, and 18	Text
March 28, M	REAL ESTATE AND THE FEDERAL INCOME TAX (cont.) A. Schwartz, Sheldon. "Real Estate and the Tax Reform Act of 1986," Real Estate Review, Winter 1987, pp. 28 - 38.	Mimeo
March 30, W	PRINCIPLES OF REAL ESTATE RISK MANAGEMENT A. Graaskamp, J. <u>Fundamentals of Real Estate Development</u>, ULI, 1981, pp. 11 - 23. B. Chapter 21 C. Hornick, Peter. "Applications of Portfolio Theory to Real Estate," Real Estate Review, Summer 1983, pp. 88 - 92. D. <u>Development Trends 1987</u>, the Urban Land Institute, 1987, pp. 8 and 9.	Mimeo Text Mimeo Mimeo
April 4, M	PRINCIPLES OF REAL ESTATE RISK MANAGEMENT (cont.) A. Switzer, Michael H. "Using Due Diligence in Shopping Center Purchases," Real Estate Review, Fall 1986, pp. 88 - 92. B. Van Lieshout, John M. "Breaking the Bank: Liability Under Superfund," Real Estate Review, Fall 1986, pp. 51 - 55. C. Forte, Joseph. "A Lender's Guide to Environmental Liability Risk Management," Mortgage Banking, May 1987, pp. 53, 55 - 56, 59 - 60.	Mimeo Mimeo Mimeo
April 6, W	EXAM II	
April 11, M	LIMITATIONS OF LOCAL LAND USE CONTROLS A. Chapter 26 B. Shirvani, Hamid. "Implementation: Legal Mechanisms," Chapter 9 of <u>The Urban Design Process</u>, 1985, pp. 167 - 184. C. Popper, Frank J. "What's the Hidden Factor in Land Use Regulations?" Urban Land, December 1978, pp. 4 - 6. D. Vitt, Joseph E. "Developing in a Cooperative Environment," Urban Land, November 1978, pp. 3 - 6. E. Nahas, Ronald C. and Neil Eskind. "Developing in a Hostile Environment," Urban Land, November 1978, pp. 7 - 10.	Text Mimeo Mimeo Mimeo Mimeo

April 13, W — EVALUATION OF FEDERAL AND STATE LAND USE CONTROLS

A. <u>Development Trends 1987</u>, the Urban Land Institute, 1987, pp. 13 - 19. — Mimeo
B. Miles, M. and R. Mann. "Impact of Federal Programs on State Land Use Planning," pp. 33 - 43. — Mimeo
C. Marsh, Lindell L. and Deborah M. Rosenthal. "At Long Last, The Supreme Court Speaks Out on the Taking Issue," Urban Land, October 1987, pp. 23 - 27. — Mimeo
D. Delaney, John J. "Exactions After Nollan," Urban Land, October 1987, pp. 34 - 35. — Mimeo

April 18, M — CONSUMER PROTECTION AND LAND USE

A. "Environmental Merit Doesn't Win Votes," Chapter 6 of <u>The Environmental Hustler</u>, pp. 52 - 59. — Mimeo
B. Wolfe, L. "A Density Impact Zoning Model," in <u>Density's Five Perspectives</u>, pp. 26, 28 - 31. — Mimeo
C. Raymond, G. "Structuring the Implementation of Transferable Development Rights," Urban Land, August 1981, pp. 19 - 25. — Mimeo

April 20, W — FISCAL IMPACT OF NEW DEVELOPMENT

A. "Characteristics of Private Development Projects," Chapter 11 of ..., pp. 9 - 21. — Mimeo
B. Rahenkamp, J. and R. Goodwin, "Computer-Based Project Feasibility Analysis," EC, October, 1981, pp. 8 - 11. — Mimeo
C. "Financial Obstacles to Energy Conservation," Chapter 3 of ..., pp. 35 - 45. — Mimeo
D. Ruegg, R. and H. Marshall. "Economics of Building Design," Solar Age, July 1981, pp. 22 - 25. — Mimeo

April 25, M — PUBLIC SECTOR REALLOCATION OF CASH FLOWS

A. Carmack, Paula, "Joint Public/Private Ventures," Real Estate Review, Fall 1985, pp. 62 - 65. — Mimeo
B. Portnoy, Ian and Bradford Perkins. "Developing With a Public Agency Partner." Real Estate Review, Spring 1985, pp. 75 - 79. — Mimeo
C. Witherspoon, R. "Codevelopment: City Rebuilding by Business and Government," ULI, 1982, pp. 5-48. — Mimeo
D. <u>Development Trends 1987</u>, the Urban Land Institute, 1987, pp. 10 and 11 — Mimeo
E. Shirvani, Hamid. "Implementation: Financial Mechanisms," Chapter 9 of <u>The Urban Design Process</u>, 1985, pp. 185 - 202. — Mimeo
F. Stevenson, Eric, "A Developer's Guide to Urban Development Action Grants," Real Estate Review

April 27, W — THE BUSINESS OF BUILDING NEW TOWNS

A. "Columbia: The $50-Million Gamble," in <u>Columbia and the New Cities</u>, pp. 224 - 276. — Mimeo

B. Davis, Phillip. "Columbia, Maryland: Zero to 68,0000 in 20 Years," Urban Land, November 1987 pp. 2 - 7. — Mimeo

C. Grubisisch, T. and McCandless, P. <u>Reston The First Twenty Years</u>, Reston Publishing Company, Inc. Reston Virginia, 1985. — Mimeo

May 2, M — THE BUSINESS OF BUILDING NEW TOWNS (cont.)

May 4, W — THE BUSINESS OF REBUILDING OLD TOWNS

A. Stellar, Jr. "A MXD Takes Off: Baltimore's Inner Harbor," Urban Land, March 1982, pp. 10 - 19. — Mimeo

B. Kirschbraun, Thomas C. and Peter J. Denitz. "Back to the Future Retail Redevelopment in Older Neighborhoods," Urban Land, March 1986, pp. 2 - 5. — Mimeo

C. Barnes, W. Anderson. "Ghirardelli Square Keeping a First First," Urban Land, May 1986, pp. 6 - 10. — Mimeo

****** FINAL EXAM as scheduled during Final Exams Week ******

THE REAL ESTATE PROCESS
Business 550/705
Discussion Section Schedule -- Spring 1988

Week	Topic
Jan. 25 - 28	Orientation and Legal Descriptions
Feb. 1 - 4	The Recording of Data
Feb. 8 - 11	Introduction to Land Use Controls and Site Size Requirements
Feb. 15 - 18	Definition of Building Envelopes
Feb. 22 - 25	Six Functions of a Dollar
Feb. 29 - March 3	Time Value of Money Equations
March 7 - 10	Time Value of Money Cont.
March 21 - 24	Frontdoor / Backdoor Analysis
March 28 - 31	Frontdoor / Backdoor Analysis Cont.
April 4 - 7	After-Tax Discounted Cash Flow Analysis
April 11 - 14	After-Tax Discounted Cash Flow Analysis Cont.
April 18 - 21	Financial Ratio Analysis
April 25 - 28	Computerized Real Estate Analysis
May 2 - 5	Review

DISCUSSION SECTION READING ASSIGNMENTS

Date	Readings	Source
Jan. 25 - 28	ORIENTATION AND LEGAL DESCRIPTIONS A. Graaskamp, J. <u>Fundamentals of Real Estate Development</u>, ULI, 1981, pp. 1 - 11. B. Chapters 4 and 5	 Mimeo Text
Feb. 1 - 4	THE RECORDING OF DATA A. Continue readings from previous week PS #1 will be distributed and will be due at the beginning of lecture on Feb. 15	
Feb. 8 - 11	INTRODUCTION TO LAND USE CONTROLS AND SITE SIZE REQUIREMENTS A. Stern, R. "Determining a Building's Site Size Requirement," Urban Land, May 1981, pp. 12 - 15. B. Carlini, James. "Measuring a Building's IQ," Real Estate Review, Fall 1985, pp. 87 - 90.	 Mimeo Mimeo
Feb. 15 - 18	DEFINITIONS OF BUILDING ENVELOPES A. Madison Zoning Code Excerpts PS #2 will be distributed and will be due at the beginning of lecture on Feb. 24	 Mimeo
Feb. 22 - 25	SIX FUNCTIONS OF A DOLLAR A. Mimeo in the reading packet B. Chapter 14	 Mimeo Text
Feb. 29 - March 3	TIME VALUE OF MONEY (TVM) EQUATIONS A. Mimeo on TVM concepts cont. PS #3 will be distributed and will be due at the beginning of lecture on March 21	 Mimeo
March 7 - 10	TVM CONTINUED A. Mimeo on TVM concepts cont.	 Mimeo
March 21 - 24	FRONTDOOR/BACKDOOR ANALYSIS A. Robbins, M. "Frontdoor/Backdoor: A Preliminary Risk Analysis Methodology." PS #4 will be distributed and will be due at the beginning of lecture on April 6	 Mimeo
March 28 - 31	FRONTDOOR/BACKDOOR ANALYSIS CONTINUED	
April 4 - 7	AFTER-TAX DISCOUNTED CASH FLOW ANALYSIS A. Chapters 19 and 20 PS #5 will be distributed and will be due at the beginning of lecture on April 25	 Text
April 11 - 14	ATCF CONTINUED	
April 18 - 21	FINANCIAL RATIO ANALYSIS	
April 25 - 28	COMPUTERIZED REAL ESTATE ANALYSIS PS #6 will be distributed and will be due at the beginning of lecture on May 4	
May 2 - 5	REVIEW	

UNIVERSITY OF WISCONSIN
AT MADISON
SCHOOL OF BUSINESS

Business 550-705

GENERAL GUIDELINES: Be brief, clear and concise. Write legibly. Effective use of the English language is part of your grade. Errors in arithmetic will result in a loss of points. You may 'round' from the third to the second decimal for hand calculation.
Be careful to show your calculations in a well organized, adequately-labeled format.

Be careful to allocate your time in accordance with the weight assigned to the question. There are 100 points on this examination.

PART I
'True' or 'False'

Indicate your answer by circling the "T" or "F". If the question is false correct it by changing the appropriate word(s) or phrase(s). Reductio ad absurdums are unacceptable. Each question is worth 2 (two) points. This section is worth 20 points.

T F 1. The FHA (Federal Housing Administration) is best known for its programs for the financing of owner-occupied sales housing and multifamily rental housing programs.

T F 2. The efficient output of public services might be maximized under a system in which there is: (1) a high degree of local responsibility for allocation of branch services of labor intensive public functions; (2) a significant equalizing state aid formula to enable the poorer political communities to provide such services; (3) an acceptance by the state of (and/or federal) responsibility for redistributive services (e.g., welfare assistance); (4) an assignment of capital intensive municipal functions to wide-area (metropolitan) service districts to obtain economics of scale in physical plant facilities (e.g., sanitary sewage districts) and fairer apportionment of costs and benefits.

T F 3. The President's Committee on Urban Housing indicated that in 1968 about one of eight (7.5 million) American families could not afford to pay market price for standard housing if it were to cost no more than 20% of their total income. Assuming no marked changes in economics or policies the same committee concluded that by 1978 about 15 million families would be unable to afford standard housing, a significant increase (ignore possible effects of national housing goals.)

T F 4. Urban blight designates a critical stage in the functional or social depreciation of real property beyond which its existing condition or use is unacceptable to the community.

T F 5. Functional depreciation of real property (loss of productivity) may result from a diminishing capacity to render a service or a decline in demand for the service rendered.

T F 6. The Sec. 236 and Sec. 235 interest subsidy programs were designed and implemented to provide new housing for poor families in areas where the combined supply of public housing and standard housing from the existing stock at rents the poor could afford was inadequate.

T F 7. Generally, when we say there is a low-income housing problem, we do not mean the market is malfunctioning <u>per se</u>, we mean the housing market provides for the low-income sector housing which is unacceptable for social, political, and other ideological reasons.

T F 8. If all energy involved in manufacturing, cleaning, transporting, remelting, and remanufacturing of various beverage containers is considered, it would cut the energy use of the beer and soft drink industry one-half (50%) if they would go back to using returnable bottles.

T F 9. Industrial solid wastes generated by manufacturing facilities far exceed (more than double!) the solid wastes generated by other urban uses (i.e., residential, commercial, institutional, and municipal uses).

T F 10. According to Michael Robbins, Leonard Wolffe and others interested in "impact zoning computer models," we should strive to obtain an optimum land use based upon as many relevant factors as possible. For example, we should consider erosion, permeability, water tables, soil types, slopes, climatic conditions, vegetation, and other natural and physical determinants. Further, we should consider schools, police, power, sewage, transportation, and the use and capacity of these and other man-made systems. By assigning numerical values to all of these factors, one could measure the impact of any development. Thus, we could ascertain in advance the probable impact of a development on the public and private sector.

PART II
Multiple Choice Questions and Fill-ins.

Read each question carefully and completely before attempting to answer. Several alternative answers may be partially correct or correct only in unique situations. SELECT THE ONE ANSWER WHICH IS MOST RESPONSIVE TO THE QUESTION OR STATEMENT MADE (i.e., the best available answer). Indicate your choice by making an "X" in the space ( ) indicated. This section is worth thirty points. Each question is worth 3 (three) points.

1. The proposed Better Communities Act, a revenue-sharing concept for community development put forward by the current administration, would:

( ) a. provide funds for the development of Skinnerian enclosures in which behaviorists would be the elite who would govern the citizens trained by modern techniques to be happy. The first built will be Walden II

( ) b. provide funds to test on humans the Cunningham hypothesis that rats required to live in high densities suffer undue emotional stress. It is believed humans may react in a similar fashion

( ) c. replace existing HUD categorical programs with a special revenue sharing system which enables local leaders to use the Federal funds for community development in accordance with local objectives

( ) d. provide long-term financing and grants to establish new satellite communities on the fringes of our SMSA under needs formulae which would allocate the funds to those SMSA's which by level of population, extent of overcrowding, and number of persons below the poverty threshold; have the greater need for better communities.

2. Unlearned lessons of the history of federal housing aid are:

( ) a. The provision of decent, safe, and sanitary housing can not solve the problems of poverty and ease the conditions which cause slums

( ) b. excessive emphasis on volume production of housing under the FHA programs will lead to either lax review of applicants and poor quality projects, or, on the other hand, a too strict bureaucratic application of the rules to avoid controversy

( ) c. the belief that homeownership builds character, responsibility, thrift, and stability among poor families is an inadequate basis for federally subsidized ownership for poor families without providing counseling on household budgeting, employment, and family organization

( ) d. administrative reorganization of HUD-FHA has been too frequent and too pervasive given the overriding objectives of the national housing policies

( ) e. all of the above

3. The causes of urban blight are:

( ) a. reduction in the productive capacity of the housing unit by: aging, technological obsolescence and sheer capital consumption (i.e., deferred maintenance)

( ) b. landlord motivation for excessive profits which drives out tenants and causes abandonment of structurally sound housing units

( ) c. the negative effects of changing land use, spillover effects of deteriorating nearby and adjacent uses, changes in the quality of municipal services (social overhead), changes in accessibility to necessary inputs and markets, and rising social standards affecting demand for realty fixed as to location

( ) d. lack of pride, and a sense of responsibility for property on the part of certain ethnic and racial types of overcrowd and abuse urban housing units.

( ) e. both (a) and (b)

( ) f. both (b) and (d)

( ) g. none of the above

4. Americans allocate about: (a generality applied to SMSA)

( ) a. 51% of their urban land to public rights of way including parking areas; 10% to commercial uses; 2 to 4% to industrial and transportation facilities use; 30% to residential uses; and the balance to open space, recreational and institutional uses

( ) b. 51% of their urban land to residential uses; 10% to industrial and transportation facilities; 2 to 4% to commercial uses; about 30% to public rights of way and parking; and the balance to open space and recreational and institutional uses

( ) c. 51% of their urban land open space, recreational, institutional and other such public and semi-public uses; 10% to public rights of way including parking areas; 2 to 4% to industrial transportation facilities; 30% to residential uses; and the balance to commercial uses

5. If we were to internalize all currently external costs in such a way as to personally burden the driver (and/or his family) with all externalities produced by the operation of the automobile (measured by dollar costs) it would probably result in:

( ) a. a trade-off by the motorist to public transit

( ) b. continued use by the motorist in spite of higher personal costs

(c) c. a mass migration to the smaller SMSA's to shorten journeys to work thereby enabling the motorist to continue to use the car by reducing miles traveled

( ) d. reactivation of the commuter railroad lines

6. Housing Allowances are a way of providing a subsidy to poor families to enable them to purchase the shelter they need on the open market. Some of the problems foreseen with this program are:

( ) a. it will probably cause an "unwelcome" fine grain in dispersion of the urban poor, spreading them to the suburbs

( ) b. there is no assurance that the tenant will obtain standard housing unless there is inspection by public officials

( ) c. it will increase the number of bidders in the market place for standard housing without necessarily increasing the supply of such housing which may simply result in an increase in rents

( ) d. it may result in stepping up housing code compliance activity everywhere causing a political backlash which would lobby to end the program

( ) e. all of the above

7. A study by the San Francisco firm - Livingston & Blaney, made in Palo Alto, California and supported by another study in Charlottesville, Va., and another in Moon Bay, California indicate that county-local governments will:

( ) a. realize greater revenue from new taxes on the levied development than costs imposed by the necessary expenditures to supply additional county, municipal and school services to the development and its occupants

( ) b. realize greater costs from necessary expenditures to supply additional county, council, municipal, and school services than the revenues received from the increased taxes levied on the said developments

( ) c. be required by state and federal law (including the constitution) to provide school and municipal services for new developers regardless of the effect on the local cost versus tax revenue relationships.

8. In Where do we Grow from Here, the author details the elements of the Ramapo plan, generally established by ordinance in early 1972. These elements of the growth limiting and controls plan are:

( ) a. it prohibits new construction unless the builder provides adequate sewage, parks, roads and other services

( ) b. the creation of a public housing authority calling for 300 public housing units

( ) c. adoption of "stop-gap" zoning to freeze developments of uses inconsistent with the new plan to prevent continuance of a history of spot zoning

( ) d. the zoning "out" of all pre-existing nonconforming uses by requiring that the use be terminated after 10 years

( ) e. the development of a 18-20 year capital improvement program with development easement acquisitions by purchase coupled with a reduction in assessment to the landowner-seller after recording of the easement

(f) f. the adoption of a Development Timing Point System designed to evolve a private system of development coupled with a public commitment to provide public facilities

( ) g. all of the above

( ) h. all of the above except (d)

9. According to Apgar the New Towns concept embodies four principles which differentiate it from other forms of urban development: They are:

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

10. In a discussion on the current climate and strategies in Real Estate, Downs and Lachman attempt to dispel certain myths which have been the basis of erroneous claims and beliefs about real estate investment trends. One myth concerns the expansion of our physical plant which will result from population growth by the year 2000. A second concerns the costs benefits to be realized from industrialization of housing production. The third

myth concerns the alleged very high rate of return in real estate investment. Set forth below your understanding of why Downs and Lachman say these beliefs are myths:

1 & 2 & 3

PART III - 25 points

Do one of the essay questions set forth below. They are alternatives. DO NOT SPEND TOO MUCH TIME ON THESE QUESTIONS. THE ESSAY YOU WRITE IS ONLY WORTH 1/4 OF THE GRADE.

Essay Question One:

Given your understanding of class discussions, readings, and your own ideas: How would you design and develop a housing project in which families and individuals of low-income (poverty) class would be occupants? You are expected to discuss both on-site and off-site problems as well as other problems necessary to consider and resolve in the development of such a feasible time-space product. It would be useful to compare the advantages or your projected development scheme over the disadvantages of previously constructed inadequate or inappropriate projects such as Pruitt-Igoe, etc. Keep in mind the range of problems you should solve. Draw upon such readings as Alternatives to Fear and The Tenant's Points of View, among others.

Essay Question Two:

Discuss private costs, and social costs resulting from our use of present large metropolitan areas. What are the externalities (positive and negative) resulting from the way transportation and public services are organized. Consider the relationship of poverty to: fiscal zoning, industrial dispersal, and the present form and structure of our metropolis. Your discussion should show an awareness of scale efficiencies and diseconomics which apparently exist.

Write your answer (after organizing it) on this page, back of the page and the next blank page attached.

PART IV - 25 points

Demonstrate your understanding of cash flow analysis and the methodology for discounting cash flows back to present value in order to provide information to facilitate a real estate investment decision.

Assume you are a real estate counselor and Mr. Wouldbuy, a real estate investor is seeking financial advice. It is understood you are not expected to analyze the reasonableness of his market analysis and/or his assumptions.

A builder-developer is offering a 36-unit apartment project for sale during the early phase of construction. Therefore, Mr. Wouldbuy would be eligible for the accelerated forms of depreciation according to IRS regulations. The builder-developer has an excellent reputation as a contractor, therefore, it is reasonable to expect the project's physical characteristics will be all they are purported to be.

The builder-developer has provided Mr. Wouldbuy with a copy of a computer simulation of a three-year investment in the 36-unit project. You have been provided with a copy.

As can be seen the total investment required is \$831,600. Mr. Wouldbuy would borrow \$696,600. and make an equity contribution of \$207,900.

The builder-developer represents this computer simulation analysis as true and correct. He further states that IGNORING TAX SAVINGS RESULTING FROM THE SHELTERING OF OTHER INCOME, this project will generate cash flows in the first three years, through operations of between \$15,000 - \$18,000. (See Column G of output page 7. This excludes cash benefits resulting from a sale at the anticipated selling price at the end of three years).

In addition, the builder has stated that Mr. Wouldbuy may, under these assumptions, expect a true yield on equity of at least 11.0% for the three-year holding period with a sale at the end of the period. The true yield is a discounted cash flow rate of return (IRR-PV) allowing for the time value of money.

Mr. Wouldbuy states he will buy, under these assumptions, if your financial analysis demonstrates:

(1) the accuracy of the annual operational cash flow generated by the model for each of the three years

(2) the accuracy of the after-tax equity reversion assuming a sale at the price indicated for year three

(3) a proof that the true yield on equity by internal rate of return methods is at least 11.0%

(4) He would also like to do a quick study 'check' on the internal rate of return he should expect assuming that maximum tax benefits are realized by sheltering his other income

DO NOT START TO WORK READ ON - IT WILL MAKE YOUR TASK EASIER!

PART IV (cont.)

First Question:

Set forth a hand calculation which demonstrates the accuracy (or inaccuracy?) of the "after-tax Cash Flow" set forth in column G of page 7 of the output.

YOU MAY ASSUME THAT ALL NUMBERS ON PREVIOUS PAGES ARE TRUE AND CORRECT

IMPORTANT NOTE: This model (and Mr. Wouldbuy at this point in your analysis) does ignore any external tax benefits (savings) resulting from sheltering other income on the IRS 1040. You are to do the same in your proof.

Second Question:

Assume a sale in year three at the selling price indicated and set forth a hand calculation of the "after-tax equity reversion". Does the model accurately approximate the after-tax equity reversion?

Helpful Hint: You should use the "capital gain tax rate" of 63% throughout this calculation.

ANSWER NO. 1

Set forth here your hand calculation of the three annual after tax cash flows: (To facilitate grading)

$ ______________________

$ ______________________

$ ______________________

ANSWER NO.2

Set forth here your hand calculation of the third year tax equity reversion

$ ______________________

Set forth work to prove answers here and on the back of the page:

PART IV (cont.)
FOR THIS PART OF THE QUESTION, to facilitate grading, ASSUME THE CASH FLOWS GENERATED ON THE COMPUTER PRINTOUT ARE ACCURATE.

As stated, Mr. Wouldbuy, will buy if it appears that the cash flows are received and when received do, under these assumptions, generate a yield of 11.0% internal rate of return on his stated equity contribution.

This is a test of the basic underlying productivity of the project. It disregards alleged cash flows which could be generated from the tax shelter of other income. Tax policies do change, as you know.

Third Question:

Set forth below a hand calculated proof which demonstrates whether or not the cash flows indicated on the computer printouts would yield an internal rate of return of 11.0% for the three year hold period. You have provided a compound interest table (annual) to enable you to make this determination. You may wish to round from the third place to the second, if so, round-up please.

IMPORTANT NOTE: Be sure to set forth your work in an orderly manner and carefully lable it.

ANSWER TO QUESTION 3 - The Present value of the equity cash flows at an 11.0% rate of return for the period indicated is $ ______________________

Mr. Wouldbuy should go ahead with his purchase   Yes   No

Mr. Wouldbuy should expect to pay no more than $ ________________ to obtain the 11.0% minimum acceptable rate of return.

PART IV (cont.)

Question 4.

Mr. Wouldbuy as a prudent investor does not consider the benefits of tax shelter as a part of his primary real estate investment selection criteria. However, he does want to know the magnitude of the possible cash flows he might expect from such tax savings.

(a) Mr. Wouldbuy wants you to do a calculation which adjusts the previously calculated cash flows for the tax benefits or disbenefits resulting from current tax rates as set forth in the computer simulation printout.

(b) Mr. Wouldbuy wants you to make a 'quick check' test of whether or not his internal rate of return after taking such tax benefits into consideration will exceed at least 15.0%. Make such a determination and set forth your proof. You have been provided with a 15% Annual Compound interest rate for your convenience.

SET FORTH YOUR ANSWERS TO QUESTION 4 BELOW:

THE REAL ESTATE PROCESS
Business 550/705

TAKE-HOME QUIZ #1

Due at the beginning of lecture on February 15, 1988

Name____________________

Part I Answer the following questions using the tract index for Block 4 of the Central Home Addition to the City of Madison that is attached.

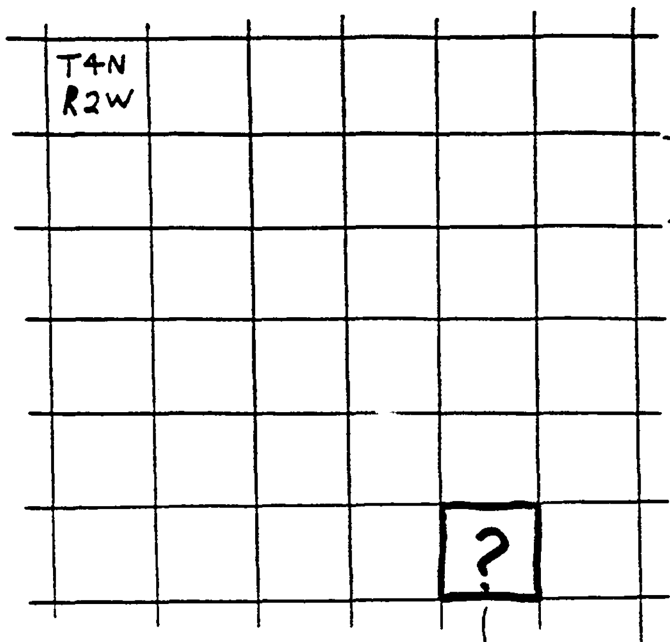
1. Who was the owner(s) of each lot on 1-1-49. Be complete.

Lot 1	____________________	Lot 10	____________________
Lot 2	____________________	Lot 11	____________________
Lot 3	____________________	Lot 12	____________________
Lot 4	____________________	Lot 13	____________________
Lot 5	____________________	Lot 14	____________________
Lot 6	____________________	Lot 15	____________________
Lot 7	____________________	Lot 16	____________________
Lot 8	____________________	Lot 17	____________________
Lot 9	____________________	Lot 18	____________________

2. Trace and explain all recorded entries concerning Lot 12 by filling in the following chart. Do not use any abbreviations.

PART II Fill in all of the following blanks regarding the rectangular (government) survey system.

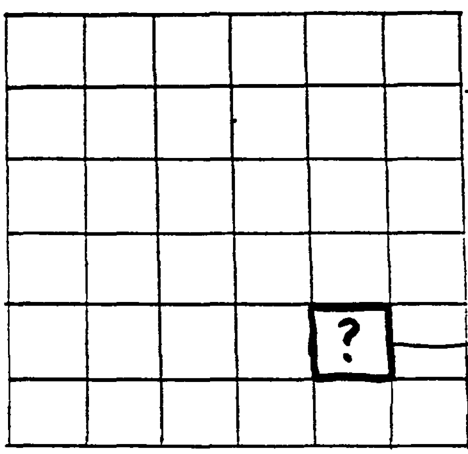
(a) ____________________



tier and it's (b) ___ miles wide

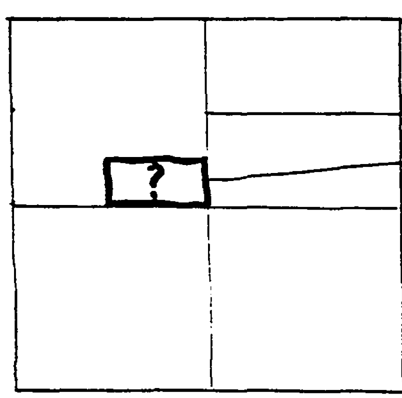
(c) ____________________

Township (d)_____, Range (e)__________



(f) ____ mile(s) wide

Section (g)_______



This is the
(h) ______________________
of the above section and
it contains ______ acres.

Lot	Doc. Number	Ins't	Vol.	Page	Date Mo.	Date Day	Date Yr.	Recorded Mo.	Recorded Day	Recorded Yr.	GRANTOR	GRANTEE	Description and Remarks
15	679672	Satis	546	173	1	15	35	11	24	43	Anchor Sav & Loan Assn	Leonard Kalstad & wf	Lot 15 of Mtg Vol 364 P 524
15	679673	Satis	546	74	11	24	43	"	"	"	Do	John Raimond & wf Concheta jtly	Lot 15 of Mtg Vol 521 P 554
7	681165	Satis	546	563	12	30	43	1	4	44	Anchor Sav & Loan Assn	Archie Collins & wf Della jtly	Lot 7 of Mtg Vol 463 P 468
3-4	695095	Release	m 180	213	10	20	44	11	2	44	Peoples Investment Co.	Release of Claim	Lots 3 & 4
5	695594	W D	454	410	10	26	44	11	16	44	Burrington H. N.	Rosaria Varesi	Lot 5 (L.C. #604637)
5	695590	Mtg	562	356	11	1	44	"	"	"	Varesi Rosaria	Lucretia B. Lawson	Do
8-9 11	703757	QCD	461	435	5	24	45	5	28	45	Hoyt Frank W.	Fred E. Gratz	Lots 8-9-11
12-13 14-16	704214	Order	m 184	434	6	4	45	6	6	45	Superior Court, Dane Co	Cottage Grove State Bank Ref John C. McKenna Apptd	Confirming Sheriff Sale
Do	704215	Shrf Deed	462	62	6	29	36	"	"	"	Sheriff Dane County	Cottage Grove State Bank	Lots 12-13-14-16
Do	704216	QCD	462	65	6	1	45	"	"	"	Cottage Grove State Bank	Fred E. Gratz	Do
9 11	709355	Affid	m 186	526	9	13	45	9	13	45	Madison, City acting (John Stein)	Auditor & Comptroller In Re	Tax Certificates
13 16													
8	711734	Tax Deed	77	505	8	27	45	10	17	45	Dane County by Clerk	City of Madison	Lot 8
6	714553	Mtg	578	201	10	19	45	11	20	45	Zaccone, Salvatore & Maria A.	Provident Loan & Bldg Assn	Lot 6
6	716388	Satis	579	421	1	2	46	1	2	46	Provident Loan & Bldg Assn	Salvatore Zaccone & Maria A.	of Mtg Vol 474 P. 370
8 14	717958	QCD	472	74	1	9	46	1	31	46	Gratz, Fred E & wf	City of Madison	Lots 8 & 14
12	720654	W D	474	276	3	13	46	3	15	46	City of Madison	Joseph D. Puccio	Lot 12
14	722577	W D	476	128	2	19	46	4	15	46	Do	John Raimond	Lot 14
11	723084	QCD	476	501	9	5	45	4	23	46	Gratz, Fred E. & wf	Royal Body Co. et al	Lot 11
3 4	740404	W D	492	592	2	6	47	2	17	47	Schoelkopf, Louis F. & wf	Wisconsin Univ. Bldg Corp	Lots 3 & 4
3 4	740405	Mtg	606	343	2	17	47	"	"	"	Wisconsin Univ. Bldg Corp	Wisconsin State Retirement Fund	Lots 3 & 4
10	740577	W D	493	84	2	20	47	2	20	47	Olson, Oscar C. & Anna M.	Wisconsin Univ. Bldg Corp.	Lot 10 Subj to Easements
10	740578	Mtg	606	435	"	"	"	"	"	"	Wisconsin Univ. Bldg Corp.	Wisconsin State Retirement Fund.	Lot 10
16	741549	W D	493	560	10	11	45	3	10	47	Gratz, Fred E. & wf.	Tony Castagna	Lot 16
9	743696	W D	495	521	4	18	47	4	18	47	Do	Wisconsin Univ. Bldg Corp	Lot 9
9	743697	Mtg	611	53	4	18	47	"	"	"	Wisconsin Univ. Bldg Corp	Wis State Retirement Fund	Lot 9
8	745907	QCD	497	554	5	28	47	5	29	47	Gratz, Fred E. & wf	City of Madison	Lot 8
8	745906	QCD	497	553	5	29	47	"	"	"	Hoyt, Frank W.	Do	Lot 8
8	746189	Mtg	614	130	6	4	47	6	4	47	Wisconsin Univ Bldg Corp	Wis State Retirement Fund	Lot 8
5	749889	Mtg	618	317	7	21	47	8	12	47	Varesi, Rosaria	Bank of Madison	Lot 5
5	749890	Satis	615	591	4	8	46	"	"	"	Lawson, Lucretia B. Decd by Extr	Varesi, Rosaria	of Mtg Vol 562 P. 356
17	753097	Satis	623	32	10	3	47	10	3	47	Anchor Sav & Loan Assn	Anton Castagna & wf	Mtg Vol 436-P 24
17	753098	Mtg	622	130	"	"	"	"	"	"	Castagna, Anton & wf	Anchor Sav & Loan Assn	Lot 17

Lot	Doc. Number	Ins't	Vol.	Page	Date Mo.	Date Day	Date Yr.	Recorded Mo.	Recorded Day	Recorded Yr.	GRANTOR	GRANTEE	Description and Remarks
15	763238	Mtg	635	270	4	20	48	4	27	48	Raimond, John wf	Commercial State Bank	Lot 15
6	767850	Mtg	640	238	7	19	48	7	23	48	Zaccone, Salvatore wf	Provident Loan & Bldg Assn	Lot 6
6	768459	Satis	641	68	8	2	48	8	5	48	Provident Loan & Bldg Assn	Zaccone, Salvatore wf	Mtg vol 578-P 201
14	772781	W.D	522	41	6	12	48	11	5	48	Raimond, John wf	John Raimond wf	Lot 14
17	780355	Mtg	655	574	5	11	49	5	13	49	Castagna, Anton wf	Anchor Sav & Loan Assn.	Lot 17
17	780791	Satis	656	200	"	"	"	5	24	49	Anchor Sav & Loan Assn.	Anton Castagna wf	Mtg Vol 622 P. 130
5	784722	Mtg	662	7	8	15	49	8	17	49	Varesi, Joseph wf	Bank of Madison	Lot 5
17	788600	Satis	664	538	11	2	49	11	3	49	Anchor Sav & Loan Assn	Anton Castagna wf	Mtg vol 655-P 574
17	788601	Mtg	667	40	"	"	"	"	"	"	Castagna, Anton wf	Anchor Sav & Loan Assn	Lot 17
15	814846	Satis	704	191	4	6	51	4	6	51	Commercial State Bank	John Raimond wf	Mtg Vol 635 P. 270
18	817194	Mtg	707	342	5	22	51	5	23	51	Parisi, Endemira	First Nat'l Bank Mad	Lot 18
7	828696	L.C	m 244	568	1	16	52	1	18	52	Calkins, Archie wf	Leonard J. Schuett wf	Lot 7
5	829179	Satis	722	368	1	31	52	1	31	52	Bank of Madison	Joseph Varesi wf	Mtg Vol 662 P. 7
5	Do										Do	Do	Mtg Vol 618 P 317
16	833600	W.D	577	409	5	1	52	5	2	52	Castagna, Tony wf	Joseph T. Castagna	Lot 16
1	835334	Mtg	732	231	5	20	52	6	4	52	Caruso, John wf	Louis T. Schoelkopf	Lot 1
12	835571	QCD	579	281	6	5	52	6	10	52	Puccio, Joseph D.	Edna A. Puccio	Lot 12
12	835572	Mtg	732	358	6	5	52	"	"	"	Puccio, Joseph D. wf	Anchor Sav & Loan	Lot 12
12	835573	Mtg	732	359	"	"	"	"	"	"	Do	Wis Dept Veterans Affairs	Lot 12
16	837028	Mtg	733	507	6	27	52	7	2	52	Castagna, Joseph T. wf	Anchor Sav & Loan	Lot 16
16	837029	Mtg	733	508	"	"	"	"	"	"	Do	Wis Dept Veterans Affairs	Lot 16
7	840311	W.D	583	340	8	26	52	8	28	52	Calkins, Archie wf	Leonard J. Schuett wf	Lot 7
7	840312	W.D	583	342	"	"	"	"	"	"	Schuett, Leonard J. wf	Steve Jerrick	Lot 7
6	842889	Mtg	742	577	9	8	52	10	14	52	Bergeron, Bernard C wf	Provident Loan & Bldg Assn	Lot 6
13	843389	W.D	586	209	10	22	45	10	21	52	Gratz, Fred E. wf	Salvatore Zaccone wf	Lot 13
6	844269	Satis	745	17	9	8	52	11	5	52	Provident Loan & Bldg Assn	Salvatore Zaccone	Mtg Vol 640 P. 238
13	844270	Mtg	744	76	9	8	52	"	"	"	Bergeron, Bernard C wf	Provident Loan & Bldg Assn	Lot 13
6 13	844271	W.D	587	57	10	31	52	"	"	"	Zaccone, Salvatore wf	Bernard C. Bergeron	Lots 6 & 13
6 13	844272	Mtg	744	77	11	3	52	"	"	"	Bergeron, Bernard C wf	Salvatore Zaccone wf	Lots 6 & 13
5	858802	Mtg	762	17	8	11	53	8	11	53	Varesi, Rosaria & husb	Bank of Madison	Lot 5
1	866575	Satis	770	268	12	30	53	1	8	54	Schoelkopf, Louis T	John Caruso wf et al.	Mtg Vol 732 P. 231
1	866576	W.D	605	284	12	30	53	"	"	"	Caruso, Rose	George Parrino wf	Lot 1

Lot	Doc. Number	Ins't	Vol.	Page	Date Mo.	Date Day	Date Yr.	Recorded Mo.	Recorded Day	Recorded Yr.	GRANTOR	GRANTEE	Description and Remarks
6 13	881021	Mtg	790	140	9	20	54	9	21	54	Novara, Gasper & wf	Anchor Sav. & Loan	Lots 6 & 13
6	881441	Satis	789	171	9	28	54	9	28	54	Provident S. & Loan	Bernard C. Bergeron & wf	Mtg Vol 742 P. 577
13	Do										Do	Do	Mtg Vol 744 P. 76
6 13	881442	Satis	789	172	9	23	54	"	"	"	Zaccone, Salvatore & wf	Do	Mtg Vol 744 P 77
6 13	881443	WD	618	201	9	28	54	"	"	"	Bergeron, Bernard C & wf	Gasper G. Novara & wf	Lots 6 & 13
5	897796	Satis	810	342	6	16	55	6	16	55	Bank of Madison	Rosaria Varesi & wf	Mtg Vol 762 P 17
1	922985	WD	652	262	7	17	56	7	30	56	Caruso, Rosie	George Parrino & wf	Lot 1
18	956787	Mtg	888	381	4	28	58	4	29	58	Parisi, Endemira	First Nat'l Bank	Lot 18
18	957889	Satis	887	585	5	14	58	5	16	58	First Nat'l Bank	Endemira Parisi	Mtg Vol 707 P. 342
18	960603	W.D.	680	342	7	1	58	7	1	58	Parisi, Endemira	Erna R. Gautke	Lot 18
18	960953	Satis	891	577	7	3	58	7	8	58	First Nat'l Bank of Mad.	Endemira Parisi	Mtg Vol 888 p. 381
11	970695	Q.C.D	687	358	12	3	58	12	4	58	Royal Body Co. co partners	Harry M. Spray Etal	Lot 11
11	970889	W.D	687	439	"	"	"	12	8	58	Spray, Harry M & wf	Henry Eberhardt	Lot 11
16	972469	Mtg	909	286	1	6	59	1	6	59	Castagna, Joe & wf	Tony Castagna & wf	Lot 16
16	987484	Satis	928	478	8	31	59	9	2	59	Castagna, Tony & wf	Joe Castagna & wf	Mtg. Vol 909 P 286
16	992024	W.D.	701	376	11	10	59	11	16	59	Castanga, Joseph T. & wf	Clyde A. Kiefer & wf	Lot 16
16	992122	Mtg	934	599	11	9	59	11	17	59	Kiefer, Clyde A. & wf	Anchor Sav & Loan Assn	Lot 16.
16	992335	Affd	m 343	370	11	19	59	11	20	59	Castagna, Tony	In re: Possession	Lot 16
16	993322	Satis	936	355	12	8	59	12	8	59	Wis Dept of Vet Affairs	Joseph T. Castagna & wf	Mtg. Vol 733 P 508
16	993323	Satis	936	353	11	9	59	12	8	59	Anchor Sav & Loan Assn	Do	Mtg. Vol. 733 P 507
1	1000196	Mtg	945	201	1	12	60	1	14	60	Parrino, George & wf	Randall State Bank	Lot 1
1	1001329	Cert	m 347	388	12	1	53	5	2	60	Caruso, John, dec'd	Term. Jt. Tenancy	Lot 1
1	1001541	Cert.	m 348	521	5	16	57	5	4	60	Caruso, Rosie dec'd	In re: Term. Life Est.	Lot 1
17	1009009	Satis	953	516	8	29	60	8	30	60	Anchor Sav. & Loan	Anton Castagna & wf	Mtg. Vol. 667 P. 40
16	1016968	Satis	965	361	12	23	60	1	10	61	Anchor Sav. & Loan	Clyde A. Kiefer & wf	Mtg Vol 934 P 599
16	1016969	Mtg	966	211	12	23	60	1	10	61	Kiefer, Clyde A. & wf	Anchor Sav & Loan	Lot 16
12	1017704	Satis	965	521	1	23	61	1	24	61	Wis. Dept Veterans Affairs	Joseph D Puccio & wf	Mtg Vol 732 P 359
12	1018744	Mtg	967	516	2	7	61	2	10	61	Smithback, James E.	Anchor Sav & Loan Assn	Lot 12.
12	1019112	Satis	968	200	2	7	61	2	17	61	Anchor Sav & Loan	Joseph D Puccio & wf	Mtg Vol 732 P 358
12	1019113	WD	720	503	2	17	61	2	17	61	Puccio, Joseph D & wf	James E. Smithback	Lot 12
12	1020930	L.C.	m 359	224	3	13	61	3	20	61	Smithback, James E. & wf	Jerry F. Dagna	Lot 12
9	1029436	Rel	980	427	7	27	61	7	28	61	State of Wis Inv Board	Wis Elnic Bldg Corp	Mtg Vol 611 P 53

Lot	Doc. Number	Ins't	Vol.	Page	Date Mo.	Date Day	Date Yr.	Recorded Mo.	Recorded Day	Recorded Yr.	GRANTOR	GRANTEE	Description and Remarks
12	1035072	WD	731	314	9	19	61	10	16	61	Daane, Jerry F.	Jerry F. Daane & wf	Lot 12
2	1038334	QCD	733	413	11	28	61	12	5	61	Fabian, Tony	Mary Fabian	Lot 2
2	1038336	Rel	T 369	438	12	1	61	12	5	61	Wis Dept of Taxation	Tony Fabian to Mary Fabian	gift tax lien Lot 2
13	1038466	Satis	989	502	12	5	61	12	6	61	Anchor Sav & Loan Assn	Shaper Novara & wf	Mtg Vol 790 P 140
1	1044298	Satis	998	149	3	12	62	3	16	62	Randall State Bank	George Parrino & wf	Mtg Vol 945 P 301
16	1048663	Satis	1001	485	5	21	62	5	23	62	Anchor Sav & Loan Assn	Clyde A. Kiefer & wf	Mtg Vol 966 P 211
16	1048664	WD	740	271	5	23	62	5	23	62	Kiefer, Clyde A. & wf	City of Madison	Lot 16
4	1050555	Satis	1005	289	5	21	62	6	18	62	Wis State Invest Board	Wis Univ Bldg Corp.	Mtg Vol 606 P 343
10	1050555	Satis	1005	289	5	21	62	6	18	62	Wis State Invest Board	Wis Univ Bldg Corp	Mtg Vol 606 P 433
9	1050555	Satis	1005	289	5	21	62	6	18	62	Wis State Invest. Board	Wis Univ Bldg Corp.	Mtg Vol 611 P 53
8	1050555	Satis	1005	289	5	21	62	6	18	62	Wis State Invest. Board	Wis Univ Bldg Corp.	Mtg Vol. 614 P 130
3-4-10-9-8	1050556	QCD	741	508	6	18	62	6	18	62	Wis Univ Bldg Corp.	Regents of Univ of Wis	Lots 3-4-10-9-8
	(corrected 9/2/65)												
18	1056167	L.C.	M 380	617	8	31	62	8	31	62	Zautke, Erna K.	Ann S. Slavney	Lot 18
5	1068184	WD	754	260	3	11	63	3	11	63	Varese, Rosaria M.	Regents of Univ of Wis.	Lot 5
14 15	1077206	WD	760	536	7	10	63	7	10	63	Raimond, John & wf.	City of Madison	Lots 14 & 15
12	1156764	Mtg	1144	52	3	21	66	3	24	66	Daane, Jerry F. & wf	Anchor Sav & Loan Assn	Lot 12
12	1157599	Satis	1143	203	3	21	66	4	4	66	Anchor Sav & Loan Assn	James E. Smithback & wf	Mtg Vol 967 P 316
12	1157600	WD	816	116	3	31	66	4	4	66	Smithback, James E.	Jerry F. Daane & wf	Lot 12
18	1158609	Order to sell	M 443	230	4	12	66	4	19	66	Zautke, Erna K. Dec	or Encumber Real Estate	Lot 18
18	1158610	Exec Deed	816	515	4	15	66	4	19	66	Zautke, Erna K. Dec by Exec	Ann S. Slavney	Lot 18
18	1158611	Letters	M 443	230	11	21	65	4	19	66	Zautke, Erna K. Dec	Testamentary	Lot 18
18	1158612	WD	816	517	4	19	66	4	19	66	Slavney, Ann S.	City of Madison	Lot 18
2	1159866	WD	817	414	5	3	66	5	4	66	Fabian, Tony & wf	City of Madison	Lot 2
1	1159823	award of Damages	M 444	100	5	4	66	5	4	66	Madison, City of	George Parrino et al	Lot 1
17	1163864	WD	820	212	6	22	66	6	23	66	Castagna, Anton & wf	City of Madison	Lot 17
1	1176681	WD	828	508	1	10	67	1	11	67	Parrino, George & wf	City of Madison	Inher Tax Lien Lot 1
11	1250309	Rel	133	193	9	9	69	9	16	69	Wis Dept Revenue	Henry Eberhardt, Dec	Lot 11
11	1250310	Exec Deed	133	194	9	10	69	9	16	69	Eberhardt, Henry Dec by Exec	Alfred G. Jacobs	Lot 11
11	1250311	Mtg	133	196	9	15	69	9	16	69	Jacobs, Alfred G.	Madison Bk & T Co	Lot 11
11	1284161	J.J.	221	574	6	29	70	3	2	71	Eberhardt, Henry - Dec	Dorothy Eberhardt	Lot 11
13	1340128	WD	377	335	9	1	72	9	8	72	Novara, Shaper & wf	City of Madison	Pt Lot 13

SEC.______ T______ R______ PLAT CENTRAL HOME ADD, MADISON BLK. 4

Lot	Doc. Number	Ins't	Vol.	Page	Date Mo.	Date Day	Date Yr.	Recorded Mo.	Recorded Day	Recorded Yr.	GRANTOR	GRANTEE	Description and Remarks (5)
11	1346558	J.J.	393	324	6	29	69	11	7	72	Eberhardt, Henry Dec.	Dorothy Eberhardt	Lot 11
12	1358062	Satis	422	433	3	12	73	3	16	73	Anchor Sav + Loan	Jerry J. Doane etal	Mtg V. 1144 P. 52
12	1358161	mtg	422	559	3	16	73	3	16	73	Doane, Jerry J. + wf	Anchor Sav + Loan	Lot 12
12	1371316	Satis	454	433	7	9	73	7	12	73	Anchor Sav + Loan	Jerry J. Doane + wf	V. 422 P. 559
12	1371317	WD	454	434	7	9	73	7	12	73	Doane, Jerry J. + wf	City of Madison	Lot 12
11	1384536	Pt Rel	486	263	12	3	73	12	7	73	United Bank + Trust Tr	Alfred G Jacobs etal	Vol 133 P 196
11	1387965	WD	494	682	1	17	74	1	25	74	Jacobs, Alfred G	City of Madison	Lot 11
6 13	1584882	Certif	978	362	6	4	78	8	2	78	Novara, Gaspare dec	of Term of Tenancy	Lot 6 & 13

	On this Date	This person (s)	Gave this Instrument	To this person (s)	In return for or why recorded	Event Recorded On
(1)	6-4-45	Superior Court Dane County	Court Order	Cottage Grove State Bank Plaintiff John C. McKenna Def.	Confirming Sheriff's Sale	6-6-45
(2)						
(3)						
(4)						
(5)						
(6)						
(7)						
(8)						
(9)						
(10)						

	On this Date	This Person (s)	Gave this Instrument	To this person (s)	In return for or why recorded	Event Recorded On
(11)	2-17-61	Puccio, Joseph D. + wife	WD warranty Deed	James E. Smithback	transfer title	2-17-61
(12)						
(13)						
(14)						
(15)						
(16)						
(17)						
(18)						
(19)						
(20)						

18
23 ✓

THE REAL ESTATE PROCESS
BUSINESS 550/705
Final Exam -- 200 Points

Professor James A. Graaskamp
Fall Semester 1987

Name Cathy Allor
Section 301

USE THE BLUE BOOK FOR ANSWERS TO QUESTIONS 1 - 6!!

Make sure your name and discussion section is on both this exam and your blue book.

site
bldg. env.
market
use
cash flow

~~1.~~ Describe the five components or steps in the real estate process as presented in Discussion Section. (25 points)

2. Compare and contrast exactions and the taking issue as used in land use policy making. (25 points)

~~3.~~ Given the following information discuss the implications of the feasibility of the project. (18 points)

Results of Frontdoor analysis:

Construction Cost per SF	$45.29
Commercial Rent per SF	$ 8.98

given c. cost + determine NOI

Results of Backdoor analysis:

Commercial Rent per SF	$ 9.67
Construction Cost per SF	$47.13

given rent => just. budget

4. What is meant by the statement, "If you can't buy the assumptions don't buy the real estate." How does this statement fit into real estate decision making? (20 points)

Discuss

~~5.~~ As a developer you are interested in a project, but financially as a "private" project it is not feasible. Discuss at least four alternatives that might make the project feasible if the project were a joint public/private venture. (30 points)

reasons (article)

3 princ
people
env.
urban setting
urban/middle
Land - had to keep
prominent
lakes

6. Discuss the development of Columbia, Maryland, with specific attention to Rouse's three main principles, the reasons for the location chosen, the synergistic elements in the plan, the "software" services provided, and the success or failure in achieving the three principles. (30 points)

CIGNA

yield - 5.5% 18 Cathy Allor 301

7. Given: MC = .11 and DCR = 1.2, EY = .055,
Real Estate Tax = 15% of GPI, Operating Expenses = 20% of GPI,
and Vacancy = 5% of Gross Potential Income, and Gross Effective
Income = $104,500, find the annual: (20 points)

GPI 104,500 X1.05 = ~~109,725~~ -2

$\boxed{\$109,725}$

10 104500 ÷ .95 = 110,000

109,725	GPI
5225	Vac
104,500	EGI
- 16,458	Tax
21,945	Op Exp
66,097	

NOI

$\boxed{\$66,097}$ as given above

R.E. Tax

$\boxed{\$16,458}$ " " "

Op. Exp.

$\boxed{\$21,945}$ " " "

MC = .11
DCR = 1.2
eq. yield 5.5

JMA mort. amount 66,097 ÷ 1.2 = $55,080 ADS ÷ .11

$\boxed{\$500,727}$ mort. as given above

JEC equity cont 66097 - 55080 = 11,017 ÷ .055

$\boxed{\$200,304}$

JPB J. Proj. Budg.

$\boxed{\$701,036}$

L/V

$\boxed{71.4\%}$

DR Def Ratio

$\boxed{85\%}$

$$\frac{\text{Taxes} + \text{Op Exp} + \text{ADS}}{\text{GPI}} \qquad \frac{16458 + 21,945 + 55080}{109,725}$$

CTO

$\boxed{\$11,017}$

23 Cathy Alloz 301

~~8~~. Indicate how the financial measure in each row changes in response to the following occurrences. Enter a (+) if it goes up, a (-) if it goes down, or (0) if it stays the same.

(+2 points if correct, -1 point if wrong, and 0 points if left blank, total 32 possible points)

	an increase in the vacancy rate	a decrease in the investor's marginal tax rate	a decrease in the term or length of the mtg.	an increase in the mill rate
Net Operating Income	—	0	0	0 -1
Net Present Value	—	+	—	—
Default Ratio	0	0	+	+
Debt Coverage Ratio	0 -1	0	—	0 -1

13×2 26
-3
23

THE REAL ESTATE PROCESS
Business 550/705

Professor James A. Graaskamp
Fall Semester 1987
Midterm Exam #2

Name____________________

Section 301

USE THE BLUE BOOK FOR YOUR ANSWERS!!

√ 1. Carefully define or discuss FIVE of the following six terms or concepts as used in this course. (25 points)

a. disintermediation
√b. special assessment
√c. equalization rate
√d. public infrastructure solvency
√e. tax deductible versus tax credit
√f. mortgage factor

√ 2. Explain the pros and cons of a mortgagee foreclosing on a mortgagor. Be thorough in your answer. (15 points)

√ 3. Describe the theme and concepts discussed in one of the following readings: (20 points)

√a. "Real Estate Finance Blazes New Trails," Frederick Flick, Real Estate Today, April 1987, pp. 22-26.

b. "Using Due Diligence in Shopping Center Purchases," Michael H. Switzer, Real Estate Review, Fall 1986, pp. 88-92.

4. Describe the four traditional tax ploys and their impact on real estate and the impact of the 1986 Tax Reform Act on the use of each ploy or strategy. (20 points)

5. Given the following information set up how to solve the problem: (20 points)

As an investor you can borrow \$ 300,000 at 12% interest for 30 years, monthly payments.

Net operating income is projected to be:

Years 1 - 5	\$ 40,000
Years 6 - 10	\$ 50,000

In Year 10 the property will sell at a NIM of 10. You will also have to pay a 6% real estate sales commission. Your before tax opportunity cost of funds is 14%. What is the total maximum purchase price for this investment?

$\frac{\text{annual debt se}}{\text{loan princip}}$

iFHLMC

THE REAL ESTATE PROCESS
Business 550/705
Midterm Exam #1

Professor James A. Graaskamp
Fall Semester 1987

Name___________________________

Dis. Section______Attend_____

1. Carefully define FIVE of the following six terms or concepts as used in this course. (25 points)

a) constructive notice
b) most probable use
c) restrictive covenant
d) filler industry
e) radial or axial theory
f) friction

2. Taking into consideration the groups involved in the real estate process mentioned in Graaskamp's article, describe the groups and explain why cash solvencies and cycles are a critical concern. (20 points)

3. You are looking at a site in the Northwestern United States. The site is halfway up a valley side, and it over looks a lumber mill town and valley. To the back of the site you have timber and mountains. What type of analysis would you do if someone offered you this site? (Keep in mind what we have discussed in this course.) You plan to build a residential subdivision on the site. (25 points)

4. Briefly summarize the theme and basic concepts discussed in ONE of the following readings: (15 points)

a. "Why Real Estate Projects Fail," Boykin, James H. Real Estate Review, Spring 1985, pp. 88-91.

b. "Spotlight of San Antonio," Rice, J. and J. Roef. Urban Land, March 1984, pp. 2-7.

c. "Alternatives to Fear," Batterman, L. Progressive Architecture, October 1972.

5. Given the following information determine: (15 points)

a) Lot area
b) Area lost to setbacks
c) Standard Allocation Unit - measured in total square feet
d) Number of apartments that can be built on the site

Development proposes retail on the first floor and residential two bedroom apartments on the second floor.

Lot Dimensions -	200 feet (wide) by 250 feet (deep)
Setbacks	5 ft. side yards
	20 ft. back yard
	10 ft. front yard

Parking Requirements:
Retail.......1 space per 500 net SF of commercial space
Residential..1 space per bedroom
Each parking stall or space is 350 SF

Net Leasable area of each apartment is 800 SF.

Open Space Requirements:

Retail	none
Residential	75 SF per bedroom

Building Efficiency 76.27%

Assume parking and open space may not occupy setback areas.

Business 550/705
THE REAL ESTATE PROCESS

FINAL EXAM
(200 Points)

Spring Semester 1986 — Name KEY
Professor James A. Graaskamp — Disc. Sec. ____

(3pts. each)

(60) I. MULTIPLE-CHOICE QUESTIONS: Write the letter corresponding to the one best answer in the blank to the left of each question.

c 1. Traditionally, public regulation of land use has been dealt with at the ____________ level of government.

a) federal
b) state
c) local
d) regional

c 2. Indirect (versus direct) regulation of land use occurs through all but which one of the following:

a) public works
b) general property tax assessment
c) zoning
d) building code enforcement

d 3. This procedure for measuring the return on equity involves compounding all cash flows to equity investors forward to a terminal date at a specified reinvestment rate and then finding the compound interest rate that equates the terminal value and the initial equity investment.

a) overall discount rate
b) internal rate of return
c) financial management rate of return
d) modified internal rate of return

d 4. Under present Wisconsin statutes, the state may enforce regulations for which one of the following when counties have no laws which meet the state's minimum standards:

a) shoreland zoning
b) floodplain zoning
c) subdivision regulations
d) all of the above

d 5. Which one of the following is not a direct or indirect control used by state and federal governments in regulating land use and real estate decisions?

a) tax subsidy of particular land uses
b) regulation of the property owner
c) regulation of financial institutions
d) all of the above are direct or indirect controls

b 6. Which of the following statements is not true regarding how to cope with a hostile environment (as a developer)?

a) Minimize the front-end investment.
b) Apply for approvals which are not specific and binding regarding allowable construction methods.
c) Condition your purchase of the site upon obtaining a building permit.
d) All of the above statements are true.

d 7. Which of the following statements is not true regarding the Breckenridge Development Code?

a) In some neighborhoods, Victorian design must be used for all new development and redevelopment.
b) There are no uses-by-right and virtually no prohibited uses.
c) Performance better than the minimum of zero required by the code on all the relative policies taken together is rewarded with an increase in density.
d) Points are awarded for the construction of fireplaces in residential units.

b 8. Which one of the following is not one of the three essential ingredients behind the success of the working committee in Kansas City?

a) Representation on the working committee by the key organizations in the local real estate process.
b) Relaxing the city's standards for pavement width and thickness.
c) Dedication to achieve specific results by taking issues one at a time and following through on the necessary changes.
d) A positive attitude by the city and by the homebuilders toward making Kansas City a better place for builders to do business.

b 9. Basically, ______________________________ involves a conditional exchange between the city and the developer. The city permits the developer to build a larger building in exchange for some public amenity, such as a plaza or open space.

a) fiscal zoning
b) incentive zoning
c) performance zoning
d) inclusionary zoning

d 10. As occurred in the case of Mountain Village (California), large-scale residential developers often respond to stiff opposition to their multi-family housing proposals by ____ .

a) building a shopping center on the site instead of houses and apartments
b) staying with their original plans and raising prices
c) meeting all of their opponents' demands
d) substituting a smaller number of higher-priced houses

c 11. The developer's leading allies in the San Bruno Mountain (CA) case were the ______________________________.

a) environmentalists
b) residents of the nearby blue-collar neighborhoods
c) construction workers
d) planning commission

d 12. Which of the following is not a type of project acceptable to HUD under the Urban Development Action Grant program?

a) middle-income housing
b) downtown shopping malls
c) downtown hotels
d) all of the above are acceptable to HUD

b 13. Professor Graaskamp presents the real estate process as the constant interaction of three major groups and their subgroups. Each of these conceptual groups and subgroups consist of real-world enterprises. The critical common concern of all these conflicting enterprises is ____________________.

a) increasing their span of control
b) cash solvency
c) profit maximization
d) using other people's money

d 14. Which of the following recommendations is not made by the author in "Coping with the Risks of Commercial Development" regarding what to do prior to buying the land?

a) Do your site investigation.
b) Get a lot of your leases signed.
c) Arrange for construction and permanent mortgage financing.
d) All of the above are recommendations made by the author.

a 15. Which of the following programs was not discussed in the article "How St. Louis Turned Less into More" as being a major part of St. Louis' promotion of redevelopment?

a) enterprise zones
b) Urban Development Action Grants
c) tax abatement
d) investment tax credit for historic preservation

d 16. The "polarization of housing quality" that occurs in response to restrictions on the housing supply in the face of increasing demand for housing refers to:

a) housing quality in the northern states running down while housing quality in the southern states improves.
b) the quality of apartments improving while the quality of detached, single-family residences declines.
c) higher-income space consumers suffering since no new housing is being built while low-income space consumers enjoy low rents.
d) higher-income space consumers maintaining and improving their houses as values increase while lower-income space consumers strain to pay rents while letting their houses run down.

C 17. One of the reasons there is so little balance between residential and other land uses is:

a) Taxpayers are too eager to assist low-income consumers in finding affordable housing.
b) Housing consumers are easy to represent because their needs are very similar while other types of space consumers differ widely in their needs.
c) Individuals responsible for land use regulations feel confident that they know what is best for the housing consumer and rarely use surveys of housing consumers.
d) The future consumer is given too much consideration when compromise on land use regulations is necessary.

a 18. Several years ago, the State of Wisconsin studied the cost of alternative land use policies and found which of the following residential environments to be cheapest?

a) urban
b) suburban
c) exurban
d) outlying communities

d 19. ______________________________ are thought to be a way to shift economic pressure by giving the owner of a golf course or a historical landmark some of the residual land value created by allowing more intense development at another site.

a) enterprise zones
b) tax incremental financing programs
c) Urban Development Action Grants
d) transferable development rights

C 20. In the article "Applying Real Estate Financial Analysis to Planning and Development Control," author David Dowall discusses four distinct areas where real estate expertise can help. Which one of the following was not discussed?

a) Designing incentive programs that promote the provision of public amenities.
b) Evaluating requests for a relaxation in regulations or for financial assistance.
c) Designing social service delivery programs.
d) Creating public/private partnerships.

(40) II. MATCHING ATTRIBUTES: Write the abbreviation of the program corresponding to the attribute description in the blank to the left of the attribute description.

(4 pts. each)

EZ = enterprise zones
TIF = tax incremental financing
MRB = mortgage revenue bonds
UDAG = Urban Development Action Grant
IDB = industrial development bonds
HoDAG = Housing Development Action Grant

MRB 1. Issued by state and local units of government to promote multi-family rental housing construction by providing low-cost funds.

TIF 2. Under this program the state's Department of Revenue must certify the base value of the district prior to construction of new facilitie

UDAG 3. This program requires minimum leverage of $2.50 in private funds for every $1.00 of program funds.

HoDAG 4. This program transfers funds from the federal government to the local government to be used to financially assist developers of multi-family housing projects.

EZ 5. The focus of this program is tax relief, cutting red tape, etc.; it would offer significant reductions in corporate, property, and social security taxes for participating firms.

UDAG 6. This program is frequently utilized to assist hotel construction in downtown areas due to the large number of jobs created for unskilled workers.

UDAG 7. The comparative degree of physical and economic distress among applicant communities is a major selection factor in this program.

EZ 8. Critics argue that offering only one incentive to reduce labor costs and several that would reduce the cost of machinery may undermine the effectiveness of this program in creating jobs.

4 pts. for each

IDB 9. Under ~~this primarily nonresidential~~ program, credit-rating is based on the developer and the project, ~~not on the community~~.

TIF 10. This state-level program encourages redevelopment in areas that are either blighted, in need of conservation work, or suitable for industrial sites.

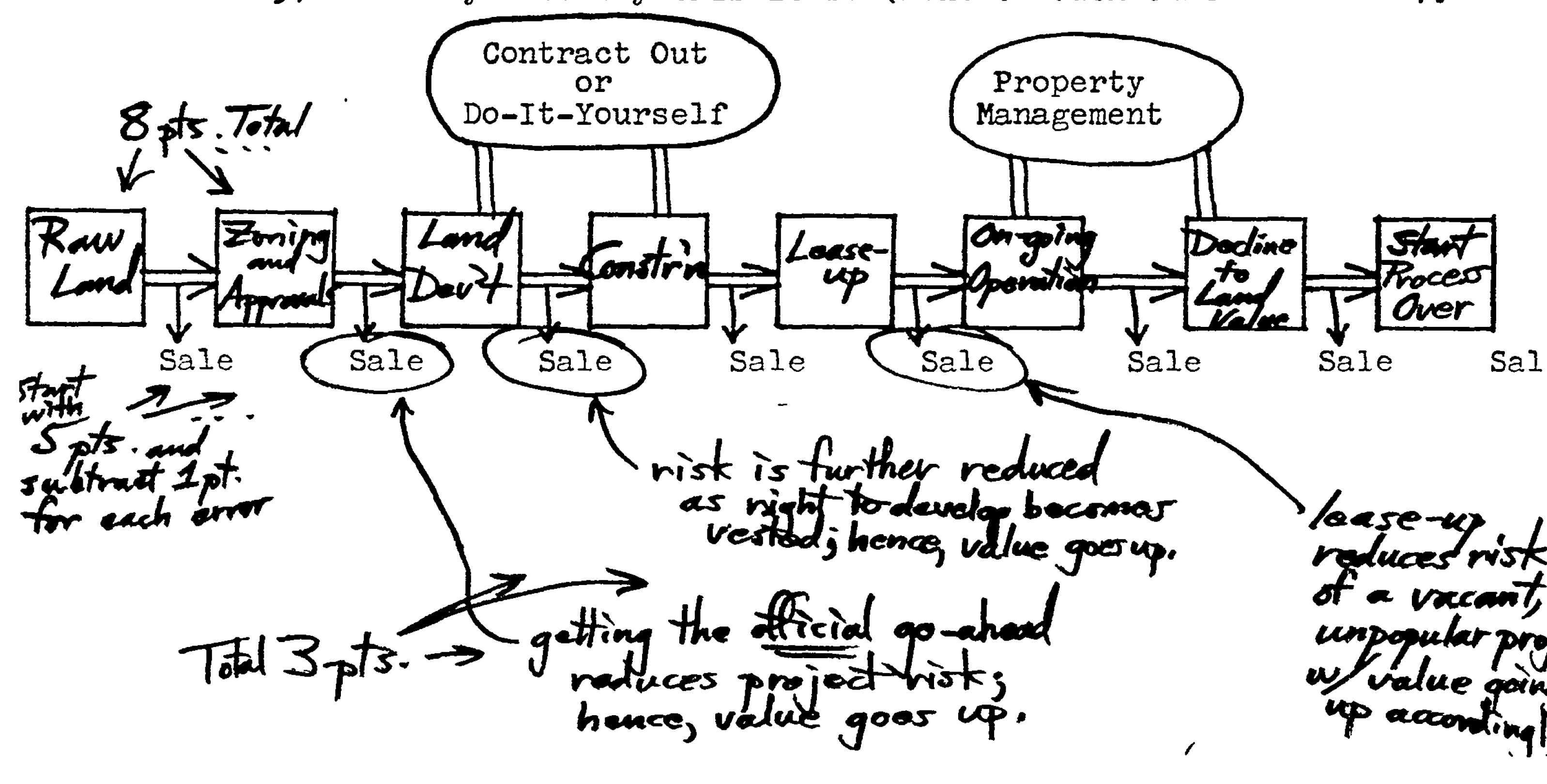
(24) III. THE FINANCIAL RATIO & CASH FLOW STATEMENT MATRIX: Indicate how the financial measure in each row changes in response to the following occurrences. Enter a (+) if it goes up, a (-) if it goes down, or (0) if it stays the same.

(+2 pts. if correct, -1 pt. if wrong, and 0 pts. if blank)

	a decrease in the vacancy rate	use accelerated deprec. instead of S-L	an increase in the mortgage loan interest r
Net Operating Income	+	0	0
Default Ratio	0	0	+
Cash Throwoff	+	0	—
Payback Period	—	—	+

(16) IV. THE REAL ESTATE DEVELOPMENT PROCESS: The directions for this section consist of three parts:

1) Fill-in each of the 8 boxes representing stages in the development process.
2) Circle the points at which selling the property is often highly profitable (as discussed in class).
3) Briefly note why this is so (next to each circled "sale").



(60) V. CASE STUDY QUESTIONS: This section consists of 3 subsections:

(18) A. Explain how new town developer James Rouse addressed the issue of public infrastructure creation and solvency at Columbia, MD by filling-in the following chart:

	Agency 1	Agency 2	Agency 3
Name of Agency	(Howard County Utility District)	(Howard County School District)	(Columbia Assoc. Recreational Utility)
Responsible for providing these services	utilities: • water • sewer • gas • electricity ? ...	schools (education)	• recreational facilities • public mass transit
Size of district served (e.g., village, county)	county	county	Columbia (town/city)
Capital funds were raised by...	tax-exempt bonds w/ Conn. Gen'l	• ← Same • Donations of land for school sites (by Rouse)	← Same
Revenues were generated by...	• property taxes and user fees	• property taxes	• (special) assessments (property taxes) (user fees) [redacted]

(12) B. The basic problem facing developers of new towns is that they must strike a balance between 3 major factors. Clearly identify each factor and discuss the trade-offs between each pair of factors by filling-in the following blanks:

Factor 1 is Need for cheap land (so that interest costs don't consume the developer).

Factor 2 is Need to be somewhat close to existing urban areas to attract residents (business)

Factor 3 is Need to have the urban infrastructure in place before the space consumers arrive

Trade-off between factors 1 and 2 is Closer to city, land prices are higher, but eas to attract consum

Trade-off between factors 1 and 3 is [redacted], land price higher [redacted] infrastructure in place (or near

Trade-off between factors 2 and 3 is Closer to city, less pressing need for infrastructure to be in place right away.

Alternatively:
1) Need to respect the environment.
2) Need to set up community such that local political participation is high.
3) Need to have all of the proper social software in place (e.g. HMOs, education)

↑ Up to 6 pts. (none for trade-offs 'cause only limited budget really results in any trade-offs)

C. Complete the following chart:

(30)

	Columbia, Maryland	One Magnificent Mile, Chicago	Water Tower Place, Chicago	Quincy Market, Boston, MA	Baltimore's Inner Harbor
The (or one of the) main developer(s) of the project (if a joint venture -- so indicate): 1 pt. each / 1 pt. each	• Howard Co. Dev't Co. or (James Rouse or & Conn. Gen'l) • Joint Venture	[redacted] • Levy Bros. Not a J.V. (?)	• Urban Investment Dev't Co. (Klutznick) or (Marshall Fields) • Joint Venture	• Rouse or • Ben Thompson Assoc. or • City of Boston Redev't Auth. • Joint Venture	• Rouse or • Hyatt (Regency) or • CC-IH, Inc. • Joint Venture
The most important linkage attribute contributing to the success of the project: 2 pts. each	• located in growing transportation corridor between Baltimore and Wash., D.C.	• location on Michigan Ave. (in high-inc. multi-use area)	← same	• proximity to downtown or • proximity to waterfront rehab district	• between CBD & water rec. resources
The optimal land use concept illustrated by the case study (e.g., HBU, MFU, MPU): 1 pt. each Briefly justify your answer for each case study. 1 pt. each	MFU or MPU (depending on	HBU (max. profits)	HBU (max. profits or lack of urban amenities to some critics)	MFU or MPU (depending on justification)	MFU or MPU (depending on justification)

THE REAL ESTATE PROCESS
Business 550/705

FINAL EXAM

Summer Session 1986 (150 Points)
Instructor: Dan Guenther

Name KEY

(6) I. MULTIPLE-CHOICE QUESTIONS: Write the letter corresponding to the one best answer in the blank to the left of each question.

c 1. Traditionally, public regulation of land use has been dealt with at the _______________ level of government.

a) federal
b) state
c) local
d) regional

c 2. Indirect (versus direct) regulation of land use occurs through all but which one of the following:

a) public works
b) general property tax assessment
c) zoning
d) building code enforcement

d 3. This procedure for measuring the return on equity involves compounding all cash flows to equity investors forward to a terminal date at a specified reinvestment rate and then finding the compound interest rate that equates the terminal value and the initial equity investment.

a) overall discount rate
b) internal rate of return
c) financial management rate of return
d) modified internal rate of return

d 4. Under present Wisconsin statutes, the state may enforce regulations for which one of the following when counties have no laws which meet the state's minimum standards:

a) shoreland zoning
b) floodplain zoning
c) subdivision regulations
d) all of the above

d 5. Which one of the following is not a direct or indirect control used by state and federal governments in regulating land use and real estate decisions?

a) tax subsidy of particular land uses
b) regulation of the property owner
c) regulation of financial institutions
d) all of the above are direct or indirect controls

e 6. According to Gallion & Eisner, which of the following have been used to circumvent zoning provisions?

(a) spot zoning.
(b) variance.
(c) conditional use permit.
(d) "b" and "c".
(e) all of the above.

d 7. Which of the following statements is <u>not</u> true regarding the Breckenridge Development Code?

a) In some neighborhoods, Victorian design must be used for all new development and redevelopment.
b) There are no uses-by-right and virtually no prohibited uses.
c) Performance better than the minimum of zero required by the code on all the relative policies taken together is rewarded with an increase in density.
d) Points are awarded for the construction of fireplaces in residential units.

b 8. Changing the zoning of a section of town from commercial uses to residential uses is an example of:

(a) upzoning.
(b) downzoning.
(c) neither.

F 9. When the federal government of the U.S. was formed, the "police power" was placed in the hands of the federal government which in turn delegated such authority to the states.

(T) true
(F) false

T 10. The use of the "police power" is no longer confined to the public health, safety, and general welfare but has been extended to embrace such matters as "public convenience and comfort."

(T) true
(F) false

d 11. The major difference between the "police power" and the "right of eminent domain" concerns:

(a) which level of government enacts the regulation.
(b) the applicability of "due process".
(c) the geographical area in which the right or power can be used.
(d) the matter of compensation to the landowner.

d 12. Which of the following is <u>not</u> a type of project acceptable to HUD under the Urban Development Action Grant program?

a) middle-income housing
b) downtown shopping malls
c) downtown hotels
d) all of the above are acceptable to HUD

b 13. Professor Graaskamp presents the real estate process as the constant interaction of three major groups and their subgroups. Each of these conceptual groups and subgroups consist of real-world enterprises. The critical common concern of all these conflicting enterprises is ______________________.

a) increasing their span of control
b) cash solvency
c) profit maximization
d) using other people's money

c 14. How much did it cost in fiscal 1985 to subsidize just the existing stock of public housing?

(a) around $30 million
(b) around $300 million
(c) around $3 billion
(d) around $30 billion
(e) none of the above

e 15. Evidence of the continuing need for public housing for the elderly and the poor was shown by:

(a) an average wait of 16 months by the elderly for a public housing unit.
(b) an average wait of 18 months by the nonelderly for a 2-BR public housing unit.
(c) the observation that 59% of local (public) housing authorities reported a vacancy rate of 3% or less.
(d) "a" and "c".
(e) all of the above.

d 16. The "polarization of housing quality" that occurs in response to restrictions on the housing supply in the face of increasing demand for housing refers to:

a) housing quality in the northern states running down while housing quality in the southern states improves.
b) the quality of apartments improving while the quality of detached, single-family residences declines.
c) higher-income space consumers suffering since no new housing is being built while low-income space consumers enjoy low rents
d) higher-income space consumers maintaining and improving their houses as values increase while lower-income space consumers strain to pay rents while letting their houses run down.

f 17. Court decisions generally support zoning as a proper use of the police power as long as:

(a) it's reasonable and not arbitrary.
(b) it's applied consistently to similar properties in similar situations.
(c) it doesn't discriminate against minorities.
(d) it is in harmony with the objectives of the community's master plan.
(e) all except "a".
(f) all of the above.

c 18. According to the article with the similar title, "the hidden factor in land use regulation" is:

(a) groundwater pollution.
(b) corruption.
(c) ownership.
(d) lienholders' rights.

d 19. ______________________________ are thought to be a way to shift economic pressure by giving the owner of a golf course or a historical landmark some of the residual land value created by allowing more intense development at another site.

a) enterprise zones
b) tax incremental financing programs
c) Urban Development Action Grants
d) transferable development rights

c 20. In the article "Applying Real Estate Financial Analysis to Planning and Development Control," author David Dowall discusses four distinct areas where real estate expertise can help. Which one of the following was not discussed?

a) Designing incentive programs that promote the provision of public amenities.
b) Evaluating requests for a relaxation in regulations or for financial assistance.
c) Designing social service delivery programs.
d) Creating public/private partnerships.

b 21. According to Christine Boyer, the underlying intent behind the 1916 zoning ordinance in New York was:

(a) separation of ethnic groups.
(b) protection of investments in commercial & residential property.
(c) increase the density of development in midtown Manhattan and in the financial district of lower Manhattan.
(d) separation of high-income apartments from office buildings.
(e) none of the above.

a 22. Which of the following is not one of the broad decision areas for land use policy at the state and federal level?

(a) recreational land
(b) natural resources
(c) urban land & the urbanization process
(d) agricultural land & rural communities

g 23. Retailers' criteria for desirable sites in central city locations include:

(a) frontage on busy streets.
(b) near existing retail concentrations.
(c) gentrified neighborhoods for higher-end chains.
(d) "a" and "b".
(e) "a" and "c".
(f) "b" and "c".
(g) all of the above.

1) II. MATCHING ATTRIBUTES: Write the abbreviation of the program corresponding to the attribute description in the blank to the left of the attribute description.

EZ = enterprise zones
TIF = tax incremental financing
MRB = mortgage revenue bonds
UDAG = Urban Development Action Grant
IDB = industrial development bonds
HoDAG = Housing Development Action Grant

IRB 1. Issued by state and local units of government to promote multi-family rental housing construction by providing low-cost funds

IF 2. Under this program the state's Department of Revenue must certify the base value of the district prior to construction of new faciliti

AG 3. This program requires minimum leverage of $2.50 in private funds for every $1.00 of program funds.

DAG 4. This program transfers funds from the federal government to the local government to be used to financially assist developers of multi-family housing projects.

Z 5. The focus of this program is tax relief, cutting red tape, etc.; it would offer significant reductions in corporate, property, and social security taxes for participating firms.

DAG 6. This program is frequently utilized to assist hotel construction in downtown areas due to the large number of jobs created for unskilled workers.

DAG 7. The comparative degree of physical and economic distress among applicant communities is a major selection factor in this program.

Z 8. Critics argue that offering only one incentive to reduce labor costs and several that would reduce the cost of machinery may undermine the effectiveness of this program in creating jobs.

DB 9. Under this primarily nonresidential program, credit-rating is based on the developer and the project, not on the community.

IF 10. This state-level program encourages redevelopment in areas that are either blighted, in need of conservation work, or suitable for industrial sites.

DAG 11. Under this program a one-time subsidy of up to 50% of project costs can be provided to the developer of multi-family housing.

IF 12. Critics argue that this program is abused regarding the types of projects constructed and that the benefits to the community vary from one part of the state to another.

13. Under this program at least 20% of the units have to be set aside for occupancy by low-income families for 10 years or half the life of the mortgage, whichever is greater.

1) III. FILL-IN-THE-BLANK / SHORT-ANSWER QUESTIONS:

3 1. The "real estate process" is defined as the dynamic (on-going) interaction of 3 major groups -- the space cons'r grp., the space prod'r grp., & the public interest grp. -- regarding the prod'n, ownership, & use of real estate.

2. Two reasons why office space users are moving to Chicago's west side near the Loop (other than proximity to the Loop) are:

2 (a) lower rents and

(b) near transp'n system/stations.

3. Two reasons why residential space users are moving to Chicago's west side near the Loop are:

2 (a) close to work and

(b) " " cultural excitement in downtown Chicago.

4. Two reasons why the residential movement to downtown Chicago may soon slowdown are:

2 (a) when kids arrive, many will move out to suburbs and

(b) there are only so many likely candidates (to move downtown).

5. According to Kirschbraun & Denitz, the two stages of residential revitalization in central cities that have been observed recently are

2 (a) young families/singles "back to" the city and

(b) existing " " / " remaining in " ".

6. The greatest difficulty that shopping center developers face in urban neighborhoods is

1 site assemblage at an affordable cost.

7. The four basic goals of the Charles Center-Inner Harbor master plan (drawn up in 1964 as the Charles Center mixed-use project was nearing completion) were:

(a) redoing the Municipal Center;

(b) new office bldg. constr'n in area;

(c) " residential " " "; and

(d) recreational playground (IH as a 5)

+

8. Three distinct ways in which the "Swiss Cheese Strategy" covered up Rouse's role in the land acquisition process for Columbia, MD were

3

(a) use of dummy corporations, lawyers, et al.

(b) went after large, key parcels ; and

(c) kept almost everyone in the dark .

9. The purpose of Rouse's "Enterprise Foundation" is to

3

(better & more)
promote low-income housing

while the purpose of its subsidiary, the "Enterprise Development Company" is to

to earn a profit from dev't that can go toward

and the purpose of the Enterprise Social Investment Corporation is to

raise funds for (low cost loans) .

10. Two of Richmond, CA's weaknesses were:

1

(a) poor image; lack of jobs? and

(b) lack of middle & upper-income residents .

11. Two of Richmond, CA's strengths were:

2

(a) industry weighed heavily in the tax base and

(b) views of S.F. & S.P. Bays (etc.) .

good linkages;

12. The three components of Richmond, CA's subsequent economic development strategy were:

3

(a) try to get several gov't & private sector firms to locate there

(b) balanced hsg. supply via attracting ; and

(c) improve the waterfront (?) .

I. Complete the following chart:

(24)

	Columbia, Maryland	Water Tower Place, Chicago	Quincy Market, Boston, MA	Baltimore's Inner Harbor
One of the most important dynamic attributes of the project:	• Social System (examples) • Envir'l Quality • Recreational Facilities • Other	• Excitement of interior atrium • Controlled exterior	• Festival Atmosphere • Historical Flavor	• Waterfront Ambiance •
The most important linkage attribute contributing to the success of the project:	• Highways linking Columbia to Baltimore and to Wash. D.C.	• Frontage (location) on N. Michigan Avenue (or proximity to consumers)	• Downtown location (near	• Close to downtown (hub of city)
The optimal land use concept illustrated by the case study (e.g., HBU, MFU, MPU): **and** Briefly justify your answer for each case study.	MFU/MPU Why?	HBU Why?	MFU/MPU Why?	MFU/MPU Why?

(12) V. ESSAY QUESTION:

In a brief, yet thoughtful essay, discuss and defend what <u>you</u> feel is the proper role of ethics in land use decision-making by real estate developers.

* Proper Role: ~~
(6 pts.)

* Why? ~~
(6 pts.)

Lecture #1

Urban Land 550

I. Introduction

A. Format of the course

1. Heavy reading
2. Field application to an investment case
3. Exams plus 3 problem sheets
4. 5 credits worth of work

B. Introduce teaching assistants

1. Don Weiss - administrator - Rm 91 Bascom
2. Lynn Woodward
3. Mike Robbins

C. Textbook and materials available from Rm 91

D. Real Estate Club program, book bargains, and constructive criticism

II. This fall marks a redefinition and restructuring of the course from previous periods. The real estate business is evolving so fast, this represents the third time since 1962 I have thought it desirable to shift concepts and emphasis of the course. Thus the readings and lectures will be substantially different in form and content from precious semesters and we will value the student critiques which you can provide at the end of the semester.

A. Speaking style is fast so we will try to provide a brief lecture outline each day to structure your lecture notes. We will try to use slides and overhead transparencies to emphasize major points or provide examples.

B. Many of you are not business students and will have some trouble with present value concepts and cash flow. Don't hesitate to ask one of the T.A.'s or myself for assistance because you will have to learn it to survive the course.

C. We must insist that you attend your regular assigned quiz section rather than one that is more convenient to keep class sizes in balance so you can ask questions and we conform to the T.A. contract.

III. Traditionally real estate and urban land economics have treated land as a commodity and value as the central issue. In essence highest and best use of any particular piece of ground was that use which was legal, technically feasible, in demand and produced the highest present value of future benefits measured in dollars.

A. The theory began as an economic concept to allocate land use ala Marshall.

1. Such a premise depends on the assumption that one can measure all costs and benefits, external as well as internal, and convert to a dollar figure.

2. Such a premise assumes land to be a commodity and that rational objectives are always to maximize present worth.

3. Such a premise assumes perfect competition, a knowledgeable market, and sufficient liquidity that capital can move in and out in response to marginal demand and level of profitability.

4. Such a premise implicitly assumes that what is good for one parcel is collectively desirable in the aggregate. Highest and best is pompous.

B. The viewpoint of this lecture is somewhat at odds with this simplistic approach even tho this traditional approach will be represented by your textbook.

1. The issues we hope to present and discuss as a premise of urban land economics and real estate are those of the instructor and may at times be a little abstract or complex.

2. Those who advance highest and best use theory or are unhappy with the complexities of a systems approach such as we will advance might consider Pat Moynihan relative to housing policy: "... we have never learned to be sufficiently thoughtful about the tasks of running a complex society... the essence of tyranny is the denial of complexity. It is the great corrupter and must be resisted with purpose and with energy...What we need are great complexifiers..."

IV. Absolutely basic to the theme and organization of this course are a number of definitions of distinctions in terminology. It's necessary to distinguish real estate from the real estate process. Moreover, the business of real estate is only one segment of the system of factors which comprise the real estate process.

A. Real estate is artifically differentiated space over time with a fixed reference point to earth. Somebody invented real estate by rolling a rock in front of a cave to provide the natural void with an artificial attribute of warmth, privacy, defensibility or exclusiveness. The space delineated was intended to house some activity, domestic or whatever.

1. Caves may seem far-fetched but if a lifetime of man is 60 years the history of man is accounted for by 800 lifetimes. Of that, man lived in caves for 600 lifetimes and thus the cave analogy explains 75% of real estate!

2. The utility of the cave--the economic good was its space for housing an activity and not the physical elements of the cave wall or the rock. All our improvements from survey monument to skyscraper, from condominium plat to a skylab hovering over a single point, are simply means of delineating space over time for a purpose.

3. Obviously, for the cave to have value, it depends on where it is and what activity is to be housed. These issues are derived from the cultural area.

B. Since the cave as a natural void apparently did not suit the cultural needs some improvements and services were required to smooth the interfacing of people and the land. Thus we have three elements to the real estate process, the cultural preferences, physical land resources, and the management of capital and services to reduce the harsh irritations of adapting culture to land.

C. The real estate business is essentially a service industry which utilizes some very dramatic and large scale pieces of hardware. It is concerned with the improvement, management, marketing, financing, of space-time at a given location to house any manner of activity.

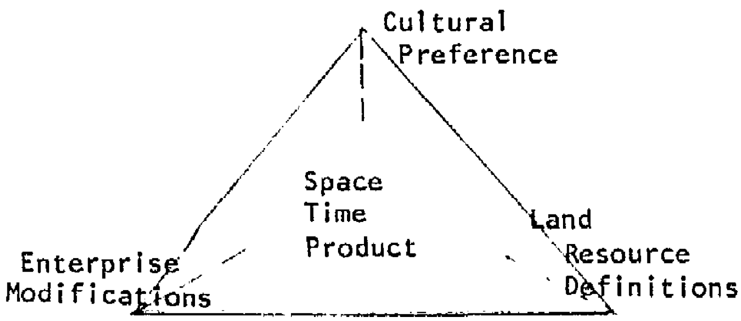
1. While a business school should be primarily concerned with the business of a real estate enterprise, it is first necessary to understand the context in which that enterprise functions.

2. To judge the success of an artistic effort, one must first define those elements which could not be changed by the artist, the form giver. In making a pot to boil water over a fire, one must take into account the nature of clay as a material, its weight, elasticity, coefficient of expansion reaction to a flame as well as the purpose for boiling the water and the users needs to lift the pot, pour the water, conserve fuel, etc. It is then possible to compare a given pot and see how well it fits the context. Only in fitting the ensemble of form and context can one understand the success achieved by the potter.

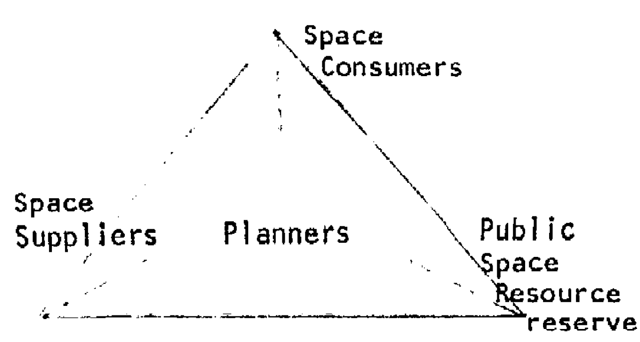
3. In the same way the real estate enterprise is responding to the limitations imposed by the land, the cultural preference, and its own inherent limitations in terms of money, talent, and objectives.

4. For example, how does one supply housing to the low income family at a place they need to live at a price that they can afford while observing the ecological limitations of the land and the solvency of the enterprise providing housing services?

5. This three cornered system could also be abstracted in economic terms to a space user, base supplier and public reserve of space resources. The wouldbe planner is caught in the middle as an arbitrator of these three differing viewpoints:



Context of Real Estate Process



Real Estate Decision Makers

D. The three elements of the real estate process can be further subdivided into additional subsets of factors which all define the context to which the real estate enterprise must adapt, must fit. The real estate business fails when a substantial misfit or irritant remains and succeeds to the degree that it has adapted to each subset of factors in the context. For example, cultural preferences and land resources might be further reduced to subsets of influences or forces shaping the real estate enterprise.

1. Cultural consensus on values and objectives operates through:

   a. Institutions
   b. Government
   c. Peer group

2. Individual consumer behavior operates through the marketplace - our cheapest regulation machinery, subject to:

   a. Rational limitations and objectives
   b. Irrational limitations and objectives

E. Definition of the land resource will require an examination of its:

1. Physical static attributes
2. Organic ecological attributes
3. Legal attributes
4. Dynamic social atrributes

F. The interfacing of cultural preferences and the resource called land is brought about by some form of enterprise.

1. The systems engineer sees the eventual form of an enterprise, in terms of both its configuration and behavior, as representing a negotiated consensus between two general sources of power - the power of the environment to dictate form and behavior of the organization on the one hand and the power of the organization to decide for itself what its characteristics and behavior will be on the other.

2. All the subsets of factors must eventually be reconciled into a project, a synthesis of subsets, and this configuration or behavior is finally reduced to a flow of cash outlays and receipts over time. Just to survive the cash flows must balance, that is the enterprise must be solvent and that is the basic determinant for both and private enterprises. <u>Thus public and private solvency is the central issue in urban land economics and not value</u>.

3. As a result this course will be somewhat schizophrenic - the textbook will pursue the traditional party line while the supplementary readings will emphasize my viewpoint of cash flow.

4. We will begin teaching cash flow early in the course to put across the basic concept in terms of the dynamic interraction of various financial components, assumptions, and measures of yield and risk for any enterprise. Then we will begin to examine the current issues within our culture and inherent in land resource attributes as they would affect cash flow and ultimately cash solvency of the consumer, the supplier, and the society. Government policy in social reforms depend on the finesse with which cash flow can be manipulated to avoid the inexorable logic of cash solvency and survival in a free market.

V. Any organized undertaking is an enterprise. Some enterprises involve cash expenditures and receipts. The classic cash cycle is a manufacturing firm which goes cash-raw material-goods in process-finished inventory-accounts receivable-cash.

A. Enterprise management does not require any particular theory of capital, scale, nor cash to be appropriate. Indeed the majority of enterprises may not involve cash at all.

B. The traditional functions of management imply a sequence of planning, organizing, directing, and controlling - but this is somewhat circular as it defines management as doing management tasks.

C. More recently John Beckett in a little book called Management Dynamics: The New Synthesis (McGraw Hill 1971) indicated the element of functions in a systems approach of any organization or undertaking might be described as:

1. Goal-setting
2. Forming policies
3. Searching for opportunities which are consistent with policies
4. Selecting opportunities which are consistent with policies
5. Designing systems for capturing selected opportunities
6. Installing systems for capturing selected opportunities
7. Operating the systems that have been installed
8. Maintaining and continuously prefecting the operating systems

D. The list above suggests a flow of events, the presence of feedback, and expresses very clearly the need to convert value judgments in the form of goals to policies or standards or criteria with which to screen alternatives and select courses of action.

1. One function of the course would be to identify various subsystems in the real estate process such as finance, marketing, development, regulatory.

2. Secondly we want to suggest some of the values, objectives, and criteria by which these systems select and pursue their opportunities.

3. During the semester we wish to trace the feedback occuring between the various subsystems and the larger categories of land, culture, and enterprise.

E. If it sounds complex, it is. However, I know no other area of business enterprise which has more high drama, more opportunity for the generalist and universal curiosity, and more opportunity for impact than real estate. The real estate process sooner or later represents the final battle ground of all the conflicting virtues and weaknesses of our society.

1. We are an urban society which will perish unless we solve our urban problems.

2. Even if you are not intending to be in real estate, we hope to make you a knowledgeable critic of the ensemble of real estate forms and context so as consumers and voters you can encourage the successful and avoid the charlatans without being so paranoid about real estate you can't tell your true friends from your enemies.

THE REAL ESTATE PROCESS
Business 550/705

ADMINISTRATIVE GUIDELINES

OFFICE HOURS

- Feel free to consult any of the Bus 550/705 teaching assistants _during_ their posted office hours.
- Please arrive at the T.A.'s Office well-prepared (i.e., with all relevant class notes, worksheets, etc. and after having carefully read _all_ assigned readings to date).
- Students who arrive in person at the office will be given priority over students calling by telephone.
- If other students are waiting to see the T.A. after you, please limit your time with the T.A. to ten minutes. If additional time is necessary, arrange an appointment with the T.A. outside of office hours.
- Phone calls to the teaching assistants outside of office hours should be for administrative purposes only (e.g., "I'm in the hospital recuperating. Can I arrange to take a make-up exam?") and _not_ for consultation purposes.

ATTENDANCE

- Prompt and regular attendance of all lectures and discussion section sessions is an essential part of this course.
- If you miss a lecture, try to get a copy of a classmate's notes and promptly stop by the T.A.'s Office during office hours and pick up a copy of any lecture handouts for the missed day (the T.A.s do _not_ bring past handouts to subsequent lectures). In any case, lecture notes are a poor substitute for attendance. Professor Graaskamp's lectures are full of thought-provoking illustrations of the concepts presented in the course -- such examples rarely show up in detail in your classmates' notes.
- If some week you can't attend your regular discussion section, attend one of the other four discussion sections that week.

GRADING

- Grading will usually focus on the "4 C's" (clarity, conciseness, completeness, and correctness) and at times will be very detailed. Superficial knowledge or awareness will be given little, if any, credit in this course. Students should strive for (and be able to express in written essay form) a thorough understanding of _all_ material presented in the course -- including all assigned readings.
- All relevant supporting calculations necessary to arrive at a correct solution _manually_ must be shown in clear, step-by-step form -- with all equations, variables, input values, and parameters being clearly-labeled and well-organized -- regardless of whether or not a calculator or computer was used to facilitate the analysis.

GRADING (Continued)

- While you are encouraged to work with your classmates when necessary to figure out how to solve a problem set, the write-up of the solution to each part of each problem set should be entirely your own work and in your own words. When "discuss/explain" answers appear to be substantially the same (i.e., exactly the same or virtually the same except for superficial re-wording), all of the similar papers will be subject to a severe penalty (i.e., will lose most of the possible points on that section) proportional to the number of similar papers. Who wrote the answer originally will be irrelevant.

- Any cheating on an exam will result in an "F" for the course and the instigation of formal procedures for the expulsion of the student from the University (pursuant to University policy).

PROBLEM SETS

- Read "GRADING" section first.

- Preparation for solving the problem sets includes reading all of the assigned readings to date -- so don't fall behind.

- Always try to work through the problem set before the next discussion section session so that you can ask questions in class and/or benefit from the questions asked in class by others.

- If stumped by part of a problem set, see a T.A. during office hours as soon as possible -- don't put offsolving the problem set.

- Problem sets will be due by the beginning of lecture (11 AM) on the days indicated in the syllabus (unless due date is changed by the T.A.s). A large box will be provided near the entrance to the lecture hall in which to deposit your problem set. The box will be removed promptly at the beginning of the lecture and all papers turned in subsequently will be considered late.

- Penalties for late papers will be

  0 to 24 hours late .... lose 10 points
  24 to 48 hours late .... lose 20 points
  More than 48 hours late .... lose all points.

- Problem sets can be turned in early to a Bus 550/705 T.A. during office hours, at discussion section sessions, or at the 550/705 lectures.

- Do not turn in problem sets by putting them in the T.A.'s mailbox or by sliding them under the T.A.'s Office door (such papers are occasionally lost and, hence, no responsibility for them will be accepted by the T.A.s).

EXAMS

- Read "GRADING" section first.

- Please arrive at least five minutes early and sit in front-to-back rows with no one next to you. All study materials should be completely out-of-sight upon the proctor's request. Do not write anything on anything until instructed to do so by the proctor. And do not talk once the exams begin to be distributed. Thank you for your cooperation.

Lecture #1
INTRODUCTION TO THE REAL ESTATE PROCESS

Definitions:

Real estate -- space delineated by man, relative to a fixed geography, intended to house an activity for a specific period of time.

The real estate process -- the dynamic interaction of three major groups -- space consumers, space producers, and the public infrastructure group -- regarding the production, ownership, and use of real estate.

Space consumer group -- consists of all entities which use (or consume) real estate. Three subgroups can be identified:

Individual space users -- attempt to rent or buy real estate to house their specific needs.

Collective space consumers -- generally pursue their interests in real estate activity through the political systems which regulate land use and space production.

Future space consumers -- are typically represented by proxy, either by developers who anticipate the need to change the use of a building in the future or by the judiciary or special interest groups who perceive some trusteeship of the land for future generations.

Space production group -- includes all forms of expertise necessary to convert from space-time requirements to money-time (e.g., developer, lender, general contractor).

Public infrastructure group -- includes all enterprises that provide a network of tangible and intangible off-site systems for the benefit of individual space users. (Examples include: street, water, and sewer systems; school system; and judicial system.)

Highest & best use (HBU) -- that use which would maximize the owner's wealth (i.e., the use which is the most profitable over a specific period of time -- taking risk and the time value of money into account).

Most fitting use -- is that use which is the optimal reconciliation of effective consumer demand, the cost of space productio the cost of providing public infrastructure services, and the fiscal and environmental impact on third parties

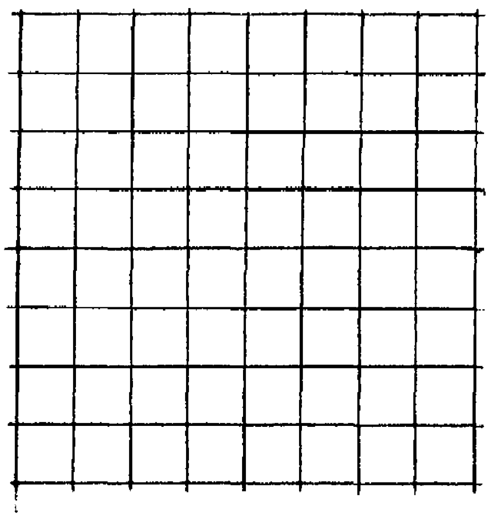
Most probable use -- is that alternative course of action which is closest to being the most fitting use while recognizing the strong constraints imposed by current political factors, the state of real estate technology, the personalities and talents responsible, the money market, and short-term solvency pressures on space consumers, space producers, and the public infrastructure.

Categories of site attributes:
(1) Physical (static) attributes
(2) Legal-political attributes
(3) Linkage attributes
(4) Dynamic (perceptual) attributes
(5) Environmental attributes

Disc. Sn. #2: Legal Descriptions / Recording of Data / Land Use Controls

I. Legal Description of Real Estate

A. Government Survey System



Meridian

Parallel

Principal Meridian

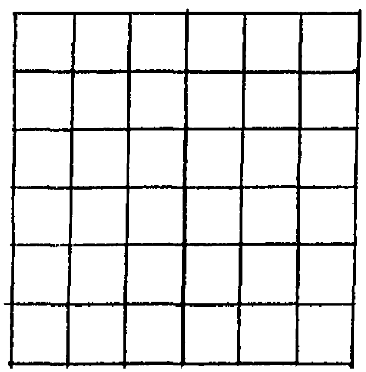
Base Line

Tier

Range

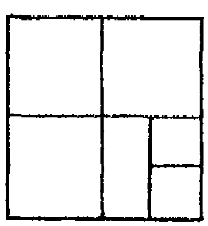
Township
- size
- numbering

Township Tier __________, Range __________



Section
- size
- numbering

Section ___ of Township Tier ____________,
Range ___________



Fractional Parts
- description
- size

B. Metes & Bounds

- how it works:

- wrt rural land:

- wrt urban land:

C. Plats

- how created:

- how used:

D. Street Address

- OK to use for:

- problems with:

E. Reference to Outside Facts

- valid only if:

II. Recording of Data

A. Register of Deeds

B. Constructive Notice

C. Actual Notice

III. Land Use Controls

- intent:

- how used:

A. Private Sector

1. Restrictive Covenant

- created by:

- must be recorded
- renewal in WI:

- common restrictions:

2. Easement

- definition:

- how used:

B. Public Sector

1. Zoning

- concept:

- evolution:

- wrt terminology:

2. Subdivision Regulations

- when apply:

- intent:

- extra-territorial:

- requirements:

3. Official Map

- shows:

- guarantees:

4. Safety Codes

- intent:

- periodic inspections:

5. Highway Access Restrictions

- access:

6. Shoreland Zoning

- intent:

- provisions:

7. Floodplain Zoning

- intent:

- DNR:

8. Interstate Sales of Subdivided Land

- when apply:

- intent:

- requirements:

THE REAL ESTATE PROCESS 550 and 705

Lecture #1 Outline

2/26/76

I. & II. Introductory Comments

III. Traditional viewpoint - Land is a commodity and value the basic allocation device.

A. Highest and best use of a real estate interest is that use which is legal, feasible, in demand, and produces the highest present value of future benefits in dollars over a specific time.

B. This course sees land as a public utility resource, cultural values determining what's "best", and the real estate business has the enterprise of fitting money to the context of land and culture as an interfacing catalyst.

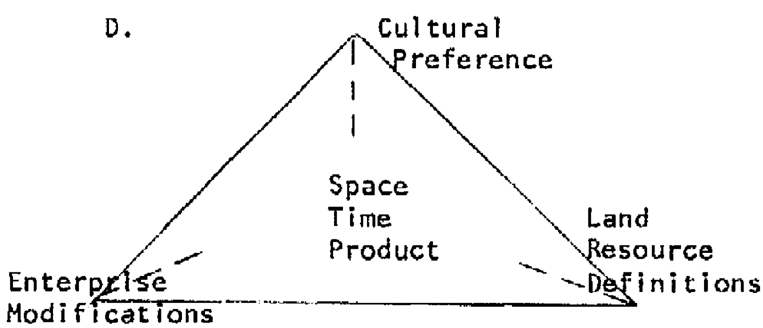
IV. Some basic definitions

A. Real estate is artificially differentiated space over time with a fixed reference point to earth.

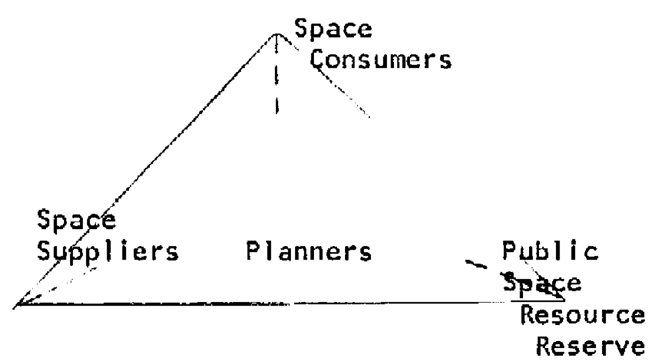
B. The real estate process is the interfacing of cultural preferences, physical land resources, and enterprise management of capital and services.

C. Real estate enterprise is concerned with the production, management, marketing, and financing of space-time to house any activity. It is essentially a service industry.

D.



Context of Real Estate Process



Real Estate Decision Makers

E. Cultural consensus on values and objectives operates through:
1. Institutions
2. Government
3. Peer group
4. Consumer behavior in market place

F. Definition of land resource must include:
   1. Physical static attributes
   2. Organic ecological attributes
   3. Legal attributes
   4. Dynamic social attributes

G. Interfacing of cultural references and land resources is brought about by some form of enterprise. An enterprise is any organized undertaking.

   1. The systems engineer sees the eventual form of an enterprise, in terms of both its configuration and behavior, as representing a negotiated consensus between two general sources of power - the power of the environment to dictate form and behavior of the organization on the one hand, and the power of the organization to decide for itself what its characteristics and behavior will be on the other.

   2. Real estate enterprise is a cash cycle enterprise. A real estate project is a synthesis of attribute subsets converted from space-time to money-over-time. Cash flows must balance. Thus, public and private solvency of an enterprise is the central issue in urban land economics, and not value.

V. The systems approach to any level of organization or enterprise may be described as requiring the following functions:

   1. Goal-setting (value judgments)
   2. Forming policies (standards)
   3. Searching for opportunities which are consistent with policies
   4. Selecting opportunities which are consistent with policies
   5. Designing <u>systems</u> for capturing selected opportunities
   6. Installing <u>systems</u> for capturing selected opportunities
   7. Operating the <u>systems</u> that have been installed
   8. Maintaining and continuously perfecting the operating <u>systems</u>

The Real Estate Process - 550 & 705
Lecture Outline #1

I. Traditional real estate and land economics has always treated land as a commodity and value as a central issue. That's what your textbook says. IN essence highest and best use of any particular parcel of ground was that use which would maximize the owner's wealth in a specified period of time, i.e., the highest present value of a stream of future benefits measured in dollars.

   A. The theory had its economic roots in Marshallian economics as a method to allocate uses to the land. Presumably those who could pay the most were those that anticipated the greatest producers surplus and society was served by maximizing economic surplus.

   B. Highest and best use replaced social history where there was a consensus of land use prevailing over long spans of time where culture, technology, and population was static. Development of new world lacked all of these conditions for social consensus on land use allocations.

   C. The concept of highest and best use, even when qualified as that use which is legal, technically possible, and in demand has some simplistic and questionable premise:

      1. Such a premise depends on the assumption that one can measure all costs and benefits, external as well as internal, and convert to a dollar figure.
      2. Such a premise assumes land to be a commodity and that rational objectives are always to maximize present worth.
      3. Such a premise assumes perfect competition, a knowledgeable market, and sufficient liquidity that capital can move in and out in response to marginal demand and level of profitability.
      4. Such a premise implicitly assumes that what is good for one parcel is collectively desirable in the aggregate.
      5. The semantics of highest and best is vague at the very least and arrogant in the extreme. But it is simple.

   D. This course will be built around a concept of most fitting use and most probable use.

      1. Before defining these terms some other basic definitions are required to suggest the complexity.
      2. Those who advance highest and best use theory or are unhappy with the complexities of a systems approach such as we will advance might consider Pat Moynihan relative to housing policy: "...we have never learned to be sufficiently thoughtful about the tasks of running a complex society... the essence of tyranny is the denial of complexity. It is the great corrupter and must be resisted with purpose and with energy... What we need are great complexifiers..."

II. Real estate is artificial delineated space with a fourth dimension in time referenced to a fixed piont on the face of the earth to enclose or house some activity. It is a space/time unit of enclosure.

   A. Real estate invented by rolling a rock in front of a cave to separate the natural void with an artificial attribute such as warmth, privacy, defensibility, or exclusiveness.

1. If the history of man is 1,000 lifetimes at 40 years each, then man lived in caves for 750 lifetimes and we have explained 75% of real estate.
2. The utility of the cave, the economic good was its space for housing and activity, not the solid elements of roof, walls, and ceiling. Indeed the technology of building has moved steadily toward reducing the weight and mass of our structures, at least until we have put a priority on holding passive energy.
3. Space/time units are defined as room per night, apartment per month, tennis court hours, square foot per year, cave per moon, or wilderness for coming generations.

B. Man made improvements represent an evolution of artifacts to reduce the irritations or misfits between man and the cave, between the form of any artificial solution andthe context in which it is to operate. Real estate is intended to interface individuals and their society to the limitations of the land.

C. Improvements from survey mark to city layouts to individual buildings defines space.

D. The law through legislation, contract, and precedent allocates and defines time, benefit, privileges and responsibilities of use.

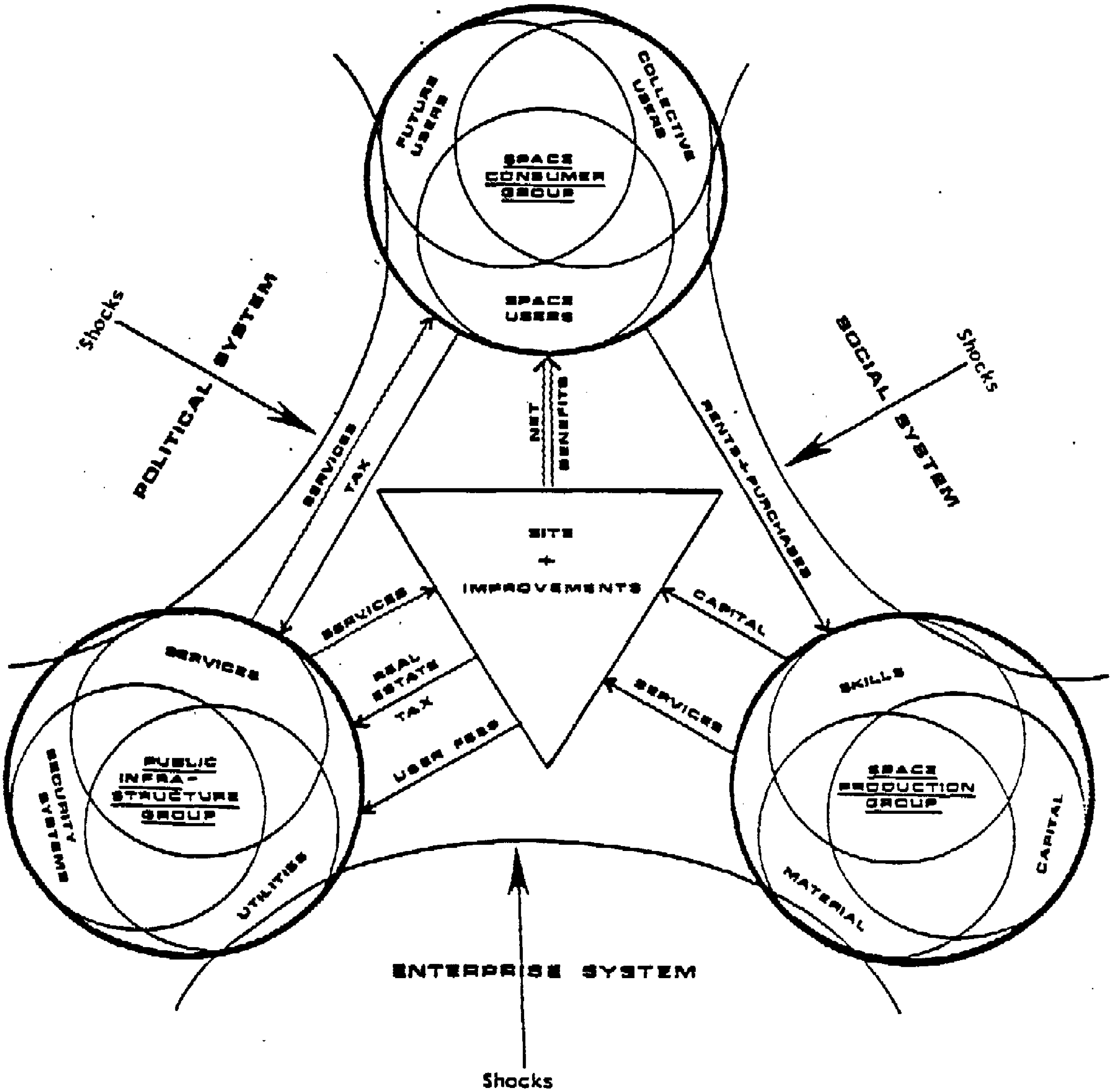
E. The law is a reflection of the political machinery by which society expresses its values, objectives and priorities including both a collective and individual preference for land use.

F. Private rights to use and benefit are those which remain after the public has exercised its rights to control through the police power, its share of benefits through the power to tax, and its priority over the private position through the power to condemn or expropriate.

G. A real estate project is cash cycle business enterprise which combines a space/time product with certain types of management services to meet the needs of a specific user. It is the process of converting space/time needs to money/time dimensions in a cash economy.

1. A real estate business is any business which provides expertise necessary to relate space/time need to money/time requirements and includes architects, brokers, city planners, mortgage bankers., and all other special skills.
2. The true profit centers in real estate are in the delivery of services and cash capital. Money is an energy transfer system.
3. Equity ownership is the degree to which one enterprise controls or diverts cash from another real estate enterprise.
4. Public has direct ownership to the degree real estate taxes take a percentage of tenant income in excess of service cost.

H. The real estate process is the dynamic interaction of three groups, space users (consumers), space producers, and the various public agencies (infrastructures) which provide services and capital to support the consumer needs. (See diagram)



THE REAL ESTATE PROCESS

1. Users are further subdivided among individual consumers operating in the marketplace, collective consumers operating through the political structure and collective institutions (like unions, churches, peer groups), and future users operating through a resource ethic and collective consensus.
2. Note that the space production group includes money, expertise, and material sources without specifying which is private, public, or joint venture in terms of ownership form. The real distinction is that the space production group is concerned with improvement placed on a specific site while the public infrastructure group is concerned with all the off-site improvements and services required.
3. Each of these decision groups and subgroups represent an enterprise, an organized undertaking. In a money economy all cash cycle enterprises are constrained by a need for cash solvency both short and long term, in order to survive.
4. A desirable real estate solution occurs when the process permits maximum satisfaction to the consumer at a price that he can afford within the environmental limits of land while permitting the consumer, producer, and the government cash cycle to achieve solvency - cash break even at a minimum, after full payment for services rendered.
5. Solvency of the total process, not value, is the critical issue.

I. Land is a physical surface, a bearing point for improvements, a locational point where demand and supply forces find solvency and access to business opportunity. Except as a mineral or for the sale of top soil, it is not generally a commodity but rather a point of access to control of economic events. It is not a profit center in itself but rather is desirable because those who control the land control a captive market for their services, their capital, and their opinion as to land use allocation.

III. The concept of highest and best use of land was a commodity concept which did not consider externalities adequately. It is being replaced by concepts of most fitting use and the concept of most probable use.

A. The most fitting use is that use which is the optimal reconciliation of effective consumer demand, the cost of production, and the fiscal and environmental impact on third parties. Reconciliation involves financial impact analysis on "who pays" and "who benefits."

B. The most probable use will be something less than the most fitting use depending on topical constraints imposed by current political factors, the state of real estate technology, and short term solvency pressures on consumer, producer, or public agency.

C. In seeking the most fitting and most probable use, the planner and private property appraiser must interact to determine how community objectives and consumer - production sector solvency can be achieved simultaneously.

1. A real estate decision has only two basic forms. Either a site is in search of a use and consumer with the ability to pay, or a consumer, need or use with a defined ability to pay is seeking some combination of space/time attributes he can afford.
2. The individual consumer with needs and a budget is the drive wheel

3. The public sector represents the collective consumer service delivery system, seeking to minimize marginal cost to the consumer and average cost to the community at large.
4. The production sector responds to a derivative demand for engineering and management expertise.

D. Critiquing the form and adequacy of a real estate solution is analogous to the artisitc concept of judging the success of an art object by relating form of the solution to the context to which it was created.

1. Context includes those elements which are fixed, given, or objectives and to which any solution must adapt.
2. From giving elements are those variables within the artists control, i.e, options or alternatives at a particular time.
3. A solution is judged for its correctness or success in terms of the degree of fit of the form proposed to the context.
4. Feasibility analysis is concerned with the degree of fit or the extent of misfit between a proposed course of action and the context within which it must operate or fit.
5. Success therefore depends on how appropriately the problem is defined; testing feasibility depends primarily upon accurate and comprehensive definition of the context.

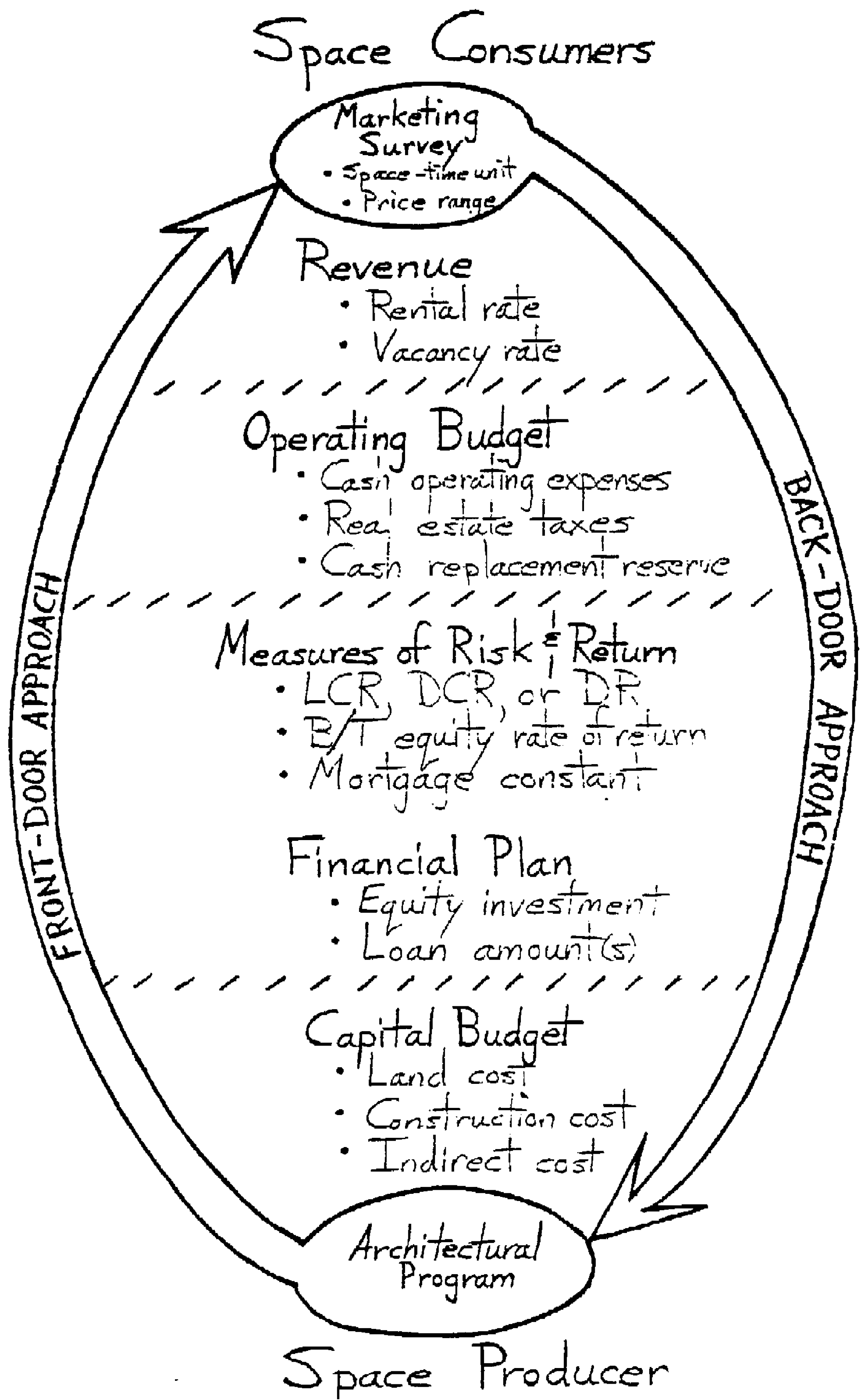
E. An enterprise is any organized undertaking, and a real estate problem or project always begins from the viewpoint of some enterprise relative to its environment.

1. The systems engineer sees the eventual form of an enterprise, in terms of both its configuration and behavior, as representing a negotiated consensus between two general sources of power--the power of the environment to dictate form and behavior of the organization on one hand and the power of the organization to decide for itself what its characteristics and behavior will be on the other.
2. The system engineer uses "power of the environment" as a dynamic alternative to the static implications of context and adds dynamic element of behavior to the elective responses of the form giver.

F. If the real estate process sounds complex, it is! Many times during the course it will be necessary to simplify, exaggerate, or arbitrarily ignore various factors for educational purposes. Nonetheless, it is a rich and valuable subject area:

1. There are few other areas of business enterprise which offer more high drama, more colorful actors, more opportunities for those with generalist curiosity and those of entrepreneurial risk taking ability.
2. Real estate skills have made American millionaires more often than any other enterprise but there is no area of enterprise more parochial, obsolete and in need of scientific management than real estate. Expertise is a competitive edge.
3. Real estate requires attention to repetitive, mundane, and often boring details but it is an area where the average individual can succeed through patience and persistence rather than brilliance.
4. The real estate process is the ultimate battle ground of all the conflicting virtues and weaknesses of our society. We hope to make you a knowledgeable critic of the ensemble of real estate forms and context so as consumers and voters you can encourage the successful and avoid the charlatans without being so paranoid about real estate you can't tell your true friends from your enemies.

550 + 705


Space Consumers
Marketing Survey
• Space-time unit
• Price range
Revenue
• Rental rate
• Vacancy rate
Operating Budget
• Cash operating expenses
• Real estate taxes
• Cash replacement reserve
Measures of Risk & Return
• LCR, DCR, or DR
• B/T equity rate of return
• Mortgage constant
Financial Plan
• Equity investment
• Loan amount(s)
Capital Budget
• Land cost
• Construction cost
• Indirect cost
Architectural Program
Space Producer
FRONT-DOOR APPROACH
BACK-DOOR APPROACH

Given Information

Site size: 8 acres at $50,000/acre
Building size: 100,000 gross sq. ft. @ $38/sq.ft.
Soft costs: 15% of construction budget
LCR: 80%; B/T equity ROR: 14%; Loan terms: 12%, 30 years, monthly py
Operating expenses: $3 per gross sq. ft. per year

LOAN TO COST RATIO APPROACH

Also given
Real estate taxes:
assume cost equals market value initially; equalization rate = .60; mill rate = $0.044
Cash replacement reserve = $20,000 per year
Vacancy rate: 5%
Building efficiency factor = .90

SITE ACQUISITION COST $400,000
+
CONSTRUCTION BUDGET $3,800,000
+
INDIRECT COST AND DEVELOPMENT FEES $570,000
=
TOTAL CAPITAL BUDGET $4,770,000

×

1 - LOAN TO COST RATIO .20
=
CASH EQUITY REQUIRED $954,000
×
REQUIRED PRE-TAX CASH DISTRIBUTION RATE 14%
=
CASH THROW OFF REQUIRED FOR EQUITY $133,560

LOAN TO COST RATIO .80
=
MORTGAGE LOAN $3,816,000
×
DEBT SERVICE CONSTANT .12343
=
CASH REQUIRED FOR MORTGAGE LENDER $471,009

▷ $604,569 ◁

▽

NET OPERATING INCOME
+
OPERATING EXPENSES $300,000
+
REAL ESTATE TAXES $125,928
+
CASH REPLACEMENTS $20,000
=
EFFECTIVE GROSS REVENUE $1,050,407 REQUIRED ▷ $1,050,407
+
VACANCY LOSS 5 % = $55,289
=
GROSS POTENTIAL REVENUE = $1,105,786
÷
NET LEASABLE UNITS = 90,000 sq. ft.
=
RENT REQUIRED PER UNIT = $12.29 per net sq. ft. ◁

Default ratio:

$$\frac{\$471{,}009 + \$300{,}000 + \$125{,}928}{\$1{,}105{,}786} = .81$$

Debt cover ratio:

$$\frac{\$604{,}569}{\$471{,}009} = 1.28$$

Given Information
Default ratio = .70
Market rent: $11 per net sq. ft.
Other info: same as before as far as is applicable

DEFAULT RATIO APPROACH

GROSS RENT POTENTIAL
$990,000

×

.30 1 – DEFAULT RATIO
=
$297,000 RISK VARIABLES AND EQUITY CASH
–
5 % $49,500 VACANCY LOSS
–
0 RISK RESERVE
=
$247,500 CASH AVAILABLE FOR INVESTORS
÷
14 % REQUIRED PRE-TAX CASH DISTRIBUTION RATE
=
$1,767,857 JUSTIFIED CASH EQUITY INVESTMENTS

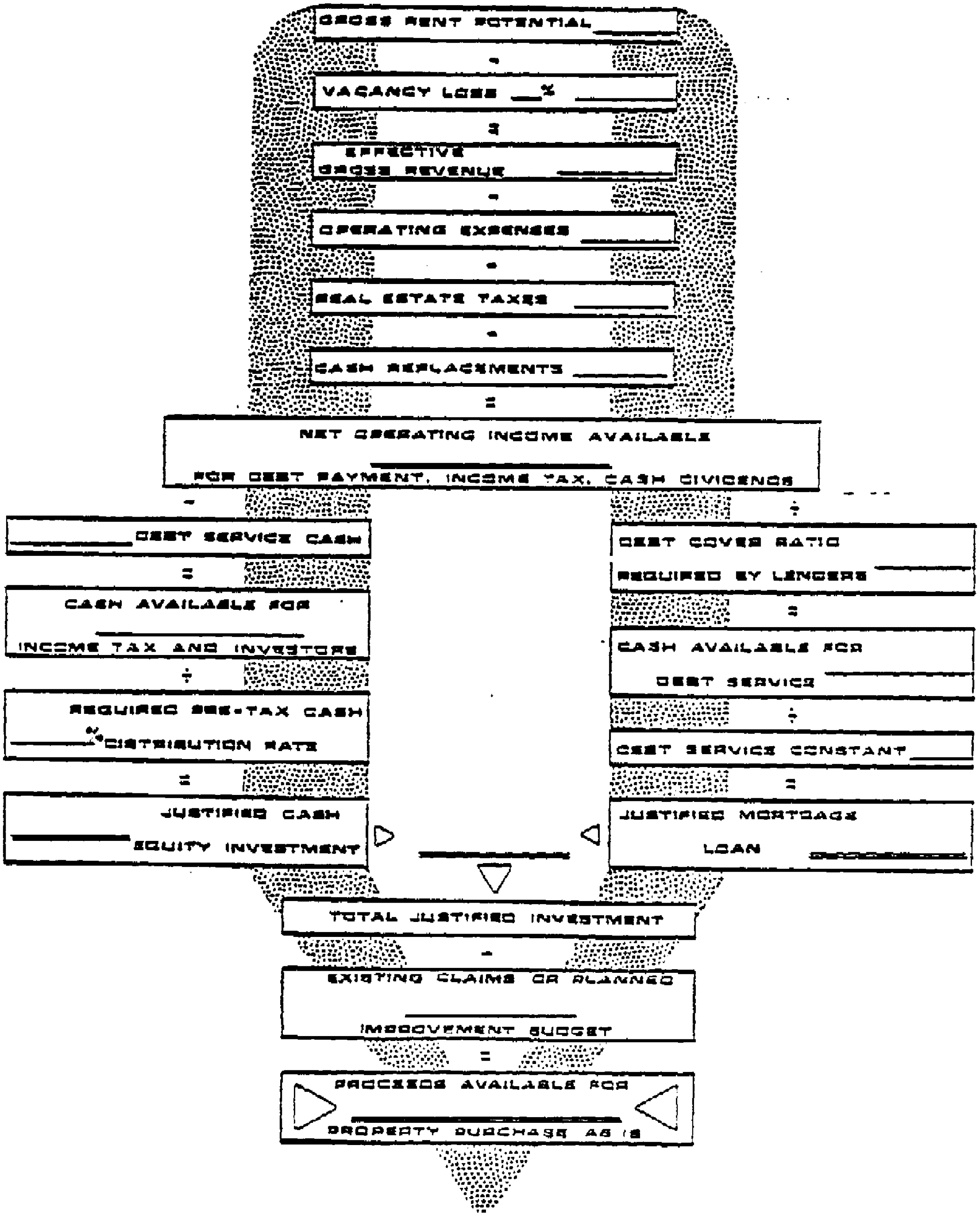
×

DEFAULT RATIO .70
=
CASH BUDGET OUTLAYS $693,000
–
OPERATING EXPENSES $300,000
–
REAL ESTATE TAXES $125,928
–
CASH REPLACEMENTS $20,000
=
CASH AVAILABLE FOR DEBT SERVICE $247,072
÷
DEBT SERVICE CONSTANT .12343
=
JUSTIFIED MORTGAGE LOAN $2,001,718

$3,769,575

TOTAL JUSTIFIED INVESTMENT
–
Land + Soft Costs — EXISTING CLAIMS OR PLANNED IMPROVEMENT BUDGET $970,000
=
Construction Budget — PROCEEDS AVAILABLE FOR PROPERTY PURCHASE "AS IS" $2,799,575
÷
Building size: 100,000 gross sq. ft.
=
Construction cost: $28.00 per gross sq. ft.

DEBT COVER RATIO APPROACH



The Real Estate Process - 550
Outline - Lecture #2

I. First lecture defined the real estate process as a dynamic synthesis in which three parties, space users, space producers and the public infrastructure, seek real estate solutions which allow each of them to remain solvent as cash cycle enterprises while pursuing other objectives.

   A. Any decision requires organization of information into alternative courses of action and their consequences. Simultaneously the facts generate values, objectives, and specific criteria for judging which consequences are good or bad. Given a ranking of criteria, one selects the most favorable course of action to pursue.

   B. Thus we need a system for ogganizing the facts to be discussed in real estate; a system which permits comparative analysis of alternatives and their consequences.

   C. The first step toward that system is in Diagram A.

II. The sequence of money flows and service flows historically began with the space producer.

   A. Step 1 indicates the space producer provides financial capital and services in the form of management expertise to control a site and provide attributes in the form of improvements.

      1. Site attributes could be physical, linkage or dynamic
      2. Site improvements range from survey monument to a fully integrated and operational environment (Disney World).

   B. Step 2 involves provisional services to the real estate from public systems for sewer, water utilities, etc. Generally compensated by the real estate tax and user charges metered to the site.

   C. In Step 3 the combination of attributes and services will be perceived by the space user differently and subjectively no matter how well engineered the site improvements may be. This perception will motivate a rent or purchase price which hopefully will compensate the space producer for his capital and services.

   D. The space users choice of location will also enable him to pay income, sales, and other personal taxes to be eligible for other services which he may or may not want. Obviously the space user wants to maximize net benefits from the real estate (#3) and services (#5) while reducing to a minimum rents or purchases and taxes.

   E. Since each of these three basic enterprises must make decisions which affect land and the space-time product and since each is a cash cycle enterprise which must remain solvent, it is useful to begin explanation of the cash cycle constraint on their real choices.

      1. Hence we begin with a simple cash flow model of the space producer and the sub-systems which affect his (their) cash cycle.

         a. Prioity based on instruction sequence
         b. Space producer is a synthesis of many sub-system enterprises

2. Real estate is a multi-disciplinary field and in a beginning course, as we unravel the various sub-systems, we can only suggest how you might pursue the input further from the other disciplines. Thus we will stop short of exploring in full many interesting subject areas.

3. The quiz sections will detail cash flow for the producer of rental property. Some lectures will be devoted specifically to detailing the cash flow problems of users of residential space, retail space and industrial space.

4. Lectures will also sketch the public infrastructure cash cycle as represented by real estate taxes and other revenues and the cost of services and public capital in streets, schools, public transit, environmental quality, etc.

F. Financial behavior is only one small part of the decision system affecting real estate so that lectures will be devoted to suggesting the sociological dimension and historical significance as well. Indeed, if the basic elements in the context of the real estate decision system are classified, financial elements must come last.

G. Basic elements of context for judging feasibility or fit of a real estate proposal:

1. Goals and objectives of decision maker
2. General areas of opportunity
3. Specific micro-market targets
4. Legal-political constraints
5. Ethical compatibility constraints
6. Physical-technical constraints
7. Financial constraints

III. By way of introduction of the mechanical front foor and back door approaches to be analyzed in detail in quiz sections, it will be useful to examine Diagram B.

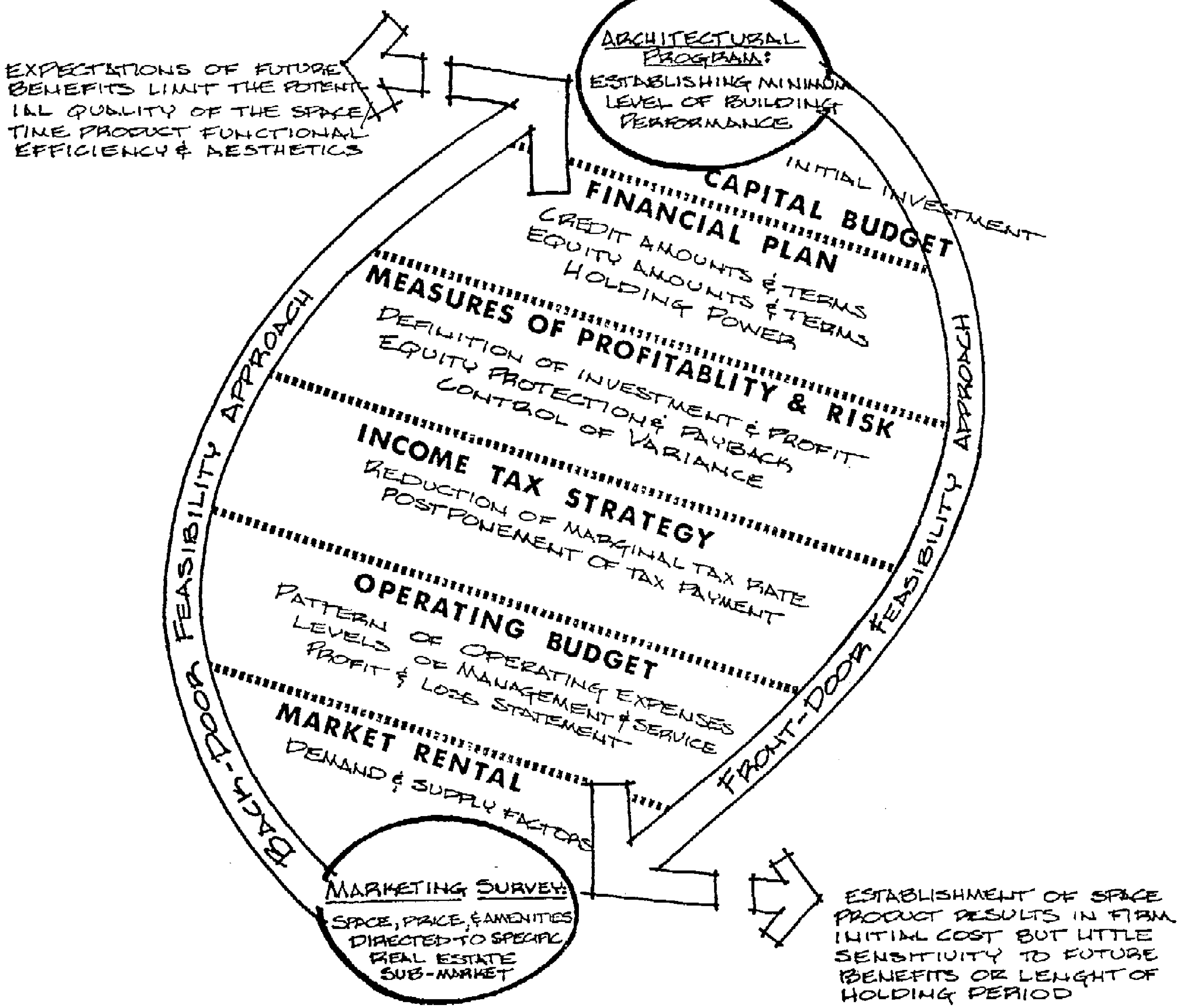
A. The traditional sequence is to begin with a space producer as in Diagram A, which may be called a front door feasibility approach or capital structure approach.

B. It may be more useful, however, to first define the maximum the consumer can pay and the priorities the consumer or space user may place on various attributes in order to derive the maximum capital budget which may be appropriate.

C. In fact, the real estate process is a continuous iteration between capital budgeting and consumer budgeting constraints.

D. The front door and back door flow charts are a simplified schematic way of looking at the space producers cash flow cycle. We will provide similar schematics for space users and the public infrastructure as we move through the course. First, a graphic flow chart, then a detailed budgeting process, and then an actual numerical illustration, the computation of which you will have to be able to execute.

DIAGRAM B



TWO SIDES OF THE COIN

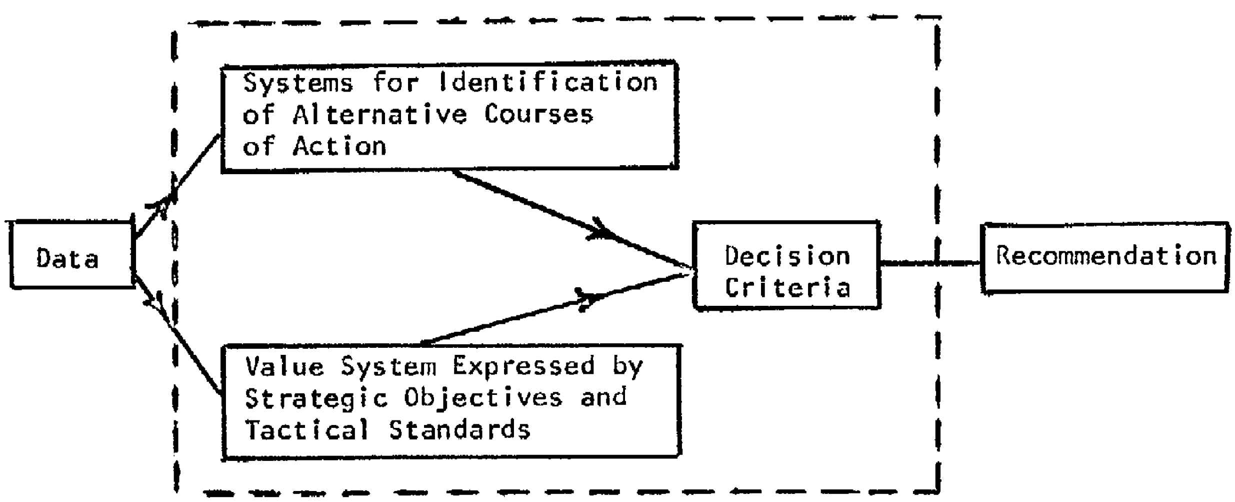
Outline - Lecture #2

I. The form and pattern of urban construction will reflect a consensus between value judgments of the society and its objectives and the physical and financial limitations of available alternatives. The degree of influence of social value judgments in the decision process might be reviewed in three phases - pre-1800, 1800-1950 in the United States, and 1950 to the present.

A. Lecture is an introductory look at the first two elements of the management process for an undertaking - goal setting and forming policies.

B. A schematic illustration of the decision process might be:

1.

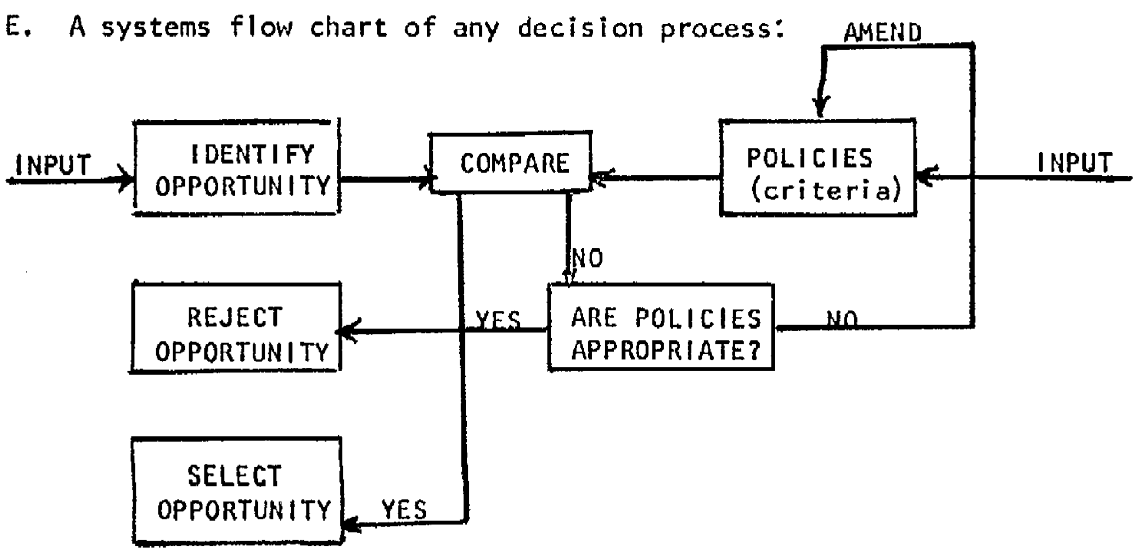


2. Values are moralistic generalization which must be explicit to be operational os objectives. Objectives must be detailed with a series of if/then statements or criteria to provide a logic for accepting or rejecting an alternative.

C. Shoreline conservation example.

D. Financial analysis pattern example.

E. A systems flow chart of any decision process:



II. Cities of the past often have physical clarity in land forms, layout and architect as a result of static population, static technology, and cultural continuity.

A. Specific purposes produce a desirable order so that social need was reflected in urban forms.

B. Interraction was simplistic in priority, defense, commerce, religion, etc.

C. Form builders made changes in traditional procedures only in response to significant and obvious irritation, misfits in the form fit to the context such as the London fire, the cannon, or disease from polluted water.

D-1 Defensive town - Naarden
D-2 Roman military town - Aosta
D-3 Inca store town = Pikillacta
D-4 Peking - Tartar City - Imperial City - Forbidden City
D-5 Canal structure of Amsterdam

III. Settlement of the new world meanst conditions of cohesive development in other civilizations were gone.

A. Population explosion
B. Cultural restructure from outer directed to inner directed
C. Technological explosion in communication, transportation, and building structures
D. Property rights were a populous emotional experience

1. Pioneer ethic of development favored those who could pay the mostest and build the biggest.
2. Thus highest and best use concept - that use which had the highest present value of dollar benefit over a specific period of time - does describe the land use allocation system form 1800 to 1950.

E. Cities grew like a reef - a process of accretion, with each building a skeleton built to house a particular activity. A process of accretion tending to cluster around transportation systems leading to the center of commerce, government, and industry.

F. A Greek city planner - Doxiadus.

1. Dynapolis - a city plan designed to grow in one direction
2. Ekistics - the science of city building as a multi disciplinary art form.

G. The conditional constraints on highest and best use through which society has begun to operate.

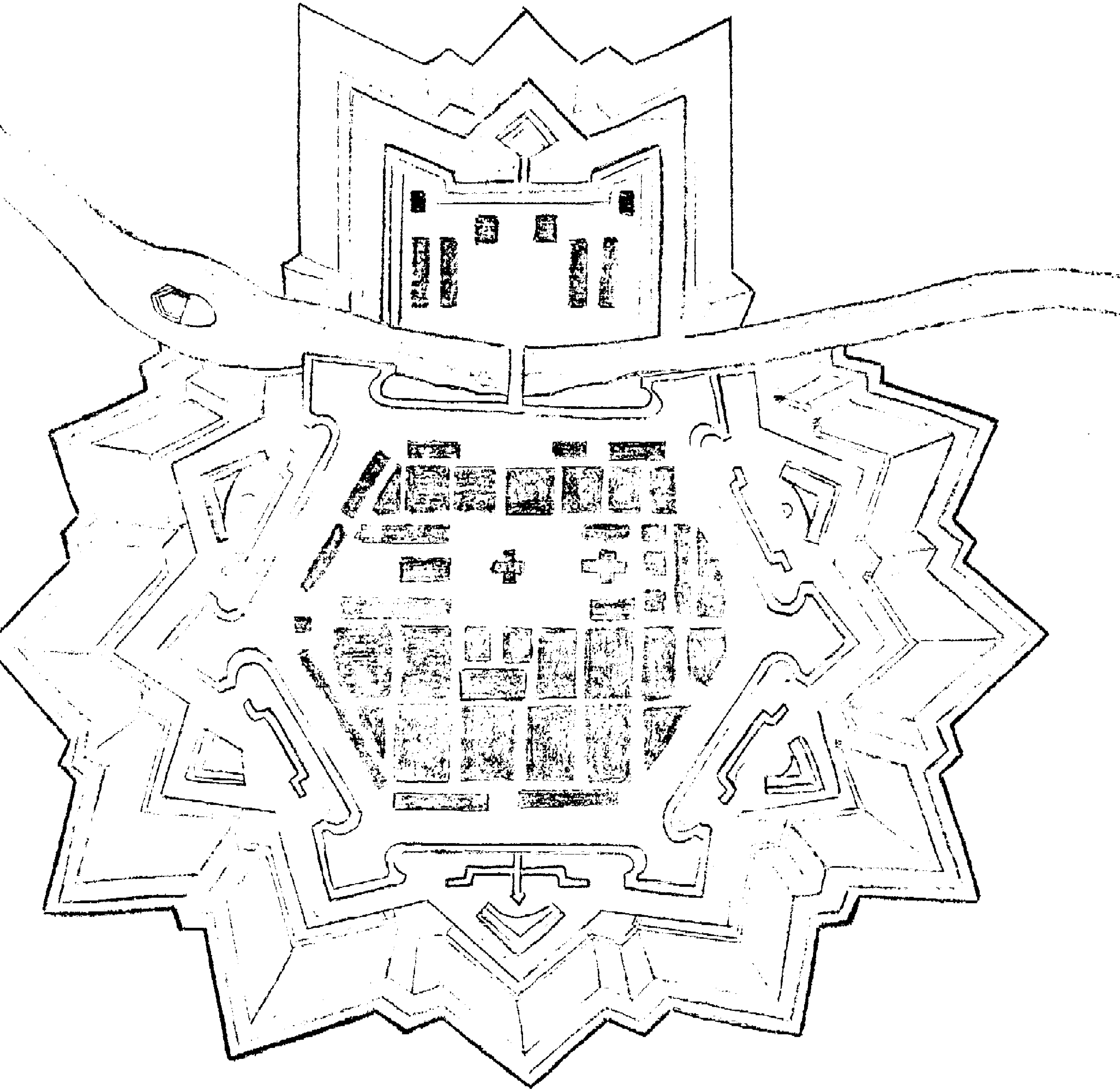
1. Legal constraints on the use of the land
2. Market need for particular kinds of space at a given point in time
3. Engineering feasibility
4. Financial prudence

IV. Since 1954 federal subsidies of urban planning are leading to drastic redefinition of land as a public utility and resource rather than a private commodity. Thus the land use allocation process is no longer a bidding process in the marketplace and we make a distinction between land use pattern and decisions and the present value of improvements to land by private enterprise.

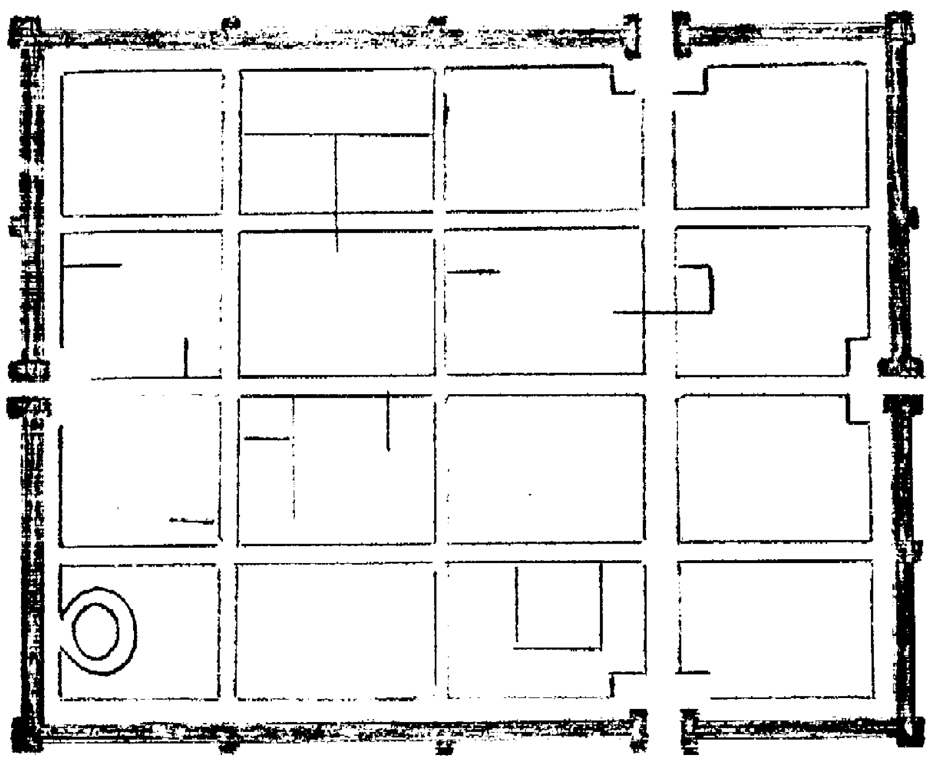
A. The old semantics of private property remains but substance of those rights have been drastically altered. Government had retained in the original constitution the power to tax, the right to regulate or to lease, and the right of eminent domain.

B. Recent Rockefeller commissiom recommendation calls for judicial reinterpretation of property rights so that "when the protection of natural, cultural or asethetic resources or the assurance of orderly development are involved, a mere loss in land value should never be justification for invalidating the regulation of land use."

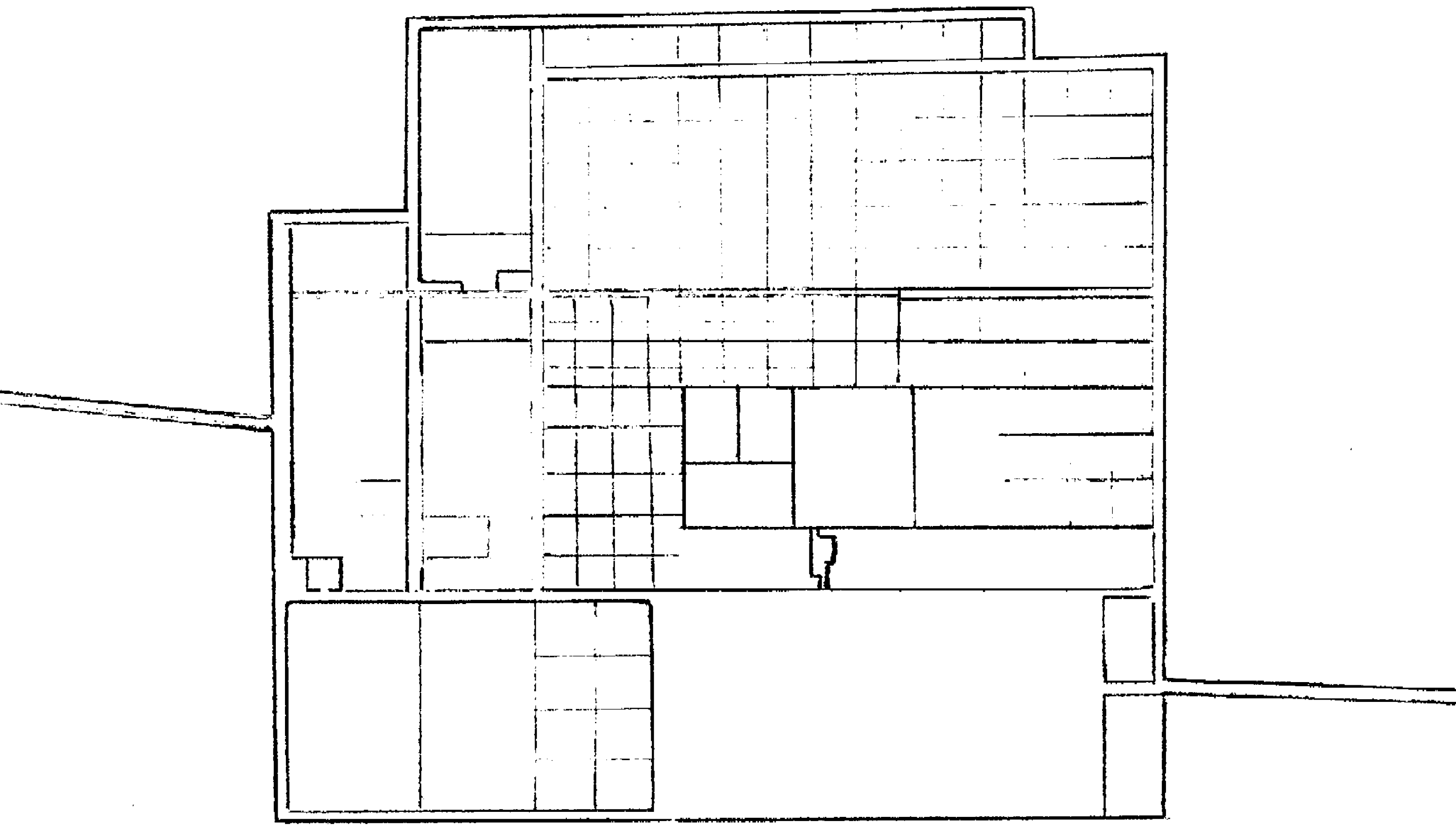
C. This course is concerned with the mechanisms and the real estate process by which value judgments are restated as objectives and objectives are made operational by creating decision screens or criteria with which to select one of several of alternative courses of action in the creation of space time units to house an activity.



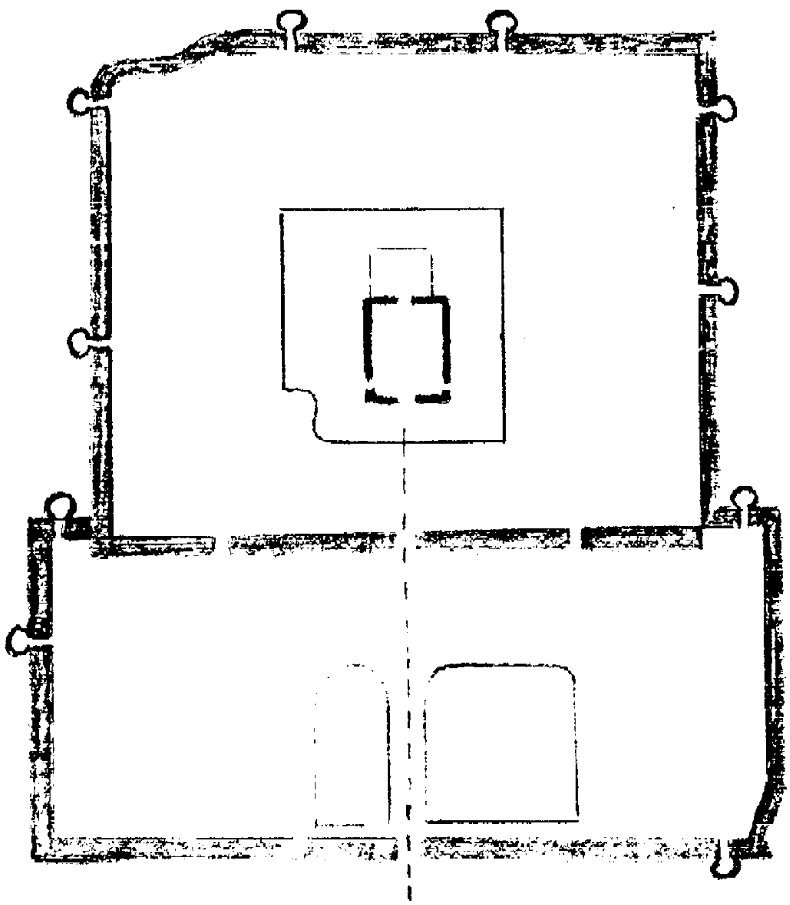
Fortified Town, Naarden



Roman Camp, Aosta

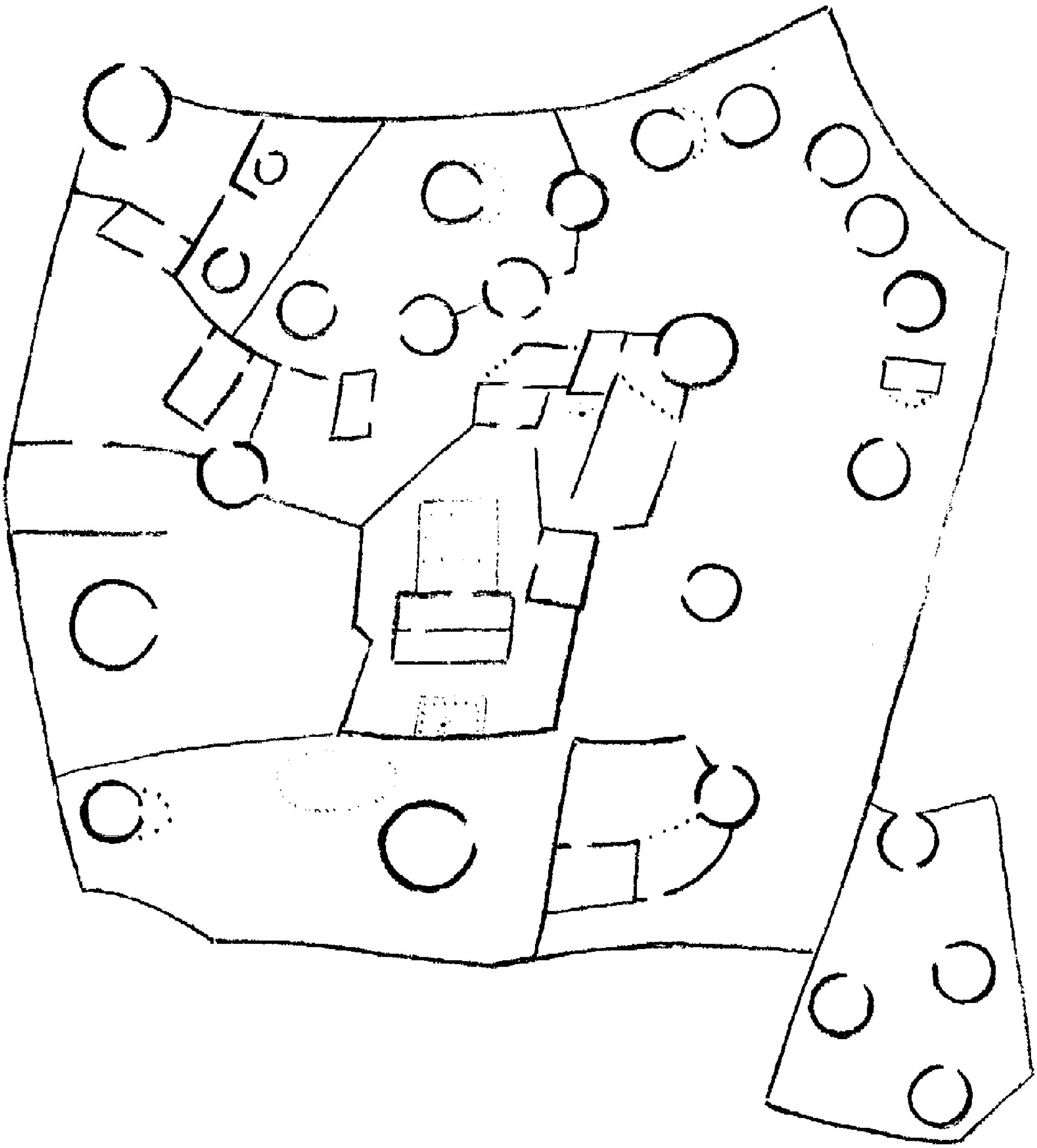


Inca Store Town, Pikillacta

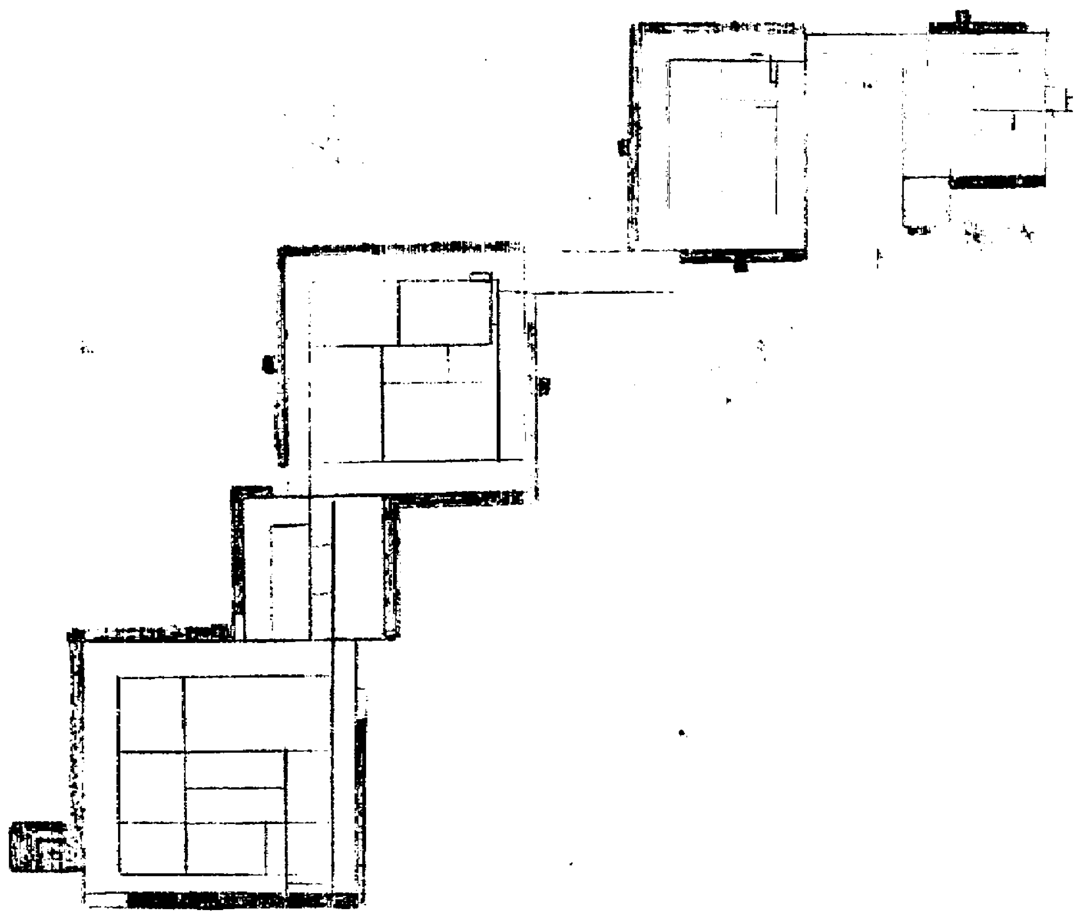


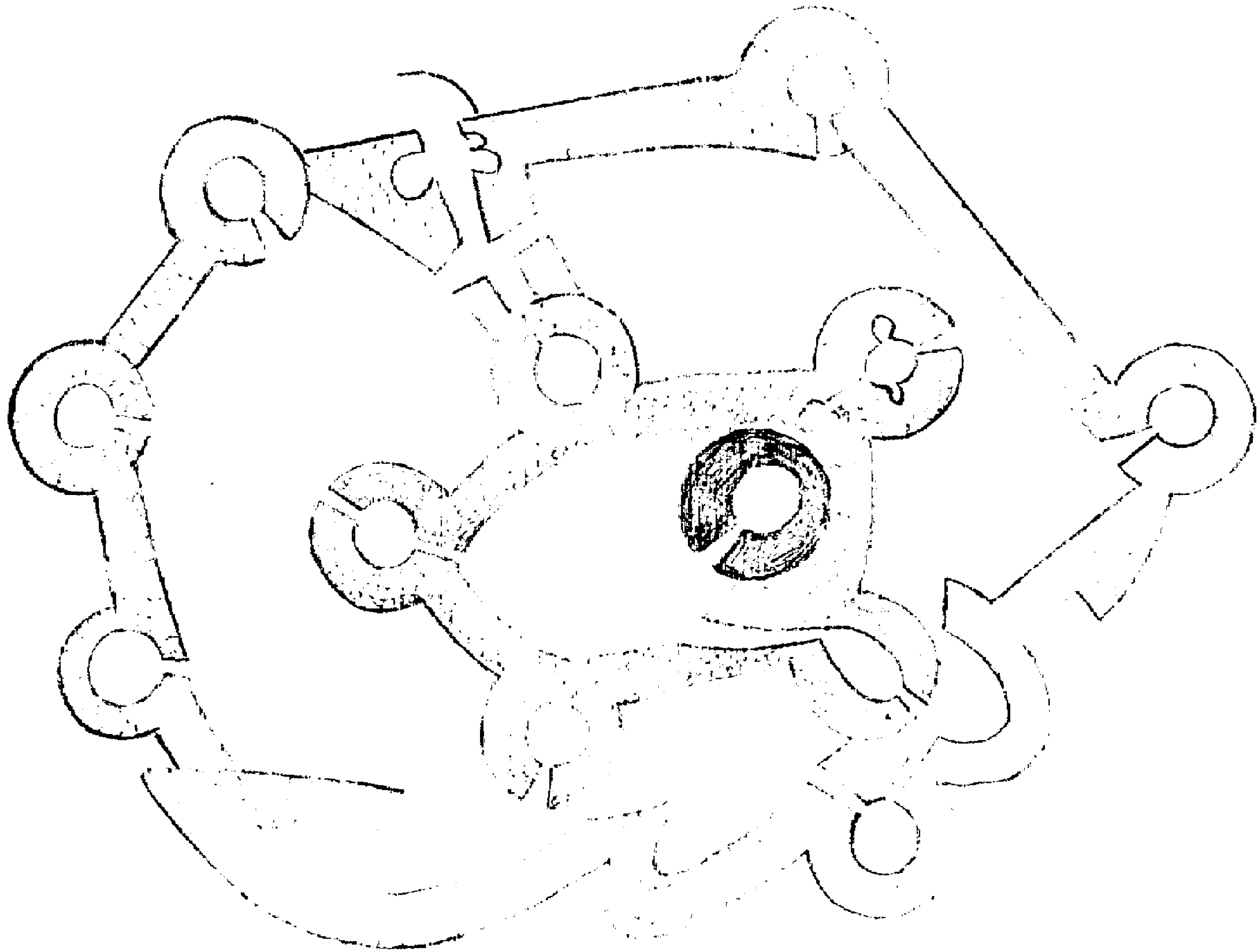
Peking

Farm Compound, Cameroons



Palace, Japan





Fortress, Sardinia

Business 550

LECTURE #3
Social Impact of Real Estate

I. The decision process involves both identification of alternative outcomes including financial consequences, and conversion of value judgments to selection criteria as in the following diagram A:

Diagram A

A. Social content or impact of real estate is found in:

1. Decision procedures of users, producers, and public agencies.
2. Impact of past real estate decisions on future behavior of individuals and social groups.
3. Winston Churchill - "We first shape our buildings and then our buildings shape us."

B. The space user can express his values...

1. As a market transaction.
2. As a do-nothing decision.
3. As explicit collective social or political action.

C. The space producer can express his values...

1. As an individual selective response to user stimuli.
2. As a collective response to external forces.

D. Political infrastructure reflects values...

1. Of the constituency through laws and ordinances.
2. Of the political administration through discretionary prodedure.
3. Through devices for public hearings and appeals.
4. By means of the threat of future political action.

E. Thus to examine social values in decision making and social impact of real estate solutions on society involves the real estate process in an almost infinite variety of behavioral models of the political and social proces

1. Some simplistic historical surveys may be useful

Urban Land 550
Lecture #3

I. In earlier definition of the land resource, we suggested it would be necessary to examine four sets of attributes to determine its suitability for any specific purpose or improvement. Today's lecture is concerned with detailing the type of data input and discision criteria appropriate for these attributes. We will try to note in passing other courses at the university outside the Sch. of Bus. which are useful tools for the real estate major.

A. The four, somewhat arbitrary subsystems of attributes relative to land are:

1. Physical static attributes
2. Organic eco-system attributes
3. Dynamic social attributes
4. Public and private legal attributes (the lecture will limited to the first three)

B. Each of these sets of attributes will affect the cash flow characteristics of any enterprise located on a particular site in different ways and therefore it will be useful to briefly sketch the elements of cash cycle forecasting so that we may simply suggest where site attributes are synthesized into the eventual solution.

C. The elements of financial planning for the cash cycle include:

1. Definition of profit center viewpoint
2. Definition of time line for the enterprise cash cycle
3. A schedule of capital outlays

   a. Direct capital cost
   b. Indirect capital cost

4. Schedule of revenue and expenses
5. Assumptions of a financing plan
6. Assumptions of income tax strategy
7. Measures of risk (potential variance between plan and realization)
8. Measures of yield

II. Static physical attributes ultimatley define the cubage available to contain an activity.

A. Size and shape of parcel

1. Frontage - filling station versus movie theater
2. Width - circulation versus us able area - double loading corridor + office or apartment
3. Depth - need for access - frontage
4. Effective building area - setback zoning, deed restrictions, ground cover area, FAR density
5. Shape-structure relationship

B. Topography

1. Degree of slope - zero to 12% buildable - cut and fill cost
2. Elevation from access point
3. Drainage

C. Soil and sub-soil conditions

1. Bearing qualities
2. Expansion and stability characteristics
3. Permeability - drainage and septic percolation

D. Utility infrastructure

1. Municipal or private sewer and availability of hook-up permits
2. Cost and capacity of electrical service
3. Availability and cost of water (Madison has metropolitan sewer but city water)
4. Availability of gas and gas service permits
5. Availability of telephone service (definition of districts-Westowne)
6. Availability of fire service and rate classification
7. Availability of muncipal services such as police, garbage disposal cable TV, etc.

E. Existing improvements

1. Survey monuments, etc.
2. Underground utility easements
3. Abandoned foundations, mining shafts, quarries, etc.

III. Organic eco system attributes are concerned with the relationship of the site to the general ecology of its environments and the impact that any alteration of the site on the natural systems of which it is a part.

A. Water conditions

1. Ground water contamination or recharge
2. Surface water run-off and erosion
3. Siltation of lakeshores and streambeds
4. Alteration of storm water absorption and run-off patterns

B. Plant life conditions

1. Destruction of rare plant resources
2. Reduction of prime agricultural reserve
3. Damage to natural food chains
4. Damage to significant animal or insect habitat

C. Alteration of micro climate

D.

IV. The dynamic social attributes of a site have to do with its spatial relationships to other related sites and the way in which people perceive the specific site. Real estate, remember, is intended to house an activity and these activities are generally interdependent with persons and activities at other locations.

A. The urban land economist defines any single activity as an establishment. A family is an establishment, a church, Oscar Mayers, or a store at Westowne.

B. The relationship between any one site or establishment and another establishment/termed a linkage. The linkages of the site are a major determinant of its economic value. For example, a car rental company may want a direct linkage to the air traffic terminal or a student book store may find it critical to be tied directly to a major student pedestrian thoroughfare.

1. Many linkages may be physical such as pedestrian bridges or the truck stop at the interchange downramp.
2. Most linkages are more mental in terms of convenience and time or street intelligence or "amenities".
3. Amenities are the esthetic satisfactions and comforts which individually cannot be priced, such as the tone of the neighborhood created by parks, and trees, etc.

C. The single family home has a variety of linkages which each household gives different weight. It has a linkage to school, to shopping, to job, to recreation, to social circles, etc. (a short crawl home).

D. Site linkages are a key to feasibility. The West Allis Inn example.

E. Linkages are related to the spatial distribution of land uses which are town builders or primary employment centers and land uses which are town fillers or ansillary services.

F. A set of linkages, physical or mental,of any particular parcel is called the situs pattern. A situs pattern suggests a use and a use defines the deserved situs pattern.

G. The relationship of establishment activities is not only rational in terms of obvious motivation of convenience, economy, etc., but is also subtle and to some degree irrational conditioning of the mind.

1. Identification with or of a building or an area depends on repeated exposure and subtle delineation of areas or visual cues.

    a. The Hidden Dimension by Hall
    b. Defensible Space by Oscar Newman

2. Anxiety is a significant factor - security, privacy, driving or pedestrian safety (the secret to defensible space is to increase the anxiety of the interloper or stranger to increase the security of the resident).
3. One writer sees the phychology of linkages as a degree of public-private character. The major streets are community at large while your own street and sidewalk are neighborhood. Your front entrance is a transition zone from public to family while the bedroom is a transition from family to private At each point there is need for different levels of audio-visual privacy and reinforcement of the appropriate degree of scale. Community plazas are large scale, but neighborhood is expansive but low key, The entry walk and foyer reduce the scale and texture at first and the home pattern itself is small pattern and texture.
4. The shopping center design is intended to reduce the anxiety of the driver approaching the site, his confusion and anxiety in parking and walking to the store of his choice, and his discomfort while in the store itself. Thus the approach zone to the site is an important linkage.

Urban Land 550 Lecture #3

I. Site attributes affect the fit of an activity to the land.

A. For somewhat arbitrary and related subsystems of site attributes are:

1. Physical static attributes
2. Organic eco-system attributes
3. Dynamic social attributes
4. Public and private legal attributes (the lecture will be limited to the first three)

B. All these attributes each affect the cash flow cycle characteristic of any enterprise or establishment located on a particular site.

C. Elements of financial planning for a real estate enterprise cash cycle include:

1. Definition of profit center viewpoint
2. Definition of time line for the enterprise cash cycle
3. A schedule of capital outlays
   a. Direct capital cost
   b. Indirect capital cost

4. Schedule of revenue and expenses
5. Assumptions of a financing plan
6. Assumptions of income tax strategy
7. Measures of risk (potential variance between plan and realization)
8. Measures of yield

II. Static physical attributes define cubage available to contain an activity and are inherent within the boundaries of the site.

A. Size and shape of parcel

1. Frontage - filling station versus movie theater
2. Width - circulation versus usable area - double loading corridor + office or apartment
3. Depth - need for access - frontage
4. Effective building area - setback zoning, deed restrictions, ground cover area, FAR density
5. Shape-structure relationship

B. Topography

1. Degree of slope - zero to 12% buildable - cut and fill cost
2. Elevation from access point
3. Drainage

C. Soil and sub-soil conditions

1. Bearing qualities
2. Expansion and stability characteristics
3. Permeability - drainage and septic percolation

D. Utility infrastructure

1. Municipal or private sewer and availability of hook-up permits

2. Cost and capacity of electrical service
3. Availability and cost of water
4. Availability of gas and gas service permits
5. Availability of telephone service
6. Availability of fire service and rate classification
7. Availability of muncipal services such as police, garbage disposal, cable TV, etc.

E. Existing improvements

1. Survey monuments, etc.
2. Underground utility easements
3. Abandoned foundations, mining shafts, quarries, etc.

III. Organic eco system attributes are concerned with the relationship of the site to the general ecology of its environments and the impact that any alteration of the site on the natural systems of which it is a part.

A. Water conditions

1. Ground water contamination or recharge
2. Surface water runoff and erosion
3. Siltation of lakeshores and streambeds
4. Alteration of storm water absorption and runoff patterns

B. Plant life conditions

1. Destruction of rare plant resources
2. Reudction of prime agricultural reserve
3. Damage to natural food chains.
4. Damage to significant animal or insect hatitat

C. Alteration of micro climate

IV. The dynamic social attelbutes of a site refer to its interaction of its other sites and the perception of people of the specific site.

A. To an urban land economist any single enterprise on a site is an establishment
B. The relationship between one site or an establishment and another site or establishment is termed a linkage.
   1. Linkages may be physical, such as a pedestrian bridge
   2. Linkages may be mental in terms of convenience, time, economy, etc.
   3. Linkages may be cumulative in terms of esthetic satisfactions and comforts which are called amenities.
C. A single family home has a set of linkages to schools, shopping, jobs, recreation, or social structure.
D. Site linkages are a key to feasibility of a store or motel.
E. A set of linkages for a particular parcel is called the situs pattern for an establishment.
F. Perception of a site is a product of both motivation and subtle conditioning of the mind.
   1. Visual cues. Interesting reading on psychology of space
      a. <u>The Hidden Dimension</u> by Norman Hall and <u>Defensible Space</u> by Oscar Newman
   2. Anxiety-security-privacy
   3. Community-neighborhood-family-individual "zoning" by means of audio visual controls and patterns
   4. The conditioning of the approach zone linkage for a site relative to its use.

BUSINESS 550
Linkage, Dynamic, Environmental Attributes
Lecture #3

I. Linkage Attributes

The marketing of a permitted use depends in large part on the location of a property. The banal phrase in real estate is that there are three critical factors in real estate - location, location, and location. Those who love to quote it seldom can define systematically the elements of location.

A. Linkage attributes are the ties of the subject property to networks of supporting infrastructure which improve convenience and access and to activity centers which may interact with the subject property. The convenience and cost of this interaction is measured in terms of friction. (Ex. when congestion downtown meant too many wasted truck driver hours, wholesale centers moved to the outer rim of the community along beltline roads; lack of parking on the Square is one element of friction which motivates people towards suburban shopping centers).

B. Analysis moves best from the borders of the subject property outward to expanding zones containing potential demand sources or competitive supplies of space. Analysis moves best from physical networks to intangible ties and relationships which may be visual or perceptual (dynamic attributes, as well).

C. Physical networks typically involve utilities and transportation. Utility linkages need to be considered in terms of availability or dependency on:

1. Sewage processing, storm water retention, and storm run-off provisions. (IBM Building)

2. Water capacity for use and fire, and water chemistry if applicable.

3. Energy sources including electrical, gas, steam, solar, and capacity of suppliers.

4. Public service zoning for fire and police, rail switching zones, etc.

5. Access networks include street, sidewalk, rail, gallerias, underground pedestrian networks, overhead bridges, and public transit systems including access points, traffic department controls, capacity for additional volume and possible shared cost formulas.

D. Relationship of subject site to immediately contiguous property (adjacent parcels), balance of city block or track, and neighborhood layout patterns.

E. Possible dependency on available resources of underutilized labor and potential employees, timber and other natural resources, water flows in streams or underground, etc.

F. Relationship of subject site to generators of potential needs and uses for the subject site, such as:

1. Employment centers
2. School system alternatives
3. Retail services
4. Complimentary existing nearby uses

5. Recreational services
6. Health care systems
7. Security systems
8. Waste disposal services

G. Neighborhood demographics (population, age, employment, income, etc.)

H. Relationship to competitive alternative and estimate of supply of available space, competitive ranking, and exposure of subject site to competitive interception of potential demand.

II. Dynamic attributes are those attributes which exist in the minds of the beholder which are mental or emotional responses which a site or project stimulate and which affect decision making behavior.

A. Image conditioning of the approach zone

B. Visual factors in terms of prominence of the site, views from the site, potential for controlled sight lines, etc.

C. Prestige and status

D. Anxiety factors of access and security

E. Noise as a function of traffic count (FHA noise pollution manual)

F. Prevailing air currents and airborne pollution (phosphate plants or sulphite paper mills, for example).

G. Political images established for a site by the public positions of local politicians or vested interest groups.

H. Historical community reputation and values attached to the project site and structures.

III. Compatibility of Alternative Uses With Off-Site Factors

Individual user needs are reflected in the first four attributes while the collected community of consumers is considered under the broadest definition of environmental attributes. The collective community is generally represented by political administrators so a land use must be sold to "two markets", the buyer or tenant user and the community political administrator.

A. Physical and environmental impacts <u>off-site</u>

1. Storm water and ground water run-off

2. Contamination of air and water

3. Impact of sun shadows on neighboring property

4. Encroachments of flora and fauna supplies

5. Encroachment on historical or cultural resources

B. Silhouette of social impact in terms of public perceptions of:

1. Displacement of existing residents and neighborhood units
2. Contribution to social integration or mobility barriers

3. Contribution to land use heterogeneity

4. Contribution to regional and community master plans

C. Fiscal impact on the community where appropriate:

1. Direct impact on real estate tax revenues

2. Direct impact on other governemental revenue

3. Direct impact on incremental government

4. Secondary contributions to local government revenues

5. Secondary cost burdens created for local communities

D. Social factors in the ethical environment:

1. Impact on supply/demand equilibrium

2. Stamina of project sponsor in the face of public pressure

3. Vulnerability of potential project buyers to secondary political pressures and counter attach

4. Potntial uses requiring unique political resources or private/public consortiums

IV. Alternative Use Scenarios Require Further Testing

The site in search of a use is first inventoried for its apparent attributes in each of the five sets above in order to identify technically possible alternatives. These alternatives must be further screened for financial viability.

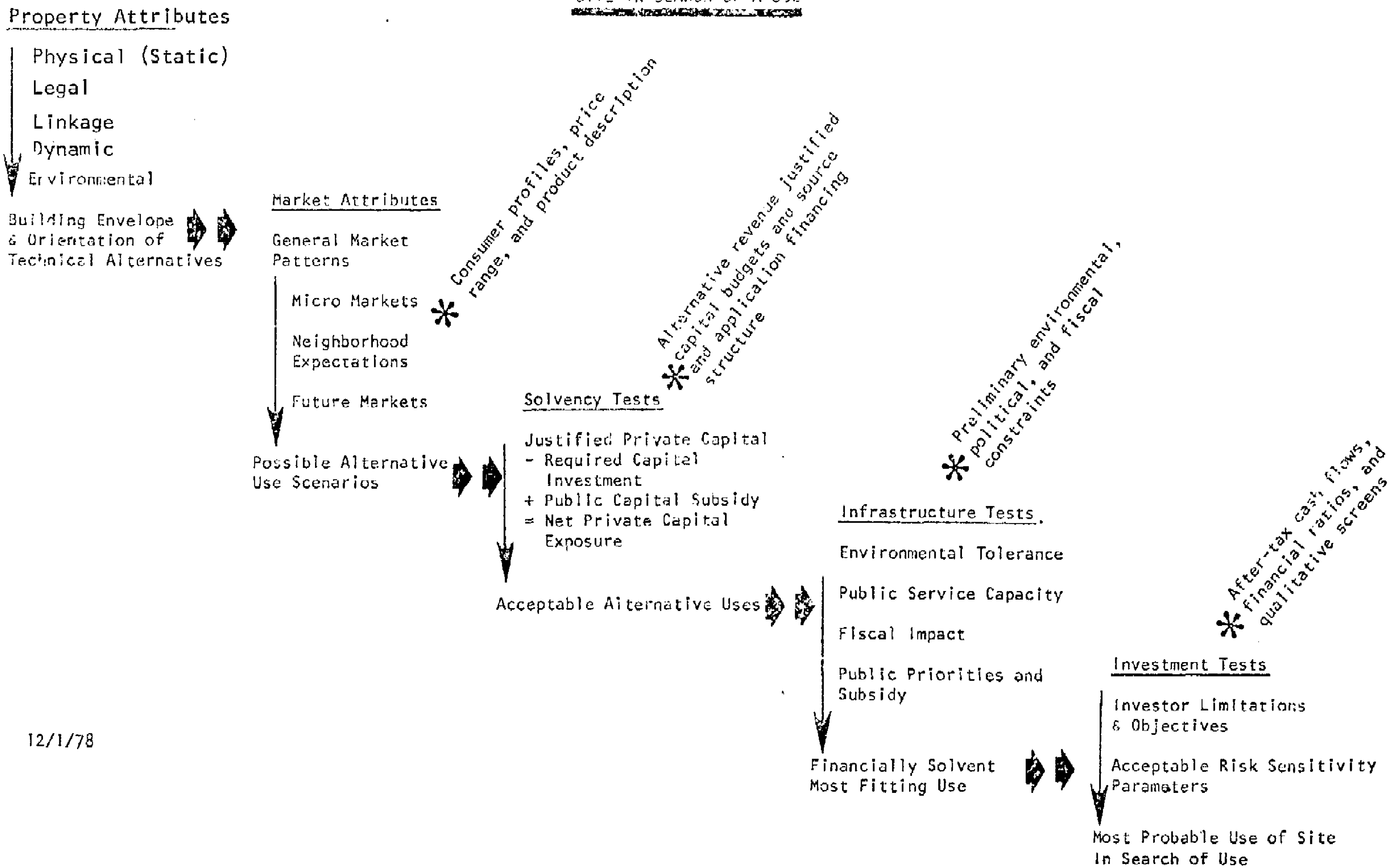
A. Reference to Exhibit I sketches the flow of analysis. It is a repetitive cycle in which surviving uses are further refined relative to market, solvency, infrastructure and investing.

B. The critical element of financial viability (i.e., solvency and perhaps profit) is effective market demand. Market attributes include macro-markets inherent in general population data, micro-market data discovered from consumer research of people and competitive peoducts, and collective markets as related to neighborhood expectations, and perhaps future unknown re-uses.

C. Use scenarios for which there is effective demand lead to preliminary solvency tests which indicate the relationship of justified investment to required capital costs for the individual investor, just to achieve breakeven.

D. The uses which survive solvency tests for the individual investor then must be related to the financial and physical infrastructure of community needs and priorities as well as financial capacities. At this point the ideal use may be modified by short term political consideration and a number of not so perfect private alternatives will survive to be tested in terms of appropriate mini-max criteria related to spendable cash, future networth, acceptable risk, and portfolio fit.

SITE IN SEARCH OF A USE



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III. Physical (Static) Attributes of the Site and Its Improvements

A. The analysis of static site attributes which begin to narrow the potential alternative uses of the site should include both the facts and their implications for productive use of the site in such topical areas as:

1. Size, shape, and lot area
2. Topography, soils, geology, slope stability, bearing capacity, septic tank suitability, potential for subsidence,
3. Water table, wells, streams, ponds, storm water swales, shoreland edges, bulkhead lines, flood plain designations, et
4. Flora and fauna which enhance marketability or which might cause environmental impact litigation
5. Concealed utility easements, old foundations, etc.
6. Existing on-site utility services and capacity
7. Access points to public thoroughfares or private right-of-ways.
8. Site improvements such as paving, retaining walls, pedestrian paths, culverts, etc.
9. Landmark attributes or historical site features
10. Define physical system subsystems

a. foundation system
b. structural system
c. floor system
d. ceiling system
e. roof system
f. exterior wall system
g. interior wall system
h. horizontal circulation syste
i. vertical circulation system
j. life safety system
k. electrical system
l. plumbing system
m. HVAC system
n. site circulation system
o. social control system

B. Numerous courses are offered at the UW-Madison which touch upon these topical areas (see course listings for the following departments, among others: landscape architecture, civil engineer ing, land resources, and real estate). All persons active in the field of real estate should have at least an introductory knowledge of these topical areas to better appreciate and to understand the ramifications of the physical nature of the real estate product. Experts should be consulted whenever appropriate.

IV. Legal-Political Attributes

A. In Anglo-American law, real estate ownership is usually viewed as consisting of a "bundle of rights." The bundle includes:

1. Right of possession
2. Right of control
3. Right of enjoyment
4. Right of disposition

B. These rights are not absolute, however. The law through legislation, contract, and precedent allocates and defines time, benefit, privileges, and responsibilities of use.

C. The law is a reflection of the political machinery by which society expresses its values, objectives, and priorities, including both a collective and individual preference for land use.

D. The actual private rights to use and benefit are those which remain after the public has exercised its right to control through the police power, its share of benefits through the power to tax, and its priority over the private position through the power to condemn or expropriate.

E. The analysis of legal attributes should move from specific limitations on the site imposed by the rights of others to restrictive convenants, private controls, etc. to public sector controls and regulations. It is important to recognize not only the black letter law but the composition of those authorities who have discretionary responsibility for interpretation, enforcement, or amendment of these controls relative to future uses of the site.

1. Freehold estates

    a. fee simple absolute
    b. defeasible fees
    c. life estate

2. Leasehold estates

    a. estate for years
    b. estate from period to period
    c. estate at will
    d. estate at sufferance

3. Nonpossessory interests

    a. easements
    b. profit
    c. license
    d. security interests

4. Legal description and measurement

    a. government survey method
    b. metes & bounds
    c. platting
    d. street address
    e. reference to outside facts

5. Restrictive covenants limiting use, re-use, or modification of the property.

6. Applicable zoning ordinances and building code limitations on use (type and extent), including: alternative setback line height limitations, floor area ratio (FAR), parking requirements, dwelling unit (DU) density limitations, etc.

7. Special zoning options which may be available at owner's option such as rezoning, down-zoning, PUD zoning, etc.

8. Special controls imposed by other communities through extraterritorial zoning, tax conservancy commitments, urban renewal districts, tax increment districts, county regulation of subdivision, and overlapping jurisdiction.

9. Special state constraints on uses affecting shorelands, state highways, state airports, etc., including state industrial building code.

10. Special federal constraints such as airport approach zone districts, harbor and river commissions, office of environmental protection, Department of Housing and Urban Development, provisions for the handicapped (HEW), and many more.

11. Since the building process takes time, impending legislation is important and regulations require interpretation or public hearings so that public attitudes and expectations may modify black letter law.

12. A hidden source of regulation are the rules which control the lending institutions which lend the money. For example, they cannot lend on any properties located in a designated flood plain except under certain conditions which include community participation in flood prevention programs.

F. Sites that border rivers or bodies of water may have water rights

1. Riparian rights
2 Prior appropriation
3. Littoral rights
4. Accretion
5. Avulsion

G. Conceptually, real estate is often divided into three physical levels:

1. Earth's surface and attachments
2. Air space
3. Subsurface space

H. Forms of ownership include:

1. Single ownership
2. Tenancy in common
3. Joint tenancy with right of survivorship
4. Tenancy by the entirety
5. Community property
6. Condominiums
7. Cooperatives

I. Legal Entities for Owning Real Estate Interests

1. General partnership
2. Limited partnership
3. Corporation
4. Land trust
5. REIT
6. Syndicate
7. Joint venture

J. Transfering title to real estate

1. Purchase and sale
2. Inheritance
3. Gift
4. Foreclosure or tax sale
5. Adverse possession
6. Escheat
7. Eminent domain

K. Examining and Insuring Title

1. Good and marketable title
2. Abstract of title
3. Restrictions, security interests, liens
4. Title insurance

L. Elements of Sales Contracts:

1. Mutual agreement
2. Reality of assent
3. Legal capacity to contract
4. Consideration
5. Legality of the transaction
6. Contract in writing

M. Purchase options

N. Types of Deeds:

1. General warranty deed

   a. covenant of seisin
   b. covenant of the right to convey
   c. covenant against encumbrances
   d. covenant of quiet enjoyment

2. Special warranty deed
3. Quitclaim deed
4. Sheriff's deed
5. Executor's deed
6. Tax deed

O. Recording deeds

1. Actual notice
2. Constructive notice
3. Race-type statutes vs. notice-type statutes

V. Analysis of the Physical and Legal-Political Attributes of the Site

A. A preliminary analysis of these attributes permits the experienced analyst to discard the majority of alternative uses and to select a set of plausible alternative uses which we will call scenarios -- courses of action which should be analyzed further in terms of marketing, pricing, costing, and acceptability.

B. These initial screens for elimination need to be refined by reference to the dynamic attributes, linkage attributes, and environmental constraints which characterize the property.

C. Sometimes legal-political attributes and physical attributes are related. For example, if physical attributes preclude development of the site as it is currently zoned, then the landowner may have a case for the rezoning of his site or for a variance.

D. Some static attributes may help identify most probable user types while other attributes will make certain uses unlikely.

E. Some static or legal-political attributes can provide monopoly advantages if they make the site unique relative to other sites.

BUILDING ENVELOPE TERMINOLOGY • P.S.#1

1) Lot Size - the area of the lot (in sq. ft.).

2) Area Lost to Set-backs - the area around the lot's perimeter which must be left vacant (due to zoning regulation and/or deed restriction).

3) Buildable Area = Lot Size - Area Lost to Set-backs

4) Maximum Floor Area Ratio (FAR) - the maximum total floor area allowed as a ratio to lot size.

5) Maximum Allowable Floor Area = Lot Size x Maximum FAR

6) Standard Allocation Unit (SAU) - an areal unit of measurement incorporating the proportional mix of lot uses* required by the zoning code for a proposed use of a given site.
*e.g., open space, parking space, & the building itself

7) Number of SAUs on Lot = Buildable Area / SAU

8) Lot Area Requirements:

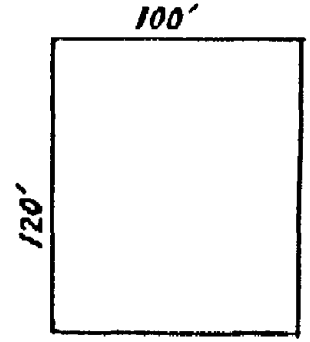
Type of Dwelling Unit	Minimum Lot Area Per Dwelling Unit
Efficiency	700 sq. ft.
One bedroom	1,000 " "
Two bedroom	1,300 " "

plus an additional 300 sq. ft. of lot area for each additional bedroom in excess of 2 in a dwelling unit.

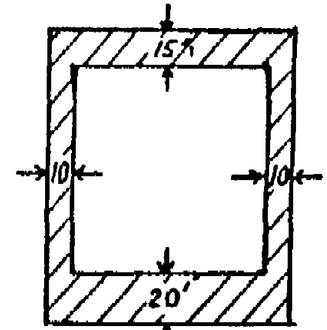
9) Parking Requirements - by type of use:
   1 per apartment
   1 per 300 sq. ft. of net rentable area of office space
   5 per bowling lane
   etc.

10) Useable Open Space Requirements - at least 160 sq. ft. of useable open space for each efficiency unit or one-bedroom unit, plus an additional 160 sq. ft. for each additional bedroom in excess of one in a dwelling unit.
- up to 50% of this open space can be on the roof or balconies.

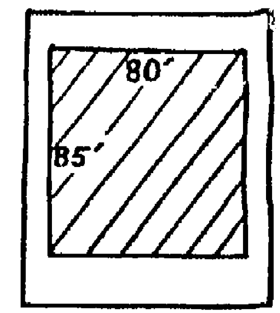
11) Building Efficiency Factors - percentage of net rentable area to gross building area; decreases with increasing height of building (i.e., # of stories).



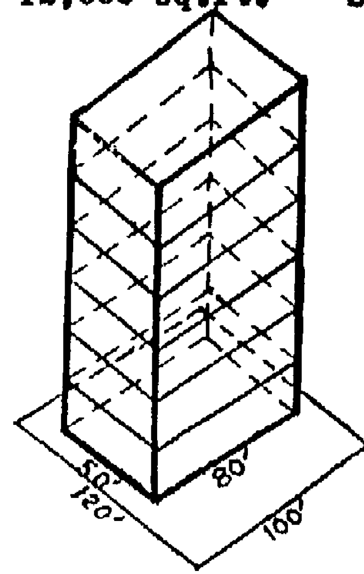
Lot Size: 12,000 sq.ft.



Area Lost to Set-backs: 5,200 sq.ft.



Buildable Area: 6,800 ☐'

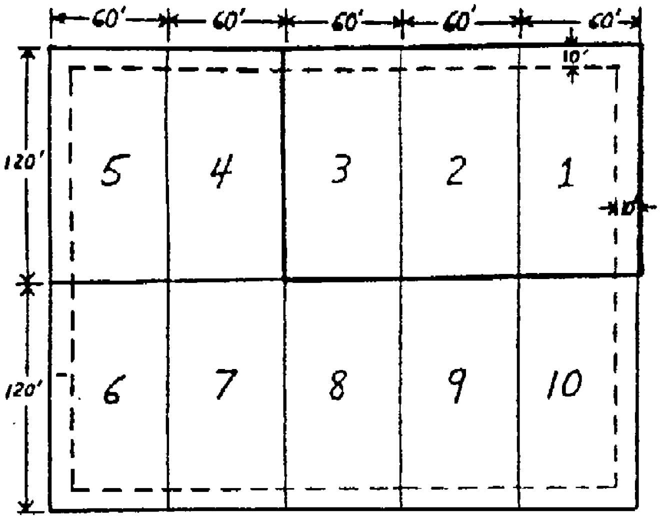


Total Floor Area:
6 x 50' x 80' = 24,000☐'

Floor Area Ratio:
24,000/12,000 = 2

550 + 705

ONE-STORY RETAIL BUILDING



1. Lot Size: 180'x120'=21,600Ø

2. Area Lost to Setbacks:
   a. Restrictive Covenant:
      Front yard: 10'x180'=1,800Ø
      Side yard: 10'x110'=1,100
   b. Zoning:
      Front yard: 3'x 10'= 30
      Total =2,930Ø

3. Buildable Area:
   21,600Ø - 2,930Ø = 18,670Ø

4. Maximum Allowable Floor Area:
   3 x 21,600Ø = 64,800Ø

5. Calculation of SAU:

	Net	BEF	Gross
Building	300Ø	÷.90 =	333.33Ø
Parking	375Ø	=	375
		SAU =	708.33Ø

6. Number of SAUs within Buildable Area:
   18,670Ø ÷ 708.33Ø = 26.36 SAUs

Given Information:

- Assume that there exists a restric[tive] covenant which requires a 10' setbac[k] from all streets and which forbids a[ny] "use" of the setback area.

- Assume that the building efficiency factor for this one-story retail building will be .90.

7. Total Building Area: Gross Net
   26.36 x 333.33 x 1 = 8,787Ø
   26.36 x 300 x 1 = 7,908Ø

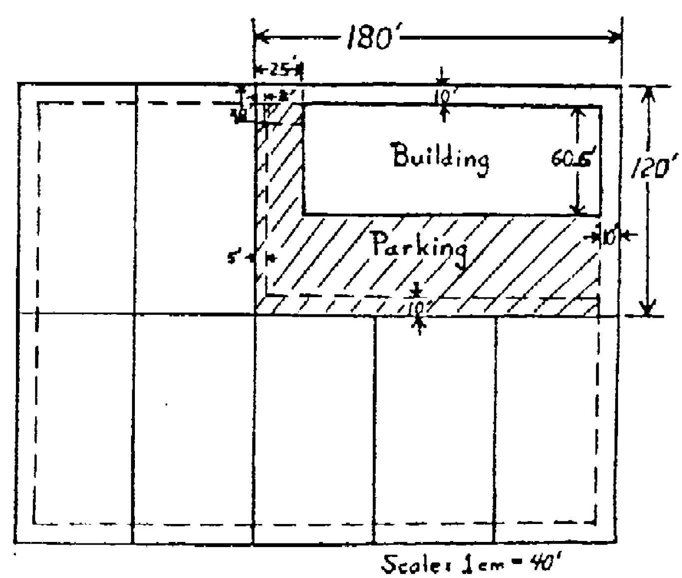
8. Parking Area: Gross
   26.36 x 375 = 9,885Ø

9. Base Area Check:

Building	8,787Ø
Parking	9,885
Total	18,672Ø

10. Is there a difference between #3 and #9? Only 2Ø due to rounding.

11. Illustrate below how you might allocate the required building and parking areas to the site. Be sure to indicate setback lines, draw to scale, and show dimensions.



TWO-STORY BUILDING
FIRST FLOOR RETAIL & SECOND FLOOR 500 NET SQ. FT. EFFICIENCIES
(Assume that the building efficiency factor is .85.)

1. Lot Size: 180'x120'=21,600□'

2. Area Lost to Setbacks:
   a. Restrictive Covenants:
      Front yard: 10'x180'=1,800□'
      Side yard: 10'x110'=1,100
   b. Zoning:
      Front yard: 3'x 10'= 30
      Total =2,930□'

3. Buildable Area:
   21,600□' - 2,930□' = 18,670□'

4. Maximum Allowable Floor Area:
   3 x 21,600□' = 64,800□'

5. Maximum Number of Apartments Allowed by Lot Area Requirements:
   21,600□' ÷ 700□'/apt. = 30.86 → 30 apts.

6. Calculation of SAU:

		Net	BEF	Gross
Building		500	÷.85	=588.24□'
Apt. Parking	(.75)	375		=281.25
U. Open Space	(.50)	160		= 80
Retail Pkg.	(500/300)	375		=625
			SAU =	1,574.49□'

7. Number of SAUs within Buildable Area: 18,670□' ÷ 1,574.49□'/SAU = 11.86 SAUs

8. Number of Apartments on Lot Based on No. of SAUs w/in Buildable Area:
   11.86 SAUs x 1 floor of apts./SAU = 11.86 apts.

9. Given constraints #5 and #8, the largest number of apartments that can be built is: 11.86 apts.

10. Total Building Area:

	Gross	Net
Apartments	6,977□'	5,930□'
Retail	6,977	5,930
	13,954□'	11,860□'

11.86 x 588.24□' → 6,977□'
11.86 x 500□' → 5,930□'

11. Parking Area:

	Gross	
Apartments	3,336□'	← 11.86x281.25□'
Retail	7,413	← 11.86x625□'
Total	10,749□'	

12. Open Space:

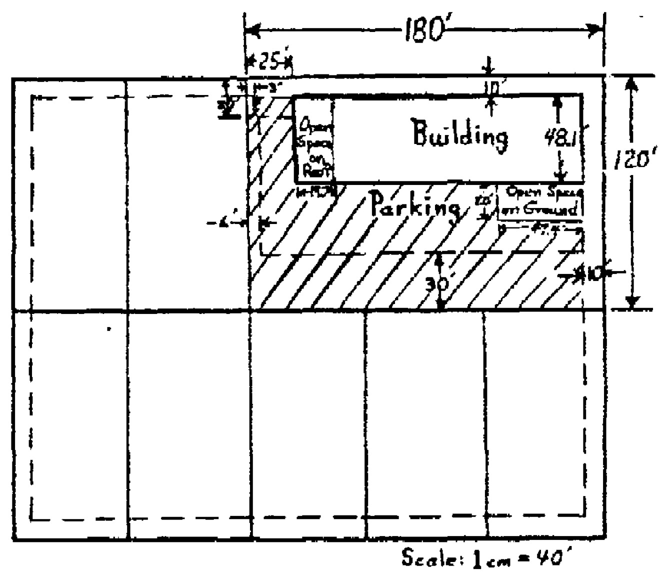
	Gross	
On ground	949□'	← 11.86x 80□'
On roof	949	← (ditto)
	1,898□'	

13. Base Area Check:

	Gross
Building	6,977
Parking	10,749
Open Space	949
Total	18,675

14. Is there a difference between #3 and #13? If so, how much? Why?
    Only □' due to rounding.

15. Illustrate below how you might allocate the required building, parking, and open space areas to the site. Be sure to indicate setback lines, draw to scale, and include dimensions.



SELECTED SAU FORMULAS (FOR MADISON C2 ZONING DISTRICT)

CASE 1: First floor retail*, upper floor(s) apartments

	NET	B.E.F.	GROSS
Building	(Net size of apt. in Ø) ÷	=	
Apartment Parking	(# of floors of apts.)(# of pkg. spaces required per apt.) 375Ø ÷	1.00 =	
Open Space	(")(# of BRs per apt.)(.5) 160Ø ÷	1.00 =	
Retail* Parking	[(Net size of apt. in Ø) ÷ 300Ø] 375Ø ÷	1.00 =	________
		SAU =	________

CASE 2: If only apartments are present, then omit the "Retail Parking" line.

CASE 3: If only retail* space, then use this format:

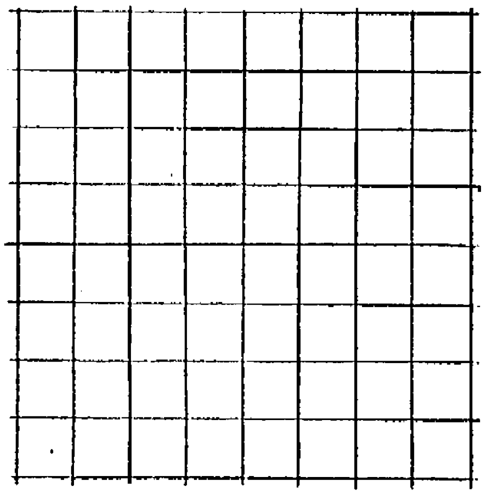
	NET	B.E.F.	GROSS
Building	300Ø ÷	=	
Retail* Parking	(# of floors) 375Ø ÷	1.00 =	________
		SAU =	________

* "Office" can be substituted for "Retail" in these formulas for Madison's C2 District.

Disc. Sn. #2: Legal Descriptions / Recording of Data / Land Use Controls

I. Legal Description of Real Estate

A. Government Survey System



Meridian

Parallel

Principal Meridian

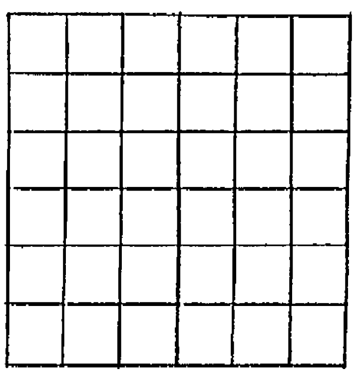
Base Line

Tier

Range

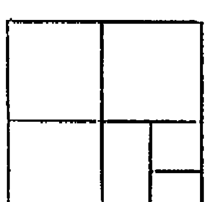
Township
- size
- numbering

Township Tier __________, Range __________



Section
- size
- numbering

Section ___ of Township Tier ____________,
Range ____________



Fractional Parts
- description
- size

B. Metes & Bounds

- how it works:

- wrt rural land:

- wrt urban land:

C. Plats

- how created:

- how used:

D. Street Address

- OK to use for:

- problems with:

E. Reference to Outside Facts

- valid only if:

II. Recording of Data

A. Register of Deeds

B. Constructive Notice

C. Actual Notice

III. Land Use Controls

- intent:

- how used:

A. Private Sector

1. Restrictive Covenant

- created by:

- must be recorded
- renewal in WI:

- common restrictions:

2. Easement

- definition:

- how used:

B. Public Sector

1. Zoning

- concept:

- evolution:

[illegible]

2. Subdivision Regulations

- when apply:

- intent:

- extra-territorial:

- requirements:

3. Official Map

- shows:

- guarantees:

4. Safety Codes

- intent:

- periodic inspections:

5. Highway Access Restrictions

- access:

6. Shoreland Zoning

- intent:

- provisions:

7. Floodplain Zoning

- intent:

- DNR:

8. Interstate Sales of Subdivided Land

- when apply:

- intent:

- requirements:

Tax Law - understand the ramifications:

- revenue source
- is the tax burden equitable?
- a tool to conduct social policy
- continually evolving

Economic Recovery Tax Act of 1981

Accelerated Cost Recovery System

Property Type	Recovery Period (Yrs.)	Deprec'n Method	Recapture*
Residential	15	SL	No
		175% DB	Excess Dep.
	35	SL	No
	45	SL	No
Nonresidential	15	SL	No
		175% DB	All Deprec.
	35	SL	No
	45	SL	No
Subsidized Housing	15	SL	No
		200% DB	Excess Dep**
	35	SL	No
	45	SL	No

* Residential and nonresidential real estate is subject to 100% recapture if held less than 12 mths. Subsidized housing is subject to recapture of excess depreciation if held less than 12 months.

** This excess deprec'n is phased out gradually (wrt being recaptured).

* Depreciation:

- the deduction of a noncash expense from income before arriving at taxable income
- recognizes the dimunition of value over time (i.e., losses from wearing out)
- this has not been the case historically with real estate

- Need:

1) depreciable basis - the amount of capital expenditures allocated to improvements,
2) useful life - the number of years over which the asset will be depreciated for tax purposes
3) method of depreciation - straight-line, declining balance, etc.

- Example of Straight-Line Depreciation:

Given: Cost of improvements = \$75,000
Useful life = 15 years

$$\text{Annual dep.} = \frac{1}{\text{useful life}} \times \text{Original depreciable basis}$$

$$\text{Annual dep.} = \frac{1}{15 \text{ years}} \times \$75{,}000 = \$5{,}000/\text{year}$$

- Example of 175% Declining Balance Method of Dep.

$$\text{Dep. in Yr. } j = 1.75 \times \frac{1}{\text{useful life}} \times \text{Remaining Bal. (beginning of year)}$$

Note: Remaining balance = Original depreciable basis minus accumulated depreciation

Given: Cost = \$75,000; Useful life = 15 yrs.

$$\text{Dep. in Yr. } 1 = 1.75 \times \frac{1}{15 \text{ yrs.}} \times \$75{,}000 = \$8{,}750$$

" " " 2 = " x " x\$66,250 = \$7,729

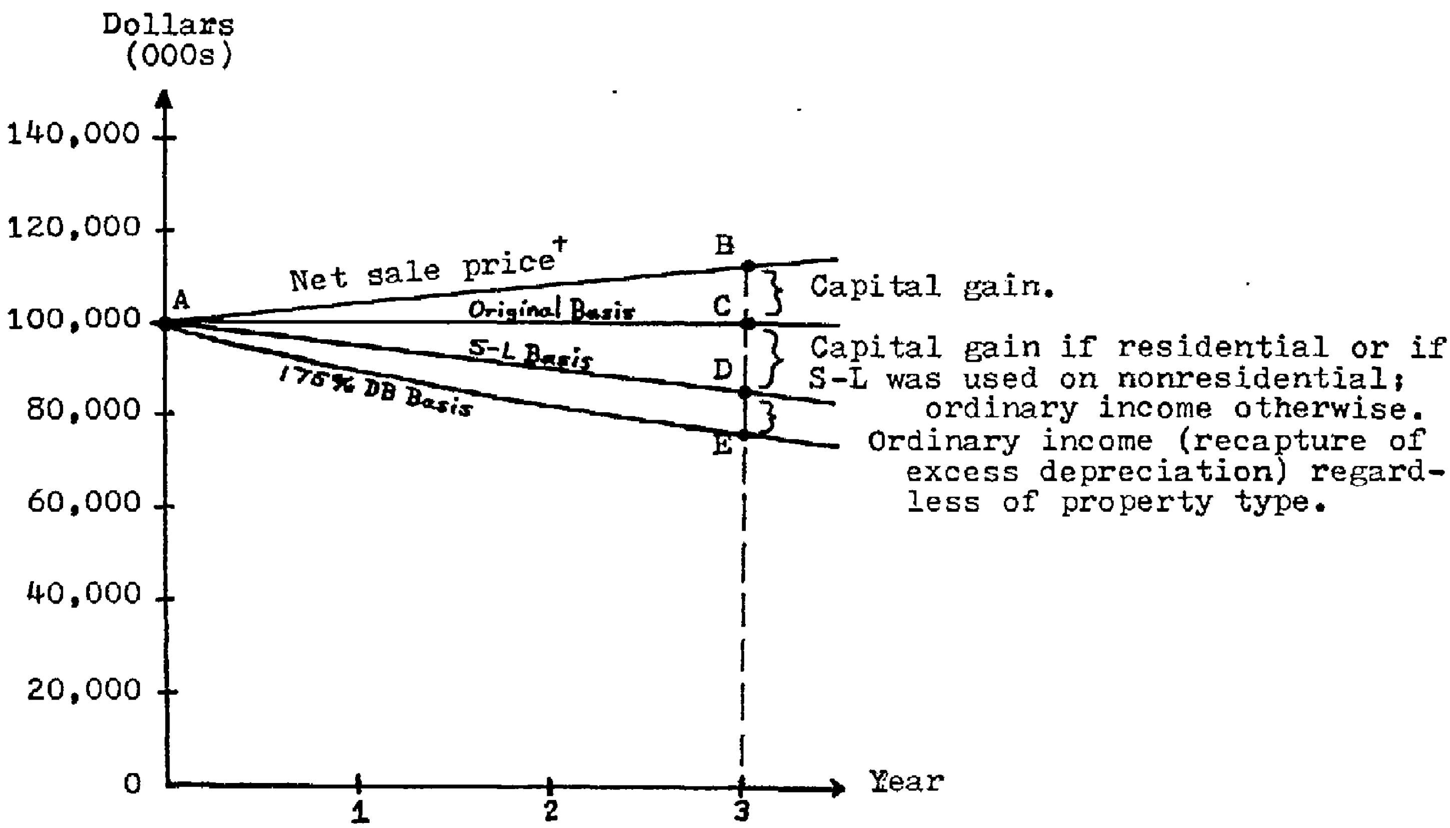
" " " 3 = " x " x\$58,251 = \$6,827

etc.

* Long-term Capital Gain Treatment on the Sale of Property

- Necessary conditions:
  1) the property must be considered a "capital asset" or a "Section 1231" property under the tax code definition
  2) the property must be owned for a period greater than 12 months
  3) the investor cannot be considered a dealer in real estate
  4) the S-L dep. method was used (for full C.G. treatment)
- Long-term capital gain is taxed at a rate equal to 40% x individual's tax bracket or 28% if a corporation

Taxation of Total Gain* upon Sale of Property



25% 75%

A = Purchase price of property (land & improvements) = $100,0

B = Net sales price (after selling expenses) = $112,000

C = Original basis of property = $100,000

D = Adjusted basis using S-L depreciation = $85,000

E = Adjusted basis using 175% DB depreciation = $76,694

Suppose that the above information applies to a nonresidential property that we've depreciated at 175% DB. If the property is sold at the end of year 3 for $112,000, then:

Total gain = B - E = $112,000 - $76,694 = <u>$35,306</u>

Capital gain = B - C = $112,000 - $100,000 = $12,000

Ordinary income = C - E = $100,000 - $76,694 = $23,306

Sum = $35,306

* The "total gain" recognized on the sale of the real estate equals the difference between " adjusted basis" and "net selling price."

† Assume 4% simple growth in project value.

FORMAT

ANNUAL CASH FLOW STATEMENT

	YEAR----	1	2	3	4--------------
1	GROSS POTENTIAL INCOME				
2	LESS VACANCY ALLOWANCE				
3	ADD OTHER INCOME FROM SERVICE SALES				
4	EFFECTIVE GROSS INCOME				
5	LESS REAL ESTATE TAXES				
6	LESS OPERATING EXPENSES				
7	NET OPERATING INCOME				
8	LESS DEPRECIATION				
	LESS INTEREST				
10	TAXABLE INCOME				
11	PLUS DEPRECIATION				
12	LESS PRINCIPAL PAYMENTS				
13	CASH THROW-OFF				
14	LESS INCOME TAXES				
15	LESS RESERVES				
16	CASH FROM OPERATIONS				
17	WORKING CAPITAL LOAN(CUMULATIVE BALANCE)				
18	DISTRIBUTABLE CASH AFTER TAXES				
19	PLUS TAX SAVINGS ON OTHER INCOME				
20	PLUS SURPLUS FROM REFINANCING				
	SPENDABLE CASH AFTER TAXES				

Business 550
Physical and Legal Attributes of Real Estate
Lecture #3 Outline

I. Application of Most Fitting use and Probable Use Concepts

A. The most fitting use is that use which is the optimal reconciliation of effective consumer demand, the cost of production, and the fiscal and environmental impact on third parties, given the limitations on constraints of a specific parcel and existing improvements. Ultimately reconciliation involves financial impact analysis on "who pays" and "who benefits."

B. The most probable use will be something less than the normative and idealistic "most fitting use", depending on short term constraints imposed by the state of real estate technology, short term market shortages and surpluses, current political factors and short term solvency pressures on consumer, producers or public agencies.

C. Fit implies that we can first define the context or elements in a design problem which are fixed, given, or objectives to which any solution must adapt.

1. Note that financial arrangements, marketing programs, as well as property management are all part of the design process in real estate. Design means the software of any enterprise as well as the hardware.

2. Form giving elements are those variables within the control of the artist, the entrepreneur, or the decision maker - i.e. options or alternatives available at a particular time.

D. The next several lectures are concerned with the problem with identifying limitations on use andviable alternatives of use that could be discovered in a given parcel of ground as the first step toward real estate analysis.

II. An Inductive Approach to Analysis

Before identification of a specific consumer target, producer group, or public infrastructure involvement it is necessary to begin with a given - a specific property. Analysis moves from the attributes of the property outward toward ever broader areas of concern.

A. For all real estate problem solving there are basically only three situations:

1. Site in search of a use
2. A use in search of a site
3. An investor seeking a real estate opportunity to improve his spendable cash or net worth position

B. A physical analysis of a real estate parcel in the search for limitations and opportunities should include:

1. Physical attributes of the site and improvements
2. Legal-political attributes controlling use and reuse
3. Linkage attributes which in combination create that illusive element of location.
4. Dymanic attributes
5. Environmental attributes of the site in relation to off-site natural syatems

C. Static site attributes which begin to narrow the potential market alternative uses should include both the facts and their implications for productive use in such topic areas as:

1. Size, shape, and lot area

2. Topography, soils, geology, slope stability, bearing capacity, septic suitability, potential for subsidance, etc.

3. Water table, wells, streams, ponds, storm water swales, shoreland edges, and bulkhead lines, flood plain designations, etc.

4. Flora and fauna which enhance marketability or which might cause environmental impact litigation.

5. Concealed utility easements, old foundations, etc.

6. Existing on-site utility services and capacity.

7. Access points to public thoroughfares or private right-of-ways

8. Site improvements such as paving, retaining walls, pedestrian paths, culverts, etc.

9. Landmark attributes or historical site features.

10. Define physical system sub-systems

    a. Foundation system
    b. Structural system
    c. Floor system
    d. Ceiling system
    e. Roof system
    f. Exterior wall system
    g. Interior wall system
    h. Horizontal circulation system
    i. Vertical circulation system

Life Safety System
HVAC System
Site circulation system
Social Control System

D. Legal Attributes should move from specific limitations on the site imposed by rights of others to private covenants, private controls, etc. It is important to recognize not only the black letter law but the composition of those authorities who have discretionary responsibility for interpretation, enforcement, or amendment of these controls relative to future uses of the site.

1. Legal interests, vested or continued of other persons in the site.

2. Legal description, its accuracy, and implied transfers.

3. All local ordinances defining alternative setback lines and height limitations in order to identify alternative building envelopes permissible on the site.

4. Private convenants limiting use, re-use, or modification of the property (urban renewal covenants, landmark building facade bequests, etc.

5. Applicable zoning and building code limitations on use and the critical constraints of each relative to floor area ratio (FAR) bulk, parking requirements, dwelling unit (DU), etc.

6. Special zoning options which may be available at owners option such as rezoning, down-zoning, PUD zoning, etc.

7. Special controls imposed by other communities through extra territorial zoning, tax conservancy commitments, urban renewal districts, tax increment districts, county regulation of subdivision, and overlapping jurisdiction.

8. Special state constraints on uses affecting shorelands, state highways, state airports, etc. including state industrial building code.

9. Special federal constraints such as airport approach zone districts, harbor and river commissions, office of environmental protection, Department of Housing and Development (HUD), provisions for the handicapped (HEW) and many more.

10. Since the building process takes time, impending legislation is important and regulations require interpretation or public hearings so that public attitudes and expectations may modify black letter law.

11. A hidden source of regulation are the rules which control the lending institutions which lend the money. For example they cannot lend on any properties located in a designated flood plain except under certain conditions which include community participation in flood prevention programs.

III. Analysis of the Physical, Legal, and Political Attributes of the Site

A preliminary analysis of these attributes permits the experienced analyst to discard the majority of majority of alternative uses and to select a set of plausible alternative uses which we call scenarios, courses of action which should be analyzed further in terms of marketing, pricing, costing, and acceptability.

A. These initial screens for elimination need to be refined by reference to the dynamic, and linkage attributes and environmental constraints which characterize the property. Sometimes legal and physical are related.

B. Consider the site of the Camelot Apartments. The soils are very bad and were capable of supporting only light weight industrial buildings. There was a side track and noise from the railyard. Hence it was zoned M-1. A developer thought he could afford to take advantage of a park by putting in extensive foundation improvements and siting the building to minimize window openings facing the railyard. Excessive costs were only possible by finance by a limited partnership. Eventually a legal issue ensued as to whether best use of the site was commercial or residential.

C. Some static attribues may help identify most probable user types (Ex. special display window sizes may be suitable for antique or art display) while attributes will make certain uses unlikely (Ex. floor load limitations of fire proofing weights required of places of public assembly).

D. Some static or legal attributes can provide monopoly advantages because suitability is unique relative to lands all around it, because of exemption from certain regulations, or existing approvals of development plans, including licenses for dredging, building code variances, etc.

Spatial Distributions Within & Among Clusters

I. Aside from a certain need for social interaction, an ordered dense ~~of~~ cluster of people creates certain economies for any exchange system.

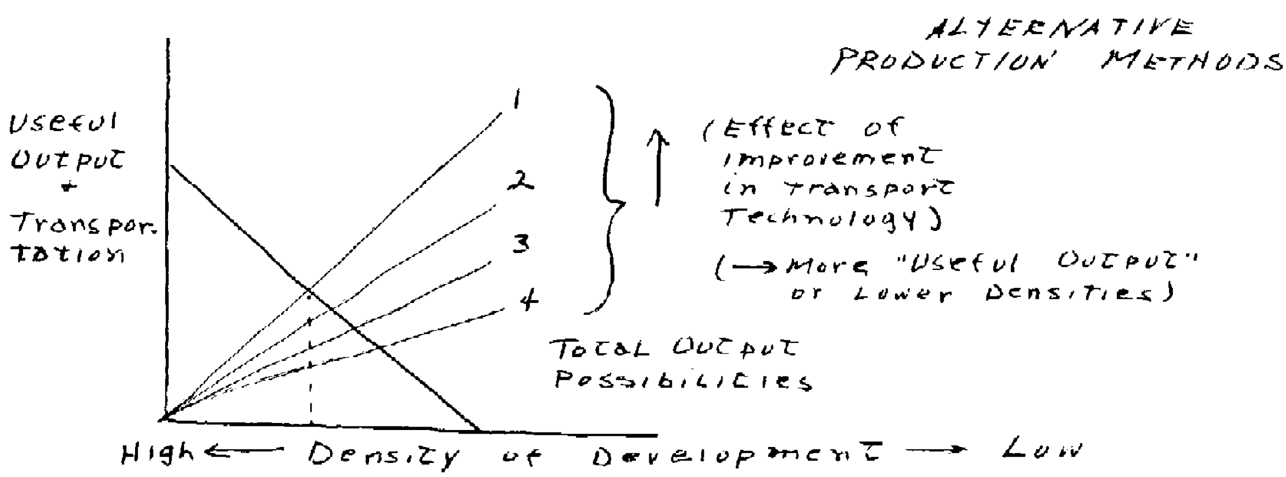
A. Clustering permits internal economies of scale due to increased specialization of labor and enterprise and reduced distribution costs.

B. External economies may be the result of increased logistical support made possible by agglomeration. For example, sewer line in place of septic tank is only possible where there are only short runs of pipe between collection points. Responsibility for disposal is shifted from the individual space user to a external community system.

C. Communication is an essential byproduct of clustering because it fosters innovation and reduces the cost of mistakes or duplication of effort.

D. Nevertheless, the orginal and most dominant cost affecting location of each cluster relative to one another and internal ordering of priorities within a cluster was transportation costs. The greater the effort, the more product allocated to transportation, the less net output any enterprise can enjoy (the appetite of the horse for oats reduces the net surplus from the farm).

1. The trade-off between transportation economics and urban land economics is suggested by the simple tradeoff diagram A.



2. The arrows labeled 1,2,3,4 show progressive reduction in transportation costs (below the arrows) and successive increases in useful output given ~~an increasing degrees of clustering~~ despite declining degrees of clustering.

3. When transportation becomes cheaper the economic payoff of clustering is less necessary and therefore people may choose to have lower densities, less spatial order or some combination of aesthetic satisfactions.

II. There are many different theories by economic geography as to what is an efficient location for different types of enterprises. Urban Geography is a useful course area for real estate majors. A few demonstrative theories follow:

A. A weight-gaining process - product gets heavier as it reaches the market - that is an increase in cost per mile of transportation the more complete the product.

1. The more significant the weight-gaining process the closer the enterprise to its market, assuming the other costs of production are identical. Transportation cost not only reflects weight and distance but bulk (modular homes), perishability and fragility (bread) and this assumes all other costs are equal.

2. In general, we are talking about the costs borne by the firm and not the real cost to the economy so if suppliers conceal costs with discriminatory rating, delivered pricing, etc. eventually the pattern of business location is less than efficient for the economy as a whole.

3. It is also assumed that the firm is free to locate anywhere along the line between raw material and market when, in fact, locations with the desired logistics are limited and there are irrational goals, too.

B. Multiple sources and multiple markets involve location vectors as in the second diagram. There is a point at which the aggregate transportation cost per ton of steel is least.

C. Urban areas are generally involved in exchange processes one of which is a transportation break point - i.e. a change in the mode of transportation from barge to rail or rail to truck.

D. There are foot-loose enterprises in which transportation and convenience cost are minimal in relation to value added, suchas diamond cutting or the manufacture of transistor diodes.

E. The way station of accommodating transients.

III. Assuming that urban clusters make sense and are spaced out with some logic, the question remains what goes where within a single urban center (ordered cluster) - i.e., pattern of urban land uses. Such pattern is relative and not absolute. For the moment, pattern is considering a "featureless plain" so the topography, water, and subsurface conditions, and political boundaries have no significance. With those assumptions pattern can have a number of dimensions.

A. Relative direction of various uses - such as oil refineries should be at the opposite end of towns from homes, or factories should be outside the green belt buffer.

B. Another dimension is density expressed as number of dwelling units per acre, or workers per square foot of floor area, or ratio of building/floor area to land area.

1. Density should be a frequency distribution and leads to many different sociological topography maps.

2. Frequency distribution modes influence values, pattern of retail and public facilities, and particularly the transportation system.

3. High density office buildings as compared to low density of employees in factory buildings will influence their relative locations and transportation linkages.

C. Definition of land use categories will influence our ability to study spatial arrangements in terms of diversity of land uses and locational tendencies of these uses. Diagram B of the average distribution of land by forty-eight (48) large cities shows the relative significance by 5 broad categories and it should be noted that while residential is the largest single class, it is far less than 1/2 all the land use.

D. The urban land economist has traditionally assumed that the separation of land uses, often through zoning and city planning, will create a land pattern. Some criteria of maximum benefit:

1. Efficiency is aggregate expenditure for internal transportation. Ideal is to reduce rent differentials to zero.

2. Fiscal profit where the real property tax is the primary source of revenue.

3. Social integration to achieve neighborhoods of relative homogeniety.

4. Control of external cost such as traffic or noise nuisance.

5. Flexibility to absorb new elements without becoming dysfunctional.

6. Prescriptive order - how people will live and behave.

7. A pattern which suggests a certain ethos or life style.

E. This is not an exhaustive list of criteria for urban land use patterns but it might suggest that with proper definition one could select a land use pattern which was best although that itself has some unattractive implications.

Of course, we are not often given clean slate options as to overall land use patterns as we must begin with an urban area as we find it and we must adapt to physical limitations of the land. Nevertheless your textbook will explore certain basic interaction patterns such as Hoyt, multiple nuclear patterns, star patterns, etc.

F. Within a certain loosely structured pattern imposed by society or physical constraints of an area individuals will be fine tuning their linkage patterns to optimize their particular goals and objectives, some of which are rational and predictable and others which are highly subjective. Planners cannot anticipate these patterns and thus the marketplace is a very useful allocation and rationing device which determines the texture of land uses in the city.

Business 550

LECTURE #3
Social Impact of Real Estate

I. The decision process involves both identification of alternative outcomes including financial consequences, and conversion of value judgments to selection criteria as in the following diagram A:

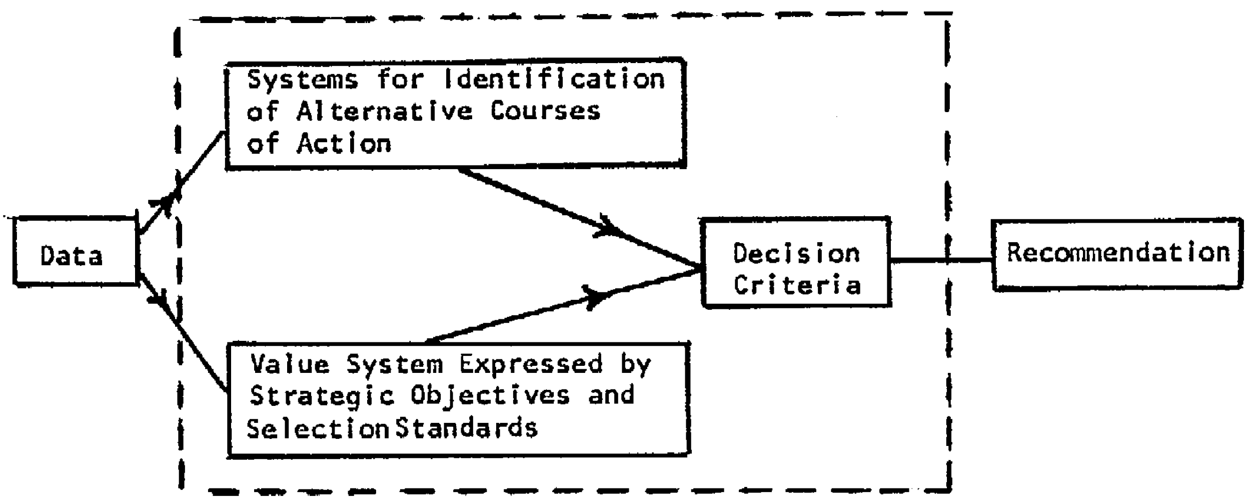


Diagram A

A. Social content or impact of real estate is found in:

1. Decision procedures of users, producers, and public agencies.
2. Impact of past real estate decisions on future behavior of individuals and social groups.
3. Winston Churchill - "We first shape our buildings and then our buildings shape us."

B. The space user can express his values...

1. As a market transaction.
2. As a do-nothing decision.
3. As explicit collective social or political action.

C. The space producer can express his values...

1. As an individual selective response to user stimuli.
2. As a collective response to external forces.

D. Political infrastructure reflects values...

1. Of the constituency through laws and ordinances.
2. Of the political administration through discretionary procedure.
3. Through devices for public hearings and appeals.
4. By means of the threat of future political action.

E. Thus to examine social values in decision making and social impact of real estate solutions on society involves the real estate process in an almost infinite variety of behavioral models of the political and social process. Thus land economics grew out of the school of Institutional economics which saw economics as a by-product of social organization.

II. Cities of the past often have physical clarity in land forms, layout and architect as a result of static population, static technology, and cultural continuity. A value consensus leads to simplistic purposes with momentum over time.

A. Specific purposes produce a desirable order so that social need was reflected in urban forms.

B. Interaction was simplistic in priority, defense, commerce, religion, etc.

C. Form builders made changes in traditional procedures only in response to significant and obvious irritation, misfits in the form fit to the context such as the London fire, the cannon, or disease from polluted water.

D-1 Defensive town - Naarden
D-2 Roman military town - Aosta
D-3 Inca store town - Pikillacta
D-4 Peking - Tartar City - Imperial City - Forbidden City
D-5 Canal structure of Amsterdam

III. Settlement of the new world meant conditions of cohesive development in other civilizations were gone.

A. Population explosion

B. Cultural restructure from outer directed to inner directed

C. Technological explosion in communication, transportation, and building structures

D. Property rights were a populous emotional experience

1. Pioneer ethic of development favored those who could pay the most and build the biggest.
2. Thus highest and best use concept - that use which had the highest present value of dollar benefit over a specific period of time - does describe the land use allocation system from 1800 to 1950.

E. Cities grew like a reef - a process of accretion, with each building a skeleton built to house a particular activity. A process of accretion tending to cluster around transportation systems leading to the center of commerce, government, and industry.

IV. Over the years, many men of intellectual stature have expressed a fear or disgust for urbanization with historian Arnold Toynbee anticipating that the increase in world population will "silt up in urban slums," and Thomas Jefferson believed cities would be the ruination of American democracy. He advocated that manufacturing remain in Europe and that the loss in transportation and trade over the Atlantic would be offset by the happiness of life in America.

A. If there was a consensus as to form of the city beautiful it was essentially on two romantic images - to the central plaza as the focus of the city for government and business and to extensive lawns as the mark of an estate owner.

1. The rich sought a palace on a hilltop surrounded by grass and the middle class copied this conspicuous assumption with the modern suburb.

2. The focus of each city is growing feeble. The Capital Square no longer is the hub of Madison; the harbor and the three rivers in Milwaukee are no longer the focus of industrial expansion, and so on. Instead of prescribing a form of order to serve a purpose we are tending to simply describe inductively what has taken place as the community "growed like Topsy."

3. It should be noted that most American towns originally had a plan - Philadelphia, the courthouse square of Georgia, the grid plans of the Midwest, etc. but the last 25 years of the 19th century and the first 25 years of this the 20th century overwhelmed the pattern because the pattern was essentially static rather than dynamic in its approach to growth.

B. A Greek city planner by the name of Doxiadus points out that the traditional concentric expension of the city eventually strangles the city center and its functions. As a result the community develops multiple centers and the loss in community identity. If a city is dynamic there is a fourth dimension, sepcifically time, so that the city should be designed to expand logically in time as well as height, width, and length.

1. He proposed that a city of the future be designed to expand in only one direction at a time so that the city could accept population pressure and changing technology without having to tear down or desert its historical buildings and past. He calls his concept a Dynapolis.

2. Compare that concept to the radial, sector, and multiple-nucleii in your textbook.

URBAN LAND 550

Perception of City Structure and Social Organization

I. When man settled down from the nomad's existence of hunter and food gatherer to cultivate the soil and raise livestock, he developed the first forms of man oriented spacial layouts: the village, rural town, and citadel.

In its formative stages, this determination to provide artificial shelter, space, heat, light, and protection,as well as security for his clan and his goods, required living in a selected environment in which the most advantageous location was chosen to bring nature under the control of man.

A. The Neolithic Age is generally considered the beginning of the village society. From 8000 B.C. to the present, the agriculturalists have maintained their settlements on the recurrent cycles of cultivating, sowing, harvesting, and storing. Even the recent introduction of mechanical assistance to the process has done little to change the spatial and functional relationship of a kabbutz of Israel or Sudonesevillage along the Nile from their prehistoric predacessors.

B. Rural towns must be as ancient as the concept of berter exchange- the true purpose for their existance. The village cycle of harvest now has added to it the elements of market transfer, and dispersal. In North America, the Germans and the Dutch knew how to build uniform market towns, but the English and Scots adherred to dispersed village planning. Even in towns with foundations of purely urban character this is true- resulting in ragged subdivision lots of modern times.

C. In addition to village and market town, the third achievement of man's sense for spatial layout was the fortified settlement or citadel. It's origin is an inextricably connected with sedentary living and the accumulation of wealth as the village or the market town. The mountain or hilltop citadels far outnumber the fortified control points on waterways and roads, but in every case, the common characteristics remains the full exploitation of natural advantages. The purest example of "high town" settlements were achieved neither in Europe nor in Asia, but rather with the pre-columbian cultures of South and Central America. The search for high ground as the ultimate form of natural defense was abandoned with the introduction of gun powder and firearms in the 14th, 15th, century.

II. No concept of man-made environment ever dies and none ever becomes obsolete if society has the potential for maintaining its statu-quo in terms of man-to-man interaction.

A. The drive toward urbanization has gripped mankind since the third millennium B.C.-observed by some experts as the longest substained irrational impulse in human history.

1. City life meant separation form natural resources, denfenses, and escape routes.
2. It meant passive exposure to famine;epidemic; conflagration; earthquake ; and assault by sword, cannon, and ultimately by warplanes.
3. The conspicious desplay of urban wealth, the concentrationo of administrative power in monumental buildings, had a magic attraction for the have-nots who attacked with monotonous regularity the cities, "because this is where the money & goods are."
4. As the cities rebuilt, redeveloped, or renovated after each overt or covert onslaught, their spatial organization changed and modified and thus dating older man-made environments obsolete to contemporary threats and fears.
5. The gains and curses of the first urban age might have evaporated in the inferno of incessant warfare if they had not proved so persuasive to those who come to destroy them.

B. Man has built and loved cities because in the urban form he constructs the superimage of his ideal self.

1. In the city man has been able to amplify, beyond the limits allowed by the natural environment, the elements of human intellect: worship, power over nature, consolidation of human resources, knowledge, and wealth.
2. As urban cultures multiply by either self generation or assimulation, the variations on urban spatial layout become more individualistic. Their origins, however, trace back to common motivations and objectives.

3. All planned cities are the interpreters of social myths
   a. Nineteenth century cities were called upon to visualize the myth of:
      -unlimited free interprise
      -successful colonialism
      -regeneration of splendors of past ages through ecclectic architecture
   b. The twentieth centruy is in breathless pursuit of the adequate statement of the technological city as well as the image personal freedom and unlimited choice.
4. Some architectural concepts take many generation to achieve perfection just as the social values that stand behind the spatial layout took generations to become institutionalized.

III. The architectural aesthetics of the "heritage of Greece and Rome"have their most impact through the emphasis by renaissance scholars to revive the Roman architecture and planning axioms of Vitruvius' ten books on classical architecture.
   A. These nostalgic attempts to keep alive the Hellenistic traditions and principles feel far short of theoretical objectives. There was a obvious misfit between the social systems that developed the spatial pattern of third century B.C. Rome and the dense old quarters of medievel cities of Florence and Venice.
   B. The best example trying to impose the Hellenistic principles over medieval reality is the efforts of Pope Sixtus V and his architect, Fontana between 1585-90.
      1. After the council of Trent (1545-63), Pope Sixtus V decided to construct connecting avenues between the seven most famous pilgrimage churches of Rome.
      2. There is no evidence that Sixtus had intended a city wide renewal project by changing sections of Rome from a maze of medieval slums into a comprehensively planned city with its broad linear precessional routes "with reciprocal vistas.
      3. It is clear that Sixtus was concerned only with mobility and ease of access for the religious pilgrim throngs and was totally unconcerned with the worldly Romans who had strongly objected to the increased pressures from the church during the Counter Reformation.
      4. Although Sixtus dod not live long enough to see the fruits of his labors, the results far exceeded the origianl expectations.
         a. The linear redevelopment was a triggering mechanisms that would have its effects on continued redevelopment of Rome for four centuries.
         b. The absolutist monarchs and their planners who dominated the architectural activities of the seventeenth & eighteenth centuries were greatly impressed by the popes brutal,but effective approach. This had the obvious additional advantage of self-glorification and displacemnt of disadvantaged populations from selected areas of medievel city slums. (not much different from the present interstate highway displacement in our urban areas.)
   C. The attempts of Sixtus to alter the spatial pattern of Rome and later by L'Enfant's proposed plan for the city of Washington set the stage for the replanning of the city of Paris.
      1. Baron Haussmann was commissioned by Napoleon III in 1853 to redesign Paris with the dual purpose of:
         a. enhancing its real estate value by constructing modern boulevards
         b. suppressing riots by cutting through the medieval maze of a city whose population was known for republicism and violence.
      2. Hausmann's concept is an expression of nineteenth-century commercialism despotism vs. democracy, just as Sixtus' plan was an expression of cleric vs. secular urban political forces.
      3. Haussmann's achievement was again only partially successfully because it neglected the connective tissue of the minor streets and completely ignored any major road connections with the rural areas beyond the city. This problem still plagues the city today.
   D. Modern politically oriented city planning projects are still rather simple-minded when it comes to developing a new variation on an old theme.
      1. Costa and Niemeyer planned and built Brasilia with 1200 foot wide avenues that isolate completely segments of the city into manageable single use units or super blocks as well as providing for a sense of monumentality and visual impact.
      2. Le Corbusier's plan for Chandigard, capital of the Punjob State in India, attempted and interesting and sophistacted comprise between the past and present theories of space allocation thru the use of complete sub city sectors related to more formal commercial and governmental superblocks.

IV. Up to this point we have been dicussing the issue of major urban spaces which are the domain fo the public at large, but an even more important element of city structure is the arrangement of individual functional space users.

A. There are a number of basic concepts of human settlement as presented by Sibgl Moholy-Nagy in the <u>Matrix of Man</u>.

1. the geomorphic approach is organic, characterized by interrelated growth between landscape and building.
2. the concentric approach is edeological which had as its focal point a citadel of religious or military importance.
3. the orthogonal concept is pragmatic where the city is constantly changing requirements of communications and expansion.

B. The geomorphic and the concentric concepts are static, because they are predicated on assummed absolutes- nature and faith or power.

C. The orthogonal concept, based on man-made reality and change, is fluid permitting a greater variety of approaches.

D. In the Rome's civilization, wealth and independence of its ruling class were expressed extravagantly free-form public buildings and villas, the discrimination and contempt for hirelings and serfs was expressed in the modular grid towns built for them.

1. This orthogonal concept has been transferred through the centuries, interrupted only by the concentric approach of the medieval ages, to the colonization of the Americas.
2. Such cities as Savannah, Philadelphia, Indianapolis, and Gary and even Jefferson's Land Ordinance adopted by the Congress 1785 all go back to the original Roman colonialism plans.

E. The opposite of the grid city is the merchant town. The merchant town layout gained ascendancy over all the other planning concepts because it offered participation in the drive for power to the majority. From the middle of the eleventh century to the present this method of planning has dominated.

1. The theories that best explain the growth of the market town are best presented by the use of economic variables.
   a. Hoyt's concentric ring theory and Burgess's sector theory begin to explain the relation of social to physical structure of the city by the factor of site rent.
   b. To the highest bidder goes the choice locations for residential developmant which includes high ground, view oriented slopes, and windward sides of the city.
   c. The working class took what was left and was allowed tohope for better.
2. Studies of many cities such as Manchester, Edinburgh, Belfast, London, New York, Chicago, and others have confirmed the hypothesis of sectional patterns of socio-economic status in which:
   a. Address counts
   b. Quarter acre owner-occupied plots are strongly entreanched in all western European cultures.
   c. There is a point of entry for recent immigrants into all urban centers and these settlement patterns have different locations for social groups. The international unskilled and semi-skilled immigrants locate in different housing sectors from the relatively well educated native young adults on the threshold of their productive years.
   d. Most cities have clear sectional patterning of socio-economic status attributes of population as a result of:
      - in the pre-industrial city, the upper status groups had strong residence to workplace ties with the C.B.D. while the remainder of the residents lived in small neigborhoods elsewhere
      - improvements in transportation freed the upper class from their workplace ties
      - a small number of high-status "rural retreats" tended to develop on the fringe of the urban center
      - increased real income and changes of societal structure created an upper-middle class that followed the rich to the fringe of the city
      - changes in dwelling location became associated with the climb in the status and social structure (filtering is one result)
      - the upper class have the status and don't have the pressure to relocate to mark phases in their social cycle but to the middle class there is only one alternative , move up and out or laterally
      - the majority of the middle class are now also freed from their work place ties and can afford the move away from the central city leaving in the C.B.D. only those that do not have the resources to make the move - the urban poor

550 Lecture Outline
Lessons to be Learned From New Towns

I. The city is a combination of various enterprise systems

A. A residential system includes retail, recreational, and educational facilities and financing.

B. The residential system must include a great variety of styles, prices, tenures, and locational patterns.

C. The retail system includes convenience shopping, neighborhood services, downtown comparison shopping.

D. The recreational system includes open space, water systems, golf courses, big structures like music pavillions and ice skating rinks as well as very small personal tot lots, patios, private gardens, and teenage hangouts.

E. The educational system and recreational system are related from tot lot to elementary school to high school to college courses and technical college courses. Education is a form of recreation.

F. The transportation system also has a hierarchy from international airport and interstate to bike paths to school and shopping. All of these must interface but avoid intersection and conflict. Like Columbia many cities have solved the problem of linking internationally and the mini-systems in the neighborhood but have failed to solve the intermediate transportation problem between village and village or between village neighborhood and downtown core.

G. Utility systems today include water, sewer, storm water, environmental quality control, cable TV, central heat and air conditioning as well as fire and police security. Each has a cash flow problem.

H. More recently town planners can design for health maintenance systems, various levels of hospitals and clinic care and house calls.

I. The land use plan also contemplates social and political interaction on systems. Columbia recognizes the need for appropriate scales of political decision making and budgeting at the point of impact, the neighborhood, the village, the city, and even the county.

1. Social systems include churches, organized welcome committees for new neighborhoods as well as subtle design controls for security and vandalism.
2. Columbia failed to anticipate the teenage social culture and has had more than its share of delinquency.
3. The social hierarchy stresses longevity - the family there three years is established and carries more influence than the Johnny-come-lately.
4. Both the price range and sophistication of the Columbian experiment has skewed its population toward higher education, higher income professionally so that the sophistication of city government is very high and with only 20-25,000 people in place, much of the talent is volunteer because everybody knows somebody else with a special talent.

II. New town experiments have to strike a very delicate balance between three major factors.

A. To buy cheap land in sufficient quantity they must choose a site some distance from established urban areas, but the farther they go...

B. ...the more amenities and infrastructure must be built at the beginning before anyone is attracted to live there for its residential quality. But to support these systems it is necessary to have a rapid increase in population density which can only come if...

C. ...an economic base industry can provide employment opportunity and jobs providing income sufficient to qualify for purchase of a new home or apartment in the new town. But employers need residents in place looking for work so it is easier to begin where economic base is already causing growth.

D. A close-in location or a big investment in infrastructure means high front-end costs which are only justified by creating an early cash flow from land sales, requiring a very competitive marketing package or a location in the middle of a natural growth area (Irvine, Reston, Elk Grove, Park Forest South).

E. The time horizon is too long and the risks too great - Columbia may not be duplicated for lack of land, capital at 6%, or another Rouse. Others have suggested government build new towns.

III. The federal government has tried new towns before, building Greendale in Milwaukee as well Greenbelt, Maryland.

A. These were later sold piecemeal to private developers to complete following World War II.

B. More recently it launched a program of insuring loans for the developers for new towns. The federal government insured loans for the developers, making some of the loans from GNMA and guaranteeing others for up to $100,000,000 per town. About 13 were approved and put into construction, but 8 are out of cash including:

1. Jonathon, Minnesota
2. Flowermound, Dallas, Texas
3. Park Forest South in Chicago
4. Riverton, New York
5. Cedar-Riversite - Minneapolis
6. Gananda - Buffalo, N.Y.
7. St. Charles - Maryland
8. Soul City - S. CArolina

C. All of these are now in distress and the government may lose several hundred million dollars on these projects. The same factors seem to have contributed to their failures in each case:

1. All began with a site in search of a market, an assemblage so large so as to require a new town rather than the Rouse example of locating a need first and fitting the site to it.
2. None of them established the capital budget and then the plan and disciplined the planners according to pre-set cost allowances.

3. The government guarantee required compliance with a host of government regulations and the government bureaucracy was unable to make decisions with the speed required of a business enterprise. A $20,000,000 loan at 6% interest is $1,200,000 a year or $100,000 a month or $3,300 a day. The government would delay several months at a time on critical decisions or would refuse to include interest costs in allowable capital budgets.
4. Environmental impact studies were done only after the site had been selected so that large amounts of capital were required to correct or avoid environmental impact. Flowermound was discovered to have serious underground water pollution potential; Riverton had large acreages in a flood plain, etc.
5. Original capital budgets had not anticipated the inflation in construction costs, particularly in utility infrastructure.

IV. The success of Columbia and the failure of other programs ultimately can be traced to one pattern:

A. Government planners and developers treat each other as adversaries rather than respecting the contributions of each viewpoint.

1. Planners refuse to acknowledge the discipline of cash flow solvency and the time value of money which imposes a dictatorship of adherence to scheduling.
2. Business oversimplifies the need for simultaneous integration of public infrastructure, social software required by the consumer, and the conventional hardware of real estate.

B. No good real estate has ever come from a committee. Ultimately there is only one entrepreneurial ego with an obsession which fits land use to his viewpoint and objective.

1. When it works we remember William Penn, Oglethorpe, or James Rouse as great humanitarians.
2. Sometimes the designer of public buildings; sometimes it is the developer of private buildings.
3. Nobody remembers the committee who designed Rockefeller Center
4. The difference between success and failure is often the understanding between the old concept of "highest and best use" i.e., maximization of value for the parcel, and the concept in this course of "most fitting use" adaptation to the linitations of the environment wishes of the consumer, and solvency of those involved in the process.

C. An example of highest and best use is Water Tower Place on Michigan Avenue in Chicago.

1. The site had been private park for the family of Edgar Bronfman, founder of Seagram's Distillers until he sold it in 1969 to Phillip Klutznick who operated Urban Investment and Development Company, which he had sold to Aetna Life. Urban Investment entered into a 50-50 joint venture with Marsahll Field & Co. to develop the site.
2. Total land cost was $20 million and that meant intensive development. The design was a response to the pattern of available market in the area in 1970.

a. Office supply was in excess of demand; the site was surrounded by millionaires and had the image of a high income area but it was necessary to attract middle income people to the area to shop to generate the volume.
b. Two floors of office space provided for the lawyers and physicians.
c. Parking and delivery areas occupy four levels below grade.
d. The Ritz Carlton Hotel occupies 22 floors with rooms at \$75-100 per night.
e. 40 floors of condominium apartments costing \$100,00-200,000 each are stacked above the hotel which is stacked above the shopping center.
f. The anchor stores, Marsahll Field, and Lord & Taylor occupy 300,000 sq. ft. Depending on location retail rents range from \$15 per sq. ft. to as high as \$45 a sq. ft. plus assessments. A specialty shop paying \$30/sq. ft. for 2000 sq. ft. would have to gross \$600,000 a year.
g. First years volume was \$65 million, slightly more than \$100 per sq. ft. which is the national average for shopping centers.

3. The critics have blasted it:

a. Paul Goldberger, critic for The New York Times, labeled the marble facade "dreary and pretentious."
b. Critic M. W. Newman, writing in the Chicago-based Inland Architect, called Water Tower Place "the 'everything' building that provides Michigan Avenue with everything but architectural or urban grace."
c. "What can you say," he wrote, "about a slender vertical slab more than 70 stories high, wedded uncomfortably to a horizontal box housing shops and atrium? A slab slapped on a box, that's about it..."
d. "You have to go back to words like vulgar," said one Chicago architect - who, like other architects quoted here, was reluctant to be identified. 'Water Tower Place goes beyond the point where vulgarity on a grand scale can be called a style."

4. People find the exterior marble mausoleum ugly but if one builds a suburban shopping cneter of 600,000 sq. ft. on land of 60,000 sq. ft. there is no room for setbacks; retailers don't want windows; meeting rooms in hotels are better as one story structures to eliminate columns; and hotel, apartments, and the retail mall each demand separate entrances, elevator systems and other environmental systems and as a result form follows function.
5. Water Tower has been defined as a machine for making money and it may fit the neighborhood as it is; the trouble is it doesn't fit the American dream of what the city might be and American nostalgis or the history of what was. In short, the values of the egotistic city builder are out of synk with the values and criteria of the critics.

V. Real Estate is applied science subject to the discipline of cash solvency and sparked by an ego which has good radar for the dreams of the middle class. Such a talent is Mr. Rouse who responded to the dreams of better suburbs like Columbia and now to the dreams of restoration of the inner city with a project called Faneuil Hall Marketplace in downtown Boston.

A. William Penn and Walt Disney were both great city builders. Disney World proves that ther is a huge middle class market for entertainment flavored with history a la mode.

1. Old cities which have lost their retail trade to suburban malls are intrigued by Disney World's magnetism. If the cities can create downtown entertainment centers, neat, bright and laced with nostalgia, they might attract suburban customers back in town.
2. Boston has learned well. The recycling of the Downtown Waterfront and the Quincy markets is an awesom success. These projects represent a skillful blending of the principles of Oglethorpe and Disney.

B. Faneuil Hall Marketplace, in downtown Boston, is adjacent to Faneuil Hall and is bordered by Government Center, Haymarket, the Waterfront, and the Financial District.

C. Faneuil Hall Marketplace consists of three 19th century market buildings: Quincy Market, the copper-domed center building; North and South Market buildings; and North and South Market Streets. The project is being restored for new retail and office use, all designed to create a contemporary urban marketplace in downtown Boston, Massachusetts.

D. Some of the statistics are:

1. Faneuil Hall Marketplace occupies 6.5 acres. Each building is 535' long and 50-65' wide.
2. The Quincy Market has three floors and contains 85,000 sq. ft. of retail space.
3. The South Market building has six floors, including the cellar and contains 160,000 sq. ft.: 80,000 sq. ft. for retail use; 80,000 sq. ft. for office use.
4. The North Market building has six floors, including the cellar and contains 120,000 sq. ft.: 60,000 sq. ft. for retail use; 60,000 sq. ft. for office use.
5. More than 200 retail merchants will occupy space in the three buildings when completed.

E. Faneuil Hall Markets, the original name of the three buildings, were built in 1826 by Mayor Josiah Quincy from the design of architect Alexander Parris. The granite, Greek Revival buildings are listed on the National Register or Historic Places because they formed one of the most architecturally impressive and large-scale urban developments in the U.S. during the 19th century.

F. Faneuil Hall Marketplace is being redeveloped into a contemporary downtown commercial center.

1. First Phase - The Quincy Market is restored to resume its historic use as a food market. It features a variety of restaurants, delicatessens, sidewalk cafes; meat, poultry, fish, cheese, vegetable, and fruit stands; gourmet food stores; and food-related specialty shops. (opened August 26, 1976)
2. The Bull Market is a group of merchants and artisans selling select wares from small carts and stands under Quincy Market's glass canopies.
3. South Market Stree is landscaped and furnished with benches. Paved with brick, cobblestone, and granite, it provides space for informal gathering and promotional attractions.
4. Second Phase - South Market building is revitalized and leased for mixed retail and office use. The cellars, first, and second floors feature quality specialty shops (fashion apparel, home furnishings, accessories, and imports) and restaurants with nighttime activity. (Agusut 26, 1977)
5. South Market building has over 50 retail stores. The Arcade and The Gallery are two separate groups of small shops within the building. The Arcade consists of jewelry, gift, and accessory shops; The Gallery consists of fashion clothing and home furnishing shops.
6. The third, fourth, and loft floors are being leased for modern office use. Offices range in size from 600 to 15,000 sq. ft.
7. Third Phase - North Market building is being revitalized and leased for mixed retail and office use. The cellars, first, and second floors feature quality apparel and accessories, home furnishings, and restaurants with nighttime activities. The third, fourth, and loft floors are being leased for modern office use. (Aug.26,1978)
8. North Market Street will be transformed into a lively pedestrian way, with brick and cobblestone pavings, kiosks, pushcart vendors and changing promotional attractions.

F. LEASE: The City of Boston is the owner. The Boston Redevelopment Authority has leased the building for 99 years to the developer for 25% of tenant rentals in lieu of real estate taxes. This year the City will make $225,000 but the state will gain $2 million in sales tax and meal tax. The money flows to the state even though the rehab costs were those of the city and the federal government. In its first year of operation Disney World attracted 14 million visitors; Quincy Market did about 13 million. Unlike Disney World it cannot screen out known criminals so that it has a bigger security problem.

G. ARCHITECT: Benjamin Thompson and Associates, Cambridge, Massachusetts.

H. CONTRACTOR: George B.H. Macomber Company, Boston, Massachusetts.

I. THE MERCHANTS: 63 permanent merchants occupy the Quincy Market; 53 are local merchants, 6 represent regional chain stores; 4 represent regional chain stores; 4 represent national chain stores. The Bull Market consists of 30 changing artisans and craftsmen.

J. THE SHOPPERS, ACCORDING TO A MARKET SURVEY NOVEMBER, 1976:
1. the average age is 37
2. 65% live and work within the Boston Metropolitan Region
3. 54% come by private car and travel 20 miles
4. 30,000 people visit Quincy Market on an average day

K. SALES:

1. Quincy Market in its first year of operation has achieved an outstanding performance. Sales per sq. ft. are projected to be $300 on an annual basis.
2. The Bull Market sales per square foot are projected to be $500 on an annual basis.

L. ECONOMIC IMPACT:

1. Quincy Market provides 700 jobs for full and part-time workers.
2. New ventures: 12 merchants started business in Quincy Market. 48 merchants started new types of business.

SLIDE SCRIPT - COLUMBIA I

1 (title)

2 Planners anticipate the Eastern seaborad will become a single megalopolis by the year 2000. It would consist of a continuous series of urban centers and suburbs linked together by interstate highways, airports, and public transit. Regional planners for Washington D.C. anticipate that the capital will be the center of a string of satellite new towns.

3 A good example of urban centers gradually growing together is the Washington - Baltimore corridor. 1970 population spill-over is indicated by the red dots.

4 By 1985 the population will increase by another 1 million people. Some new towns like Reston begin by seeking a large piece of property for single ownership and hope to draw people to their location. Columbia started by identification of current population trends and then choosing a site to harness the momentum of expected growth patterns. Columbia needs to capture only 10 - 15% of the anticipated growth on the Washington - Baltimore corridor.

5 The best way to capture a market is to give the customer access and so Columbia's builder, James Rouse, located astride two super highways, a rail spur, and connectors to Baltimore - Washington beltline highways (in blue). These highways reach 3 major airports (Dulles, National, and Friendship). It is at the center of a regional market which is fourth in size to metropolitan New York, Los Angeles, and Chicago.

6 The skyline of downtown Columbia, a new city between Baltimore and Washington planned for 110,000 people by 1981. The present population is over 21,000. The new city was five years old in 1972.

7 Columbia is being built with the idea that cities can work for people-- that a city can be a comfortable and efficient place to live-- and that only a city can provide the full range of services, institutions, recreation, and cultural attractions that people need for growth.

8 Columbia's planners believe that even in the busiest of urban places there should be trees and water, paths to walk on, and places to relax.

9 Kittamaqundi, the new city's 32 acre man-made downtown lake, borders the downtown plaza--where residents gather in winter or summer for a variety of activities.

10 This schematic layout of Columbia suggests planning for each level of community life--a city center, 7-10 villages, and each village divided into 4 or 5 neighborhoods. Each village and neighborhood has its own center. The dotted line indicates a bus route, closed to autos, which connects each village with one another and the town center.

11 A schematic plan of the city center shows the relationships of each component. These components are designed to provide a sense of place, a focal point for community life. Both business and civic enterprises which require a large marketplace or a linkage to the interstate are located here. Notice that in addition to office areas, a major shopping center, a hospital, theater, and hotel, provision is made for some downtown residential areas.

12 Over one million visitors have seen the Columbia Exhibit since it opened.

13 Displays change with the seasons. These are school kintergarten interpretations of the good life at Columbia.

14 The visitor's center indicates the ability of Rouse designers to design at a low budget. This is a steel industrial building and was the first building in downtown Columbia. Some day it may be replaced with a highrise.

15 In the center of the visitor's building is an information counter and photo snap shots displays to help prompt questions. Space is at a premium but the skylight and sunshine avoids a tunnel like feeling. To the left is a theater providing a slide show on the Columbia process and concept.

16 To the right of the entry is a pavillion-type space in which each builder and apartment project has its own display of photos and plans. Note the steel roof and wooden boards of this industrial building. The end of the room looks out on the lake through floor to gable glass.

17 To the right of the exhibition building are the terraces of the downtown lake front.

18 The first investment Rouse made was creating a central place around this manmade lake.

19 Here are the fountains before there were people to enjoy them in 1967. We will return to this view later.

20 A gazebo on the shoreline on the plaza of the teacher's building.

21 A view of the Teacher's building and downtown parking. This became the home office of the Rouse company until completion of the American Life City building.

22 The American ~~Life~~ City building under construction was pre-fabricated of concrete panels and standard steel conponants.

23 Across from town plaza is The Mall in Columbia--a completely enclosed shopping area with two major department stores and over 100 smaller shops and services. The Mall is designed to serve as the retail core of the new city and its surrounding region.

24 The Mall's central court features a fountain whose water rises to a height of 25 feet.

25 Trees, an old street clock, two additional fountains and a glass roof convey an outdoor atmosphere, indoors.

26 Restaurants and snack shops featuring specialty food items, plus the liberal distribution of tables, chairs and benches throughout The Mall invite shoppers to pause and relax. Expansion plans call for 200 shops and an additional t ree department stores.

27 Rouse plays for taste and smell as well as sight and sound in The Mall. Here is a raw oyster bar where they shell oysters and clams to order in season or provide shrimp and scallops deep-fried. Imported beer on tap. One kiosk serves fresh baked cinnamon rolls and bread while the aromas float free in The Mall. These were used to balance pedestrian flows between first and second levels of the center.

28 Notice the fountains are designed to permit people to get close and enjoy quiet zones, or...

MISSING

29 To peek over the second level rail and remind people of activity down below as well as to provide an auditory gauze to muffle background conversations.

30 Notice the light space-frame ceiling which floats over the gaps between individual store buildings. This type of construction can be easily extended for future addition to the center. It is easy to maintain, to hang with displays, or to punch with windows. It reverses the current trend toward dramatically high sculptured white plaster ceiling with indirect lighting as found at Woodfield or Southridge.

31 In this aerial view the interstate connecting Baltimore and Washington moves diagonally at the top left corner along side Lake Kittamaqundi. The boulevard system is Columbia's own major traffic system. Notice the pedestrian bridge spanning the boulevard between the American Life Building left of center and the shopping center. In the woods beyond the center is a music pavillion. Separating Columbia's central downtown from the 7 villages that will eventually surround it are open spaces--woods, lakes, stream valleys, playgrounds, parks, golf courses, and other recreational areas. More than 20% of the new city's land area is designated "open space".

32 Located in Columbia's 40 acre central park, Symphony Woods, is the Merriweather Post Pavillion--host to concerts, ballet, musical theater and popular singing stars every summer.

33 Here is a view of the Merriweather Post Pavillion for which Rouse has made a 20 year contract with the Washington Symphony orchestra for summer concerts. — [illegible]

34 The Washington summer climate gives a longer season to open-air pavillions.

35 The grassy banks and limited number of columns doubles the sudience capacity to see and hear.

36 The Garland Dinner Theater is open the year-round with light comedy and a sumptuous buffet.

37 Howard County is responsible for education, public safety, sewers, water, road maintenance, etc. As with most Maryland cities, Columbia is unincorporated. An elected county government provides city services. Shown is the Howard County Fire Department's Columbia station.

38 The grouping of villages around the downtown core (in red) and the highway network is indicated by the raised portions of the map. While Rouse controls 23,000 acres, there are a few areas and subdivisions interspreced in this territory or absorbed into Columbia and governed by it. Contours of villages reflect both the terrain and the need to avoid existing developments.

39 This more detailed plan indicates the village centers and neighborhood divisions more accurately than the relief map.

40 Here is a schematic of functions to be served by the village center. Notice that cars are excluded to roads at the edge of the center. Shopping and schools and recreation areas may share the same parking capacity at different days and hours.

41 The heart of the Columbia plan is the village--like a small town of 10,000 to 15,000 people. Shown is an aerial of Wilde Lake Village Center. Wilde Lake High School, the circular building is separated by common playing fields from the Wilde Lake Middle School. Tennis courts, the village's major recreational facility--a year round swim center, community buildings, stores and offices ring the Village Green.

42 The car is left at the entrance to the community center in landscaped parking areas.

43 In the Village Center, cars are parked outside, and there are safe places for children to play while their parents shop, stroll or visit with friends.

44 Good design brings the pedestrian through an entrance portal which does not reveal the entire view but only hints at the plaza within. Notice the total absence of signs and neon tubes. The building on the right has doctor's offices, etc. on the second floor.

45 A close-up of Wilde Lake Village Green shows some of the stores and services that are typical of a village center. A bank, a pharmacy, a supermarket, barber and beauty shops, a cleaners--the kind of stores and services most people use during an ordinary week--plus secondary schools, a library branch, professional offices, and a community hall bring villagers in frequent contact.

46 Notice that the domestic scale of the sheltered walk ways and a stairway which tells the pedestrian how to find the second floor without a sign or fear of enclosed stairwell. The snow problem here is minimal.

47 Not only is the plaza fun but the colonnade reduces the visual bulk of the supermarket building to the right.

48 The pylon provides a reminder of the front entrance and a reference point for directions.

49 Notice plenty of benches for the elderly or the kids in a village park setting. All that is missing is a civil war cannon. Residents of 4 years are regarded as elder statesman.

50 Note the small office building on another side of a supermarket. The shingle mansard roof, the wood casement windows and the small textured pattern of white painted brick are domestic materials rather than commercial surfaces.

51 Across the road from the plaza is a high rise apartment building, the Concord.

52 An outdoor art show is typical of the kind of community activities that take place in the open space common to every Columbia village center. Book fairs, bake sales, craft shows, political gatherings, bring residents to the village center.

53 Plans call for a fast food service, in each village--like this Jack in the Box at the Village Green.

54 Joseph Square in the Village of Harper's Choice is the newest of Columbia's village centers. Like many small towns of old, it features studio apartments above the village stores. Seven villages are now planned for Columbia, four of which are in various stages of development .

55 Oakland Mills has a mini-mall for its basic stores and services. Beyond the enclosed mall is a landscaped courtyard, surrounded by offices and the two barns which serve as community buildings.

56 Oakland Mills was the second village center and Rouse decided to economize by using an existing dairy barn complex.

57 Barns have been remodeled as community meeting rooms and a teen age club.

58 The wood beam construction barns becomes a design motif for the wooden playground sculpture and the closed mall. Notice the shed roof provides clerestory lighting.

59 Here is the inside lighted pedestrian mall.

60 Truck loading docks are still screened with fences at the back of the structure.

61 Trash disposal is handled by an auger system which moves trash below the floor of the building and out to this completely enclosed portable bin.

62 No 2 villages will look alike. Each will have a flavor of its own. Oakland Mills makes use of 2 refurbished old barns for its community buildings.

63 This schematic neighborhood center reveals the close tie between the elementary school the open space area and the neighborhood recreation center.

64 3 or 4 neighborhoods compose a village. This aerial of Bryant Woods neighborhood shows how a neighborhood is planned around an elementary school, so that even small children can walk or ride a bike.

65 There are 5 elementary schools now open in Columbia. Plans call for one in every neighborhood. Being behind [illegible] A middle [illegible]

66 Columbia schools feature open space areas, team teaching, ungraded classrooms and other innovations from the traditional approach to public education.

67 In the summer, the pool replaces the school as a focal point for neighborhood life. The pool and other Columbia recreational facilities and programs, are built, maintained and operated by the Columbia Association.

68 Every neighborhood center has a pool, as well as a park, and community buildings. Many also have a small late-hours store and snack bar.

69 The school playground and neighborhood park are designed to function together, freeing more land for recreational uses.

70 Pathways for walking or biking are designed to lessen dependence on the automobile. Many paths meander through open space and alongside stream beds. Columbia's pathway system has underpasses or overpasses--so that children can get where they need to go, in many instances, without crossing a major street.

71 Even in the small neighborhoods the residential clusters are tied in to pedestrian green strips and underpasses made of giant concrete culverts.

72 Many pre-school programs are offered, ranging from day-care for children of working mothers, to cooperative nursery schools, Montessori classes, and the privately-owned Singer Learning Center.

73 The Columbia Association is a private, non-private corporation supported by all Columbia residents and businesses. An annual assessment on all property owners--residential, business, industrial and commercial--pays for maintenance of parks and open space. Shown is Wilde Lake Park.

74 The Columbia Association (CA) sponsors many classes and recreational activities. A sailing class on Kittamaqundi, the 32 acre downtown lake, is offered to residents every summer.

75 In winter, when Columbia's lakes freeze, many townspeople come downtown to skate. In the foreground is the city's symbol, called People Tree.

76 CA also builds and operates the major recreational facility planned for every village. The Columbia Swim Center is a year-round pool located in the Village of Wilde Lake.

77 Oakland Mills Ice Rink is open from October through June. In addition to general skating, there are figure skating classes, hockey games and exhibitions.

78 The Village of Harper's Choice has a health club as its major recreational facility. Residents receive sizeable discounts for use of facilities that charge a fee.

79 CA also owns and maintains the Hobbits Glen golf course--one of two golf courses located in Columbia.

80 There are public courts located in each village center and a privately-owned Tennis Barn open from October to May. Shown is the Wilde Lake Tennis Club, open day and night all summer long.

NOTES ON CURRENT STATUS OF COLUMBIA, MD

Shorthly after the project started, Robert Gladstone had developed an economic model called "The Green Book" and in working paper 16, a chilling projection showed profits of $10,000,000 on an investment of $100,000,000. Everyone was in love with the idea and modified their assumptions with some creative accounting and selective amnesia. And in Novemeber of 1964 the first shovels of dirt were turned.

A. By 1976, Connecticut General had written off losses of $21 million.

B. Another $3 million was apparently written off by the original bankers, Morgan Guarantee and Manufacturers Hanover.

C. $27 million in losses has been capitalized by Howard County Development Corporation.

D. Rouse Controls only 15% of the stock, having assigned the balance to Connecticul General to compensate for their write-down of debt.

E. Nevertheless, new communities has a ring of high purpose, great publicity, access to other people's money and an unlimited supply of other's to blame when things go wrong. This is just the stuff for architects, planners, and congressmen.

   1. By the end of 1976, HUD had guaranteed debt for 13 projects, six of which had gone bankrupt, six were unable to pay interest on their bonds, and one looked like a viable entity, The Woodlands, near Houston. Viable only because its sponsor, George Mitchell of Mitchell Energy Corporation, didn't much care whether he made money or not.

Lecture #4
Spatial Distributions Within & Among Clusters

I. Aside from a certain need for social interaction, an ordered dense cluster of people creates certain economies for any exchange system.

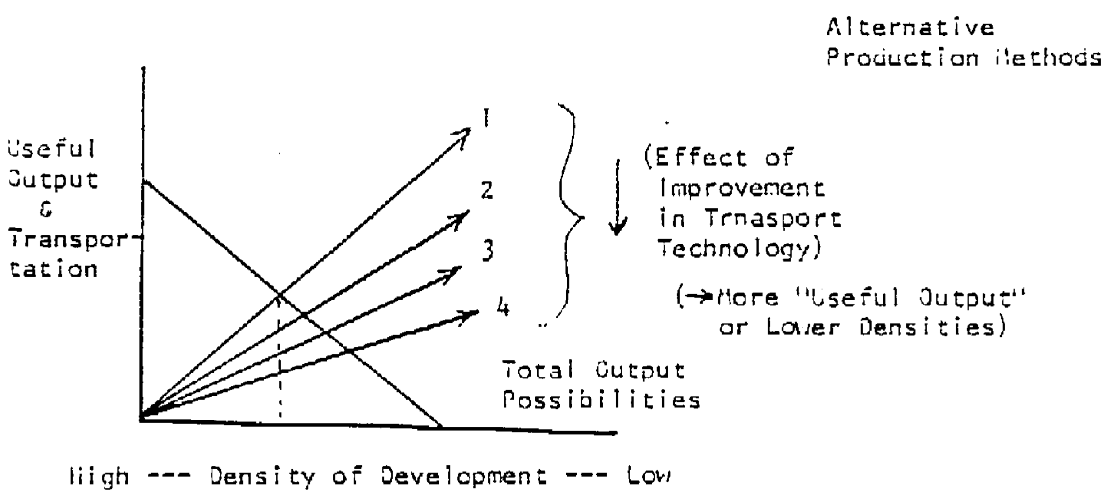
A. Clustering permits internal economies of scale due to increased specialization of labor and enterprise and reduced distribution costs.

B. External economies may be the result of increased logistical support made possible by agglomeration. For example, sewer line in place of septic tank is only possible where there are only short runs of pipe between collection points. Responsibility for disposal is shifted from the individual space user to a external community system.

C. Communication is an essential byproduct of clustering because it fosters innovation and reduces the cost of mistakes or duplication of effort.

D. Nevertheless, the original and most dominant cost affecting location of each cluster relative to one another and internal ordering of priorities within a cluster was transportation costs. The greater the effort, the more product allocated to transportation, the less net output any enterprise can enjoy (the appetite of the horse for oats reduces the net surplus from the farm).

1. The trade-off between transportation economics and urban land economics is suggested by the simple tradeoff Diagram A.



2. The arrows labeled 1, 2, 3, 4 show progressive reduction in transportation costs (below the arrows) and successive increases in useful output given despite declining degrees of clustering.

3. When transportation becomes cheaper the conomic payoff of clustering is less necessary and therefore people may choose to have lower densities, less spatial order or some combination of aesthetic satisfactions.

E. The third concept is that of dense cluster and here the economics recognize that space is not a free good. Comparing two communities with the same number of households but one town has quarter-acre lots and the other has one acre lots, it is obvious that the lower density community will have a much greater occupied area and therefore the average household is farther from the center of town than his high density counterpart. The result is that all costs of travelling to the center of town or to any other household are increased depending on technology.

1. Aggregate transportation costs for commodities, messages, and persons will rise as the density of the city falls. The marginal cost of lower density is represented by the MC line in the diagram next to dense cluster.

2. The marginal cost intersects with the marginal utility function for more space establishing the optimum density for the community. This optimum is necessarily greater than the density based on zero marginal utility. Consequently, cluster gives way to dense cluster in which the group of squares are smaller for housing each activity.

3. There is a surrender of isolation and space control in the interest of economy in interaction and the savings that result occur because space is not a free good. It is a form of wealth which individuals simply pocket in a form of spending less on transportation. These benefits come at a cost which is social and economic which society has difficulty funding since it is so difficult to tax the benefit.

F. The fourth stage of clustering Smith calls the "ordered dense cluster". If an urban community includes several categories of land users - retailers manufacturers, apartment dwellers, and single family homeowners. There are further aggregate economies to be achieved by arranging these uses in a specific pattern which tends to put high density uses at the center surrounded by rings of decreasing density of people who need to travel greater distances to the center.

1. In the diagram the center is labeled C and the horizontal axis measures the radial distance from the center. The vertical axis measures the value of land resulting from savings in transportation costs as an alternative to residing on the fringe where land would be free.

2. Just as four students can outbid one working man for an apartment, four apartment dwellers can outbid the single family homeowner for a building site.

3. Thus location translates itself into a structure of land prices and these prices allocate land among competing users.

4. The problem is to maintain an efficient spatial order despite constantly changing circumstances - population growth, change in transportation, or a change in the linkages which people value most in their list of preferences.

G. The four clustering concepts are brought together in a simple-minded tradeoff diagram in Slide #2. Given all economic resources of a community, the greater amount of transportation output, the less useful output it will enjoy.

1. The arrows labeled 1, 2, 3, and 4, show how total output will be divided between transportation and useful output given increasing degrees of clustering.

2. If transportation itself becomes cheaper, all the arrows would slide upward and closer together. The economic payoff of clustering would be reduced and we might therefore, choose to have less spatial order in our cities or lower densities, or both.

H. Clustering also permits internal and external economies of scale.

1. Internal economies are realized by increased specialization and reduced distribution costs.

2. External economies are the result of the increased logistical support from agglomeration.

3. Not only are the costs of production and delivery reduced, but the diversity of services in a city may provide the consumer more collective satisfaction. There is more utility when you have a large number of choices and choices require that one is aware of the alternatives which is more feasible in urban areas where diversity of experience is a form of education.

I. Communication is an essential by-product of clustering because it fosters innovation and reduces the costs of mistakes to many people .

II. Assuming that the economic and social benefits of clustering are positive in the abstract, there remains the next question of which places are best for a cluster as this will further refine special relationships among various communities. There are many different theories by economic geographers as to what is an efficient location for different types of enterprises. Here there are a variety of useful answers because there are many possible situations.

A. A weight-gaining process would be one in which the product gets heavier as it reaches the market - that is an increase in cost per mile of transportation the more complete the product. A bottle of pop or a house for example.

1. The more significant the weight-gaining prodess the closer the enterprise to its market, assuming the other costs of production are identical. Transportation cost not only reflects weight and distance but bulk (modular homes), perishability and fragility (bread) and this assumes all other costs are equal.

2. In general, we are talking about the costs borne by the firm and not the real cost to the economy so if suppliers conceal costs with discriminatory rating, delivered pricing, etc. eventually the pattern of business location is less than efficient for the economy as a whole.

3. It is also assumed by the chart that the firm is free to locate anywhere along the line between raw material and market when, in fact, locations with the desired logistics are limited and there are irrational goals too. (Michigan City)

B. Multiple sources and multiple markets involve location vectors as in the second diagram. There is a point R at which the aggregate transportation cost per ton of steel is least.

1. This point is modified when new industrial facilities need an environment in which labor is available, urban services are available, etc. As a result new facilities are not often set down in the wilderness and the result is existing communities grow.

C. Urban areas are generally involved in exchange processes one of which is a transportation break point - i.e. a change in the mode of transportation from barge to rail or rail to truck.

D. There are foot-loose enterprises in which transportation and convenience cost are minimal in relation to value added, such as diamond cutting or the manufacture of transistor diodes.

E. The way station function of accommodating transients is a major function and many California towns are built around a system of 21 missions started by the Franciscan order , one days journey from one another to provide overnight accommodations. Missions were replaced by hotels near the railroad station, and then motels at the interchanges, and more recently motels at the airport so that transportation advantages changed the way station function quickly and drastically.

F. In any event, there is a rough economic logic concerned with transportation linkages that determines where urban clusters locate and continue to grow once they reach a certain critical mass of population and services.

III. Assuming that urban clusters make sense and are spaced out with some logic, the question remains what goes where within a single urban center - i.e. pattern of urban land uses. Such pattern is relative and not absolute. For the moment , pattern is considering a "featureless plain" so the topography, water, and subsurface conditions, and political boundaries have no significance. With those assumptions pattern can have a number of dimensions.

A. Relative direction of various uses - such as oil refineries should be at the opposite end of towns from homes, or factories should be outside the green belt buffer.

B. Another dimension is density expressed as number of dwelling units per acre, or workers per square foot of floor area, or ratio of building/floor area to land area.

1. Density should be a frequency distribution and leads to many different sociological topography maps.

2. Frequency distribution modes influence values, pattern of retail and public facilities, and particularly the transportation system.

3. High density office buildings as compared to low density of employees in factory buildings will influence their relative locations and transportation linkages.

C. Definition of land use categories will influence our ability to study spatial arrangements in terms of diversity of land uses and locational tendencies of these uses. The slide of the average distribution of land by forty-eight (48) large cities shows the relative significance by 5 broad categories and it should be noted that while residential is the largest single class, it is far less than 1/2 all the land use.

D. The urban land economist has traditionally assumed that the separation of land uses, often through zoning and city planning, will create a land pattern which is intrinsically desirable because it is advancing some of the following criteria in pursuit of the goal of maximum benefit from our resources:

1. Efficiency which is normally taken to mean that the aggregate expenditure by the community for internal transportation is minimized. Ratcliff said the ideal is to reduce rent differentials to zero. Without attaching some conditions, however, this implies that the best city is one where everyone and everything is crowded together in one big room.

2. Fiscal profit where the real property tax is the primary source of revenue and therefore planning should promote those land uses which create a surplus of tax revenue relative to servicing costs. Of course the result is political fragmentation or land use ghettos.

3. Social integration to achieve neighborhoods of relative homogeniety and therefore presumably tranquility which may lead however to considerable social friction and antagonism and unacceptable cost.

4. Control of external cost such as traffic or noise nuisance is possible by segregating land uses but there is much problem in making this principle operate specifically . What about the guy who makes widgets in his garage or his wife is retailing pots and pans in an area that is residential.

5. Flexibility so that a city can absorb new elements as the scale and pace of life style change without becoming unfunctional.

6. Prescriptive order in terms of how people will live and behave. We could plan for no saloons so that people would learn to walk in the park or in Madison discourage parking for high-rise buildings so that people would learn to use public transportation.

7. A desire to create a pattern which suggests a certain ethos or life style might lead to a basic physical pattern such as San Francisco or Georgetown, Washington D.C. - a physical collective discipline or control of individual taste to achieve a certain overall impressi

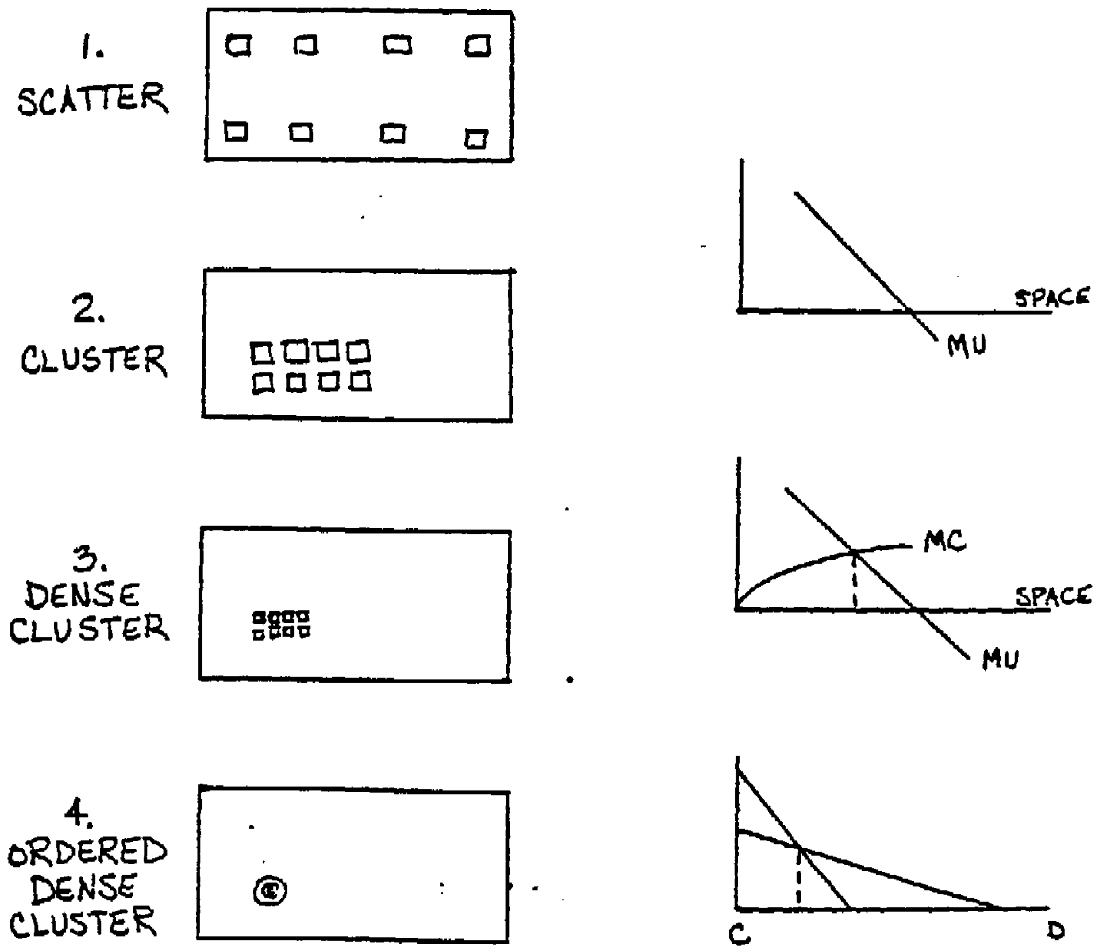
E. This is not an exhaustive list of criteria for urban land use patterns but it might suggest that with proper definition one could select a land use pattern which was best although that itself has some unattracti implications.

Of course, we are not often given clean slate options as to overall land use patterns as we must begin with an urban area as we find it and we must adapt to physical limitations of the land. Nevertheless your textbook will explore certain basic interaction patterns such as Hoyt, multiple nuclear patterns, star patterns, etc.

F. Within a certain loosely structured pattern imposed by society or physical constraints of an area individuals will be fine tuning their linkage patterns to optimize their particular goals and objectives, some of which are rational and predictable and others which are highly subjective. Planners cannot anticipate these patterns and thus the marketplace is a very useful allocation and rationing device which determines the texture of land uses in the city.

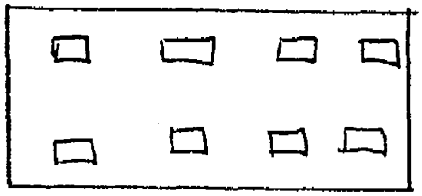
Diagram B

ECONOMIC IMPERATIVE FOR DENSITY



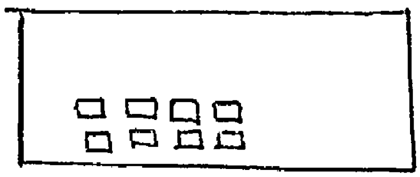
Economics

1.



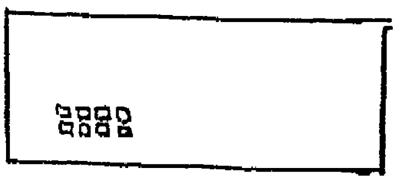
Scatter

2.



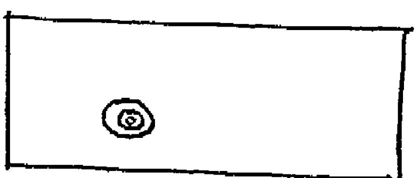
Cluster

3.



Dense Cluster

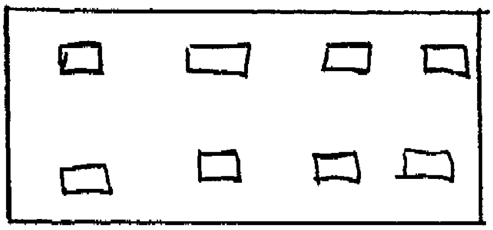
4.



Ordered Dense Cluster

Economics of Density

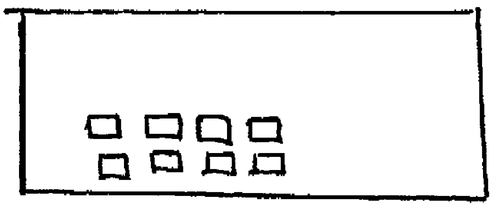
1.



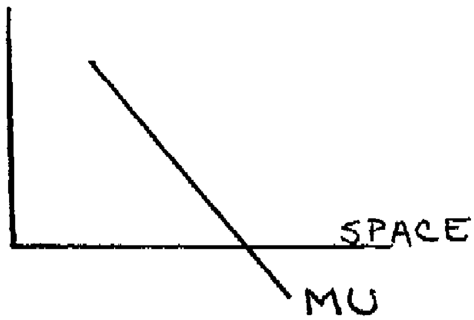
Scatter

Max Σ T.C.

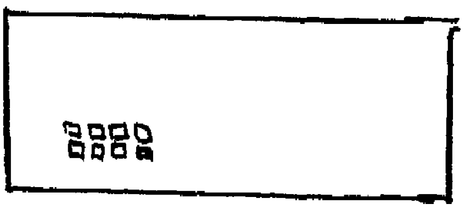
2.



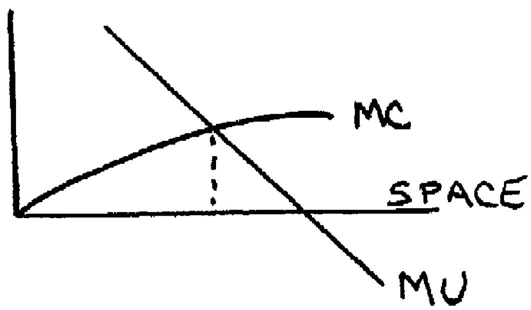
Cluster



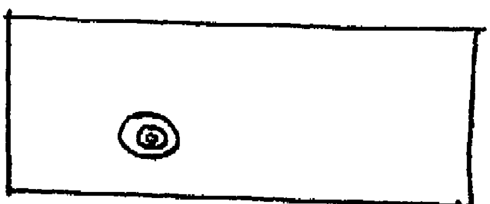
3.



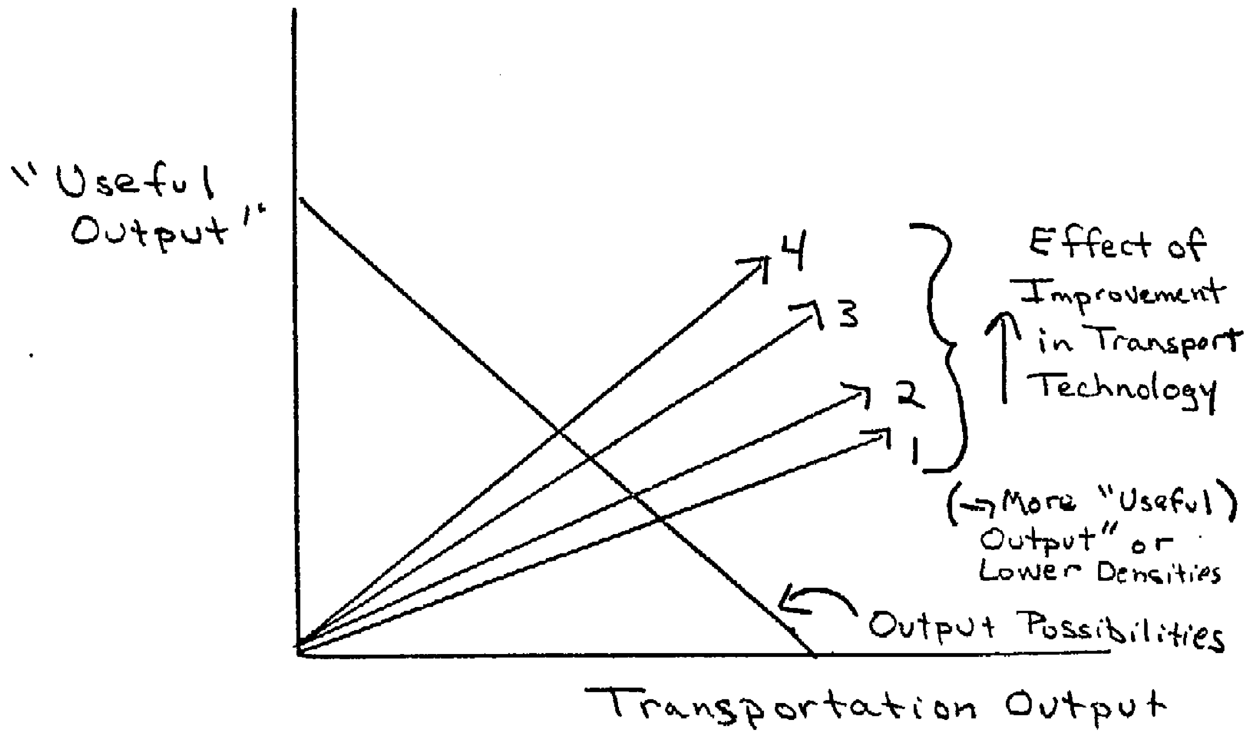
Dense Cluster



4.

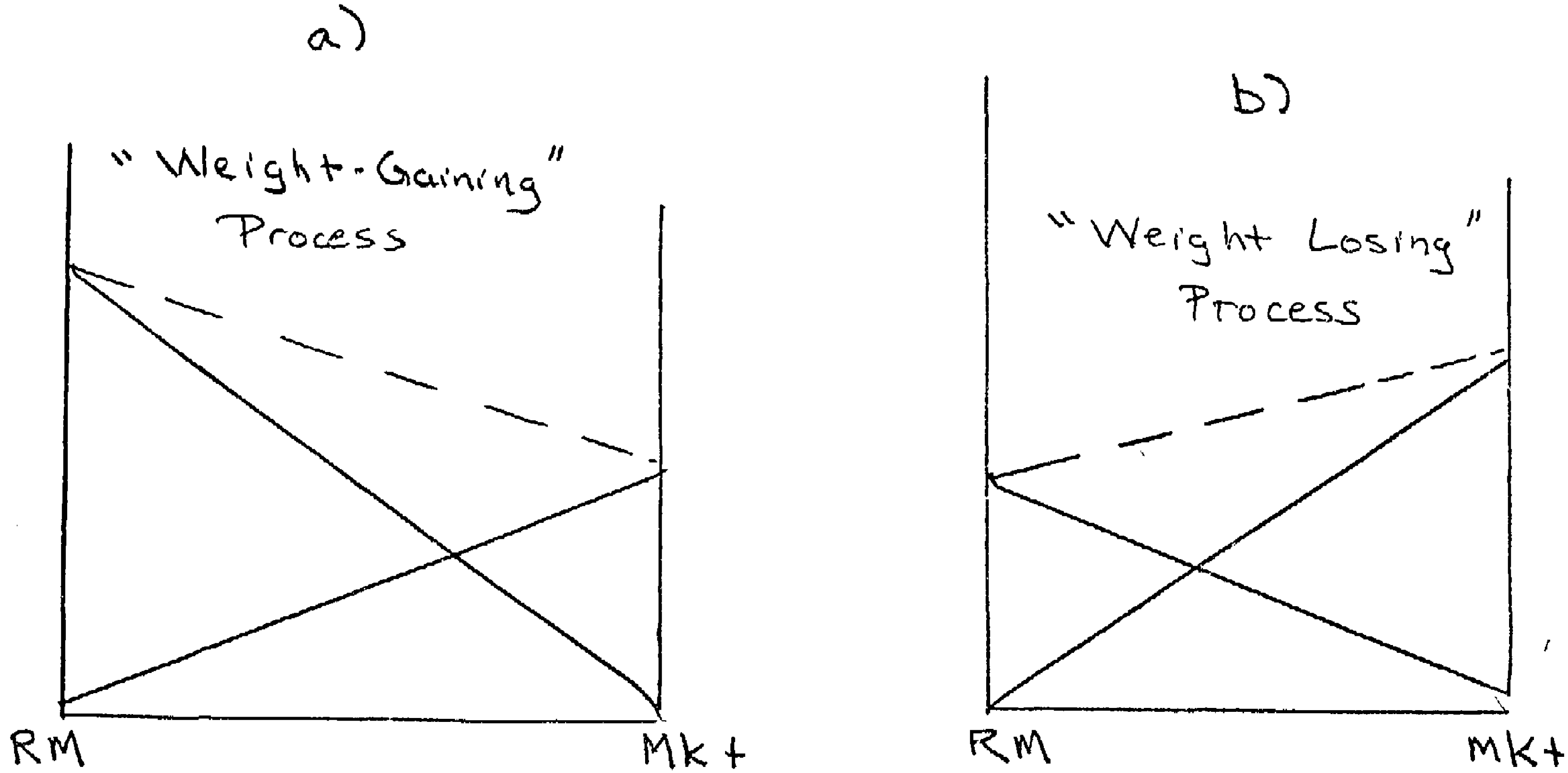


Ordered Dense Cluster



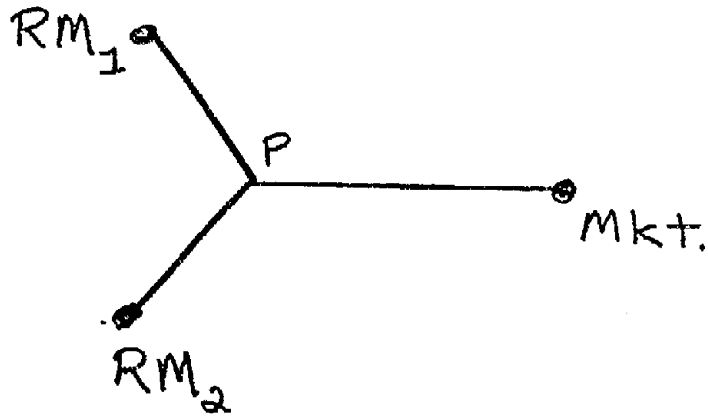
"Useful Output"
4
3
2
1
Effect of Improvement in Transport Technology
(→More "Useful Output" or Lower Densities)
Output Possibilities
Transportation Output

Location of Processing Activities



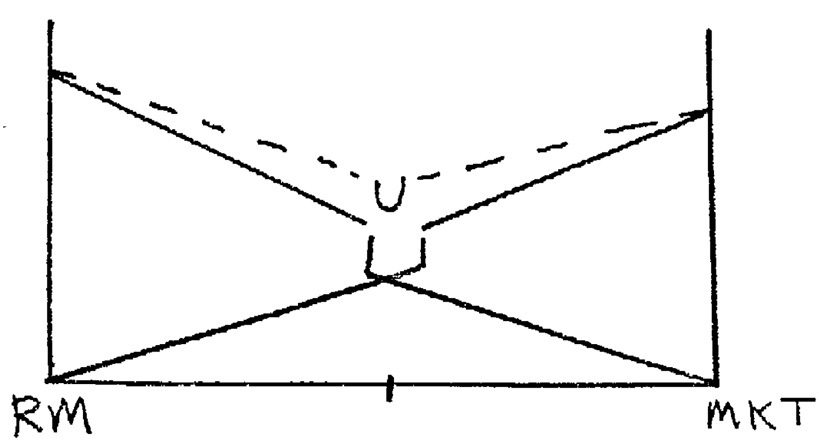
c)

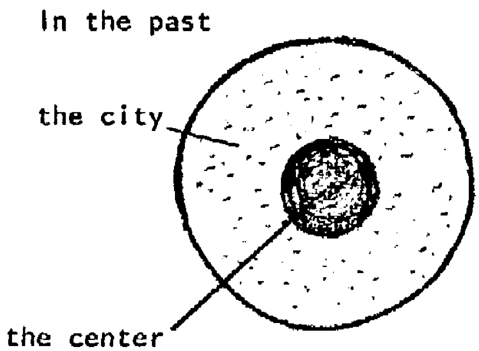
Multiple Inputs (or Markets)

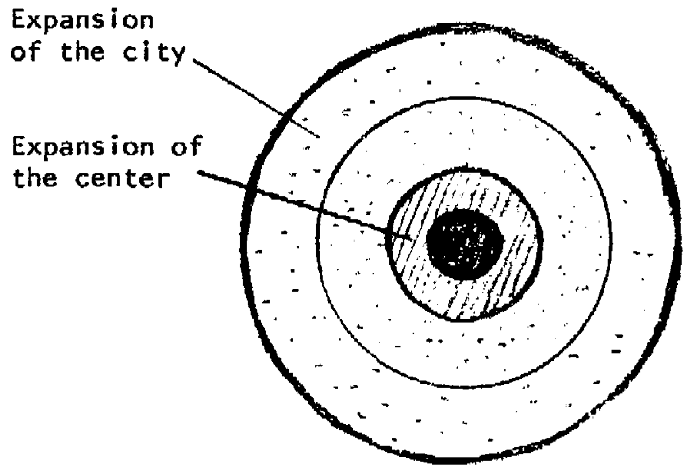


d)

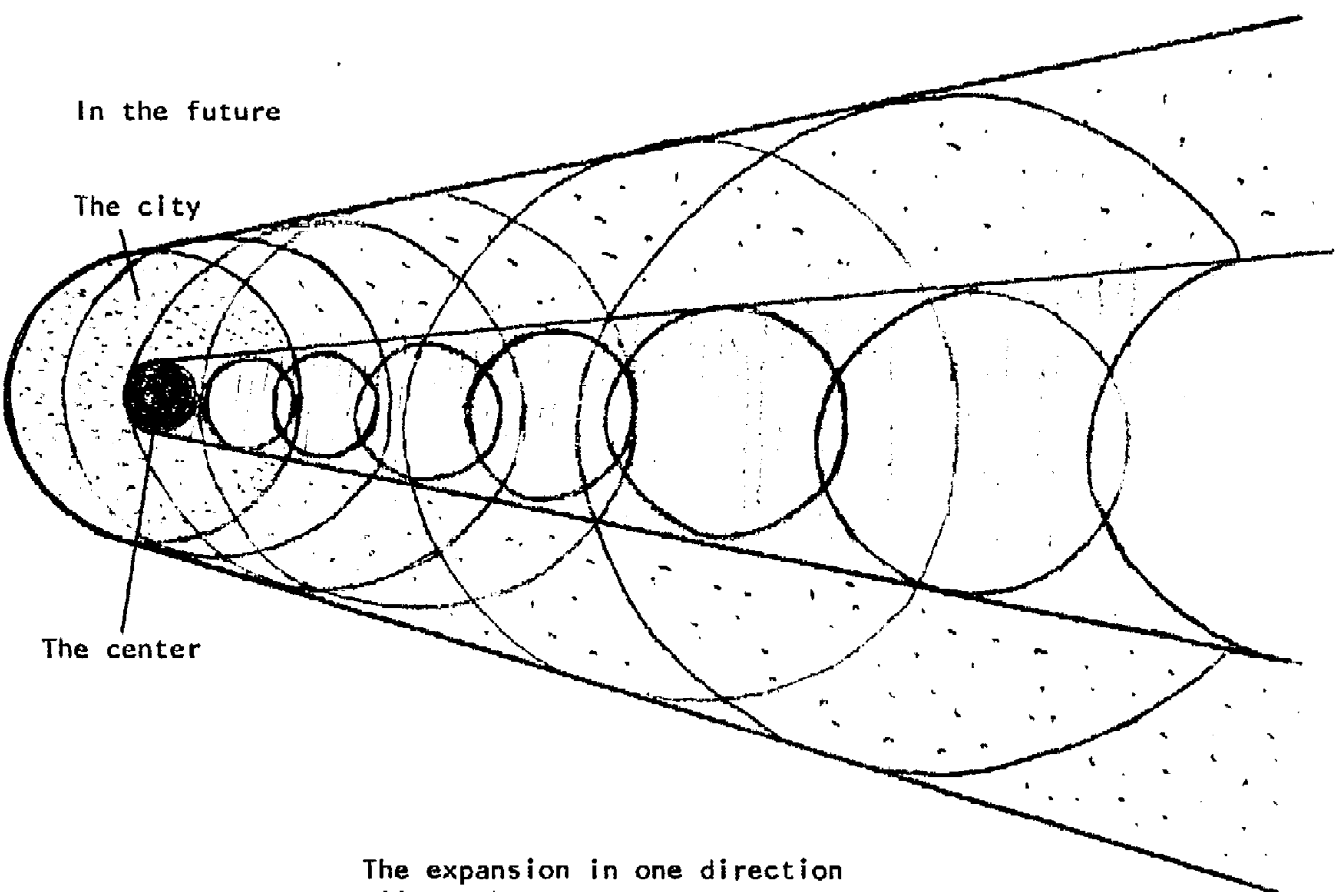
Transportation Breaking Point







The concentric expansion strangles the center and its functions



The expansion in one direction allows the center to grow without difficulty

Real Estate 550 - 705

Lecture Outline #4

ENVIRONMENTAL ATTRIBUTES OF REAL ESTATE

I. The term environmental is used broadly to describe off-site physical and institutional systems with which real estate must be compatible. Most real estate decisions have some measurable impact on a varity of soft systems.

A. Soft systems include:

1. The micro-climate
2. Off-site ecological systems
3. Historical continuity
4. Social organization
5. Social disorganization
6. Cultural decision procedures

II. The decision process

A decision requires identification alternative courses of action, possible alternative outcomes and then defintion of selection screens by reducing values to objectives and objectives to criteria

A. Many decisions are unconsciously made by cultural traditions or indirectly made by the institutional mechanics of society.

B. People are social animals and it is doubtful that if land were a free good that they would scatter to points equidistant from one another. People have tended to cluster, and as the cost of friction inherent in clustering became too great the clusters became denser and eventually well organized in some form of ordered dense cluster. Cost of friction means space is no longer a free good and eventually dense clusters become specialized into multiple land use areas.

C. An historical survey of famous cities like Peking, Naarden, Venis, Rotterdam all reflected simple cultural priority.

1. Slave to merchantile economies
2. Slingshot to gun powder warfare

D. These cities had a physical clarity in land use layouts and archi-techtural style and construction that depended on cultural factors of:

1. Static technology
2. Static population
3. Cultural continuity
4. Monolithic and futile governmental structure of the city-state

E. Conditions for cohesive development by the new world cutlure were gone due to:

1. Population explosion
2. A culture restructured from outer directed to inner directed behavior
3. Technological explosion
4. Reform of property rights concepts

F. Long-term cultural trends may be difficult to perceive in terms of rural to city migration, sophistication and decision making, etc. but even short-term cultural changes affect real estate form. Look at the impact on Madison of earlier independence for young people, political instability or shifting priortities relative to social groups like the elderly, disabled, public transit users, etc.

G. Highly structured density depends on an ethic of interdependence which was fostered by a generation of depression and world war. A growing consensus to accept planning priorities begins to appear in federal legislation, influential task force reports, and local court decisions.

1. First significant federal assistance to individual cities with city physical planning integrated with capital budgeting, priorities on areas likely to have a high percentage of disadvantaged people, and on minimum standards of housing for health and comfort was in 1954! 25 years ago!

2. Since 1964 we have seen significant advances in regional planning units for coordination of self-serving city plans and the urban interface with water resources, air resources, farm resources, etc. as recently as 1972 a twelve member task force appointed by Richard Nixon and chaired by Lawrence Rockerfeller, reported on the public consensus on land:

"When the protection of natural, cultural, or aesthetic resources or the assurance of orderly development are involved, a mere loss in land value should never be a justification for invalidating the regulation of land use."

III H. Cultural institutions such as labor unions, political lobbies, architectural schools and business schools all contribute to the environment within which real estate decisions are made and sites are valued.

III. Physical improvements to land form the walls and lid of man's own terrarium--a manufactured environment. The cliche by Winston Churchill is "We first shape our buildings and then they shape us."

A. While the whole civilization process in an industrial society contributes to social instability, real estate has some direct impacts on social disorganization as it is reflected by:

1. Individual mental illness and isolation
2. The strength of the family unit
3. Social stratification and conflict
4. Crime rate, particularly personal and bodily injury

B. Real estate development cannot be blamed for providing the consumer with what he wants in a market economy but the public must begin to dimension public controls of land use and building codes to reduce the unwanted byproducts of always doing what the consumer wants.

1. The automobile design has followed the path of least resistance by serving the individual consumer and eventually modifying his behavior with little regard to the aggregate impact.
2. The suburban flock of indivdual homes on individual lost compartmented by price and therefore family income has also produced an undesirable social stratification by economic segregation.
3. Only recently have the social psychologist begun to make their point about manufactured space and society as in the Hidden Dimension by Hall, Defensible Space by Newman, or Community and Privacy by Chermayoff & Alexander.

4. This lecture cannot prsume the planners of real estate can control all of the random social interaction of an active society, but real estate can recognize some basic constraints on its product in order to avoid some obviously undesirable manifestations of social breakdown.

C. In looking at the series of spaces which are physically defined to create a city we might use the convenient classifications of Alexander & Shermayoff--what they call 6 domains of urbanity a hierarchy of spaces for community and privacy for its residents:

1. Urban-Public. The places and facilities in public ownership: Highways, roads, paths, civic parks.
2. Urban-Semi-Public. The special areas of public use under governmnet and institutional controls: city halls, courts of justice, public schools, post offices, hospitals, transporation exchanges, parking lots, garages, serivce stat ions, stadia, theaters.
3. Group-Public. The meeting ground between public serivces and Utilities and private property requiring joint access and responsiblity: Places requiring mail deliver, garbage collection, utilities contorl, access to fire-fighting equipment or other emergency rescue devices.
4. Group-Private. Residential components under control of management acting on behalf of private or public interest for the benefit of tenants or other legal occupants: reception, circulation, and service spaces, community gardens , playgrounds, laundries, storage, etc.
5. Family-Private. The spaces within the private domain controlled by a single family that are devoted to communal family activities such as eating, entertainment, hygiene, and maintenance.
6. Individual-Private. The "room of one's own," the innermost sanctum to which individuals may withdraw from their family.

D. Examples of conscious social organization efforts in land use:

1. Urban-Public -- for municipal Squares of downtown Philadelphia
2. Urban and Semi Public -- library layout for control or corridors visible from street or parking ramp stairwells
3. Group-Public interface such as truck loading areas at a shopping center or shopping center periphiry road
4. Group-Private -- study of book called Defensible Space -- design of apartment projects to discourage strangers by reducing ananimity and increasing proprietary zone of residen ce
5. Family-Private areas as it is affected by circulation patterns in home plans or emphaisis on family kitchens or formal entertainmenta areas or color and texture of approach zones at front door

6. Individual-Private Space -- sound privacy of innermost sanctum -- family probems and personality disorder

URBAN LAND 550 LECTURE #5 - Outline
Site and Situs Theory - Origin of Demand for Improvements

I. Within the general ecomonic base activity, each enterprise searches for a real estate parcel to serve its special needs.

   A. Any given real estate parcel has three sets of attributes

      1. static or physical attributes - physical characteristics inherent within the property lines

      2. situs characteristics or linkages of the site to other parcels and activities. A linkage can be any kind of relationship between one site and another or one activity and another.

      3. dynamic attributes - behavioral responses of people to site attributes.

   B. These attributes play a large part in determining the pattern of usage in the urban cluster and influence space users, space producers, and public regulators in reasonably consistent and predictable ways.

   C. These three sets of attributes permit us to examine the common sense notion of location and the dynamic cycle of success and failure of activities at specific locations.

II. Static attributes or physical elements of a parcel involve an almost infinite list of variables, many of which relate to improvements intended for the site.

   A. Definition of shape of a parcel

      1. length and width of parcel
      2. rights below grade
      3. rights above grade
      4. set-back lines for side yards, front yards, waterfront, dock lines, flood plane elevations etc.

   B. The building envelope - spatial limit of permitted improvements. (Foot of capitol dome, air rights, view lines, private covenants, etc.)

   C. Topography, geology, and soils

   D. Flora and fauna inventory

   E. Self-contained eco-systems

   F. Access to transportation elements of road, water, rail, or pedestrian route on premises

   G. Inventory of existing improvements to the site such as farm terracing, road embankments, tile drainage field systems, structures

   H. Check list of required or acceptable attributes for each use

III. One cannot conceive of location in the abstract without relating to a place and without reference to some kind of an activity conducted at that place.

A. Land economists begin with the terms:

1. establishment - the basic unit of land use consisting of individuals or groups or enterprises occupying recognizable places of business, residence, government, or other attraction

2. Each establishment represents a cluster or packet of functions and each may require a different location but may compromise because of other economies.

3. Relationships between a function at one site and another which influence the movement of persons or goods are termed linkages.

4. The movement of persons or goods creates certain costs which are called cost of friction. Each establishment seeks a location which will minimize these costs in time, money, and stress.

B. Specification of site linkages leads to identification of its micromarket of users and eventually to value of the site.

C. Useful classifications of linked establishments by land economists Robert Mitchell and Chester Rapkin (Urban Traffic, 1954).

1. Dominant Use-Subordinate Use. The subordinate use serves the dominant establishment or group of similar establishments. An example is a machine repair shop and the industrial plant or plants which it serves.

2. Dominant Use-Ancillary Use. The ancillary establishment serves the employees of the dominant use. Examples are a restaurant near a large factory or a cigar stand in an office building.

3. Co-dominant Uses and Dominant Use-Satellite Use. These establishments serve common customers. A large department store and an adjacent ladies' shoe store serve the same clients.

D. Proximity may be historical accident, similar specs or type of building, type of site, or rent level. Proximity does not imply linkage.

E. Establishment as packet of functions suggests a land use is at the focus of its own special complex of linkages. The location of these linkages establish boundaries of a tributary area.

1. Elementary school district
2. Retail establishments subdivide tributary area into primary, secondary, etc, trade areas
3. Primary trade area might be source of 65% of business or area within five-minutes driving time etc.
4. linkages may be discovered from internal data such as address list

F. Highly specialized linkages can mean control of a unique site provide some degree of monopoly.

IV. Dynamic attributes of a site are concerned with psycholgical perception of space users about a site. Unlike linkages they do not directly invlove movement of persons or goods but have to do with mental satisfaction of prestige, aesthetics, peace of mind, etc.

A. Prestige of residential area, address, or building image

B. Aesthetics may stimulate people to more productive labor or anti-social behavior

C. Community percption affecting group behavior

D. Attributes may be in the eye of the beholder rather than in the reality of physical or functional attributes

V. The static, linkage, and dynamic attributes of location have a synergistic impact in combination which relate to analogies of magnetic or electrical force fields or energy flows.

A. Energy flows may reflect movements of people and goods which draw activity within the field.

B. The draw can be reduced by insulators such as the cost of friction or mental stress or the inertia of people.

C. There are essentially only two real estate problems:

1. a market need in search of a site with very specific attributes
2. a specific site in search of a market need

D. The real estate market is the endless matching of sites and users within a tributary area to bring off the most efficient pattern of uses within each cluster. The question of how to measure efficiency is the subject matter of this course.

REAL ESTATE PROCESS - 550

Lecture #6
Fitting A Use Into the Pattern

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      3. dynamic attributes - behavioral responses of people to site attributes.

   B. These attributes play a large part in determining the pattern of usage in the urban cluster and influence space users, space producers, and public regulators in reasonably consistent and predictable ways.

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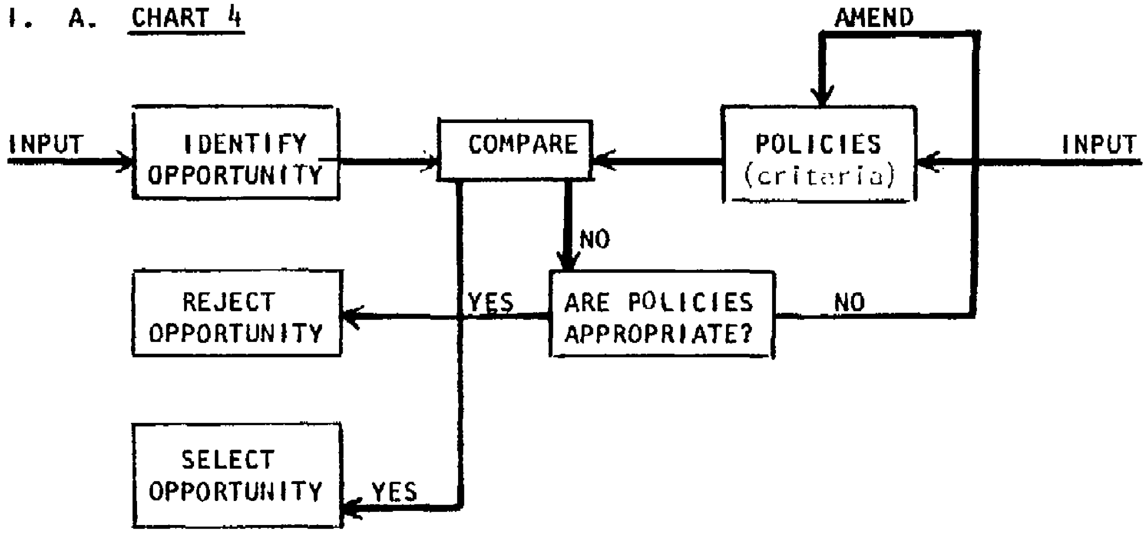
III. A. CHART 4



B. This whole process is more complex than a simple flow chart representation can depict, but the essence of the process can be discerned from such characterization as that shown in Chart 4; it is the beginning of a systems description of the management process.

This amended model, general though it is, recognizes the inputs to the system from other exogenous systems; characterizes the (circumscribed) whole as an integrated system; points out levels of states (policies, standards) within the system; identifies action points (decisions) within the system;
- documents the interrelationships between actions and information storage points;
- traces the flow of information
  - from outside the system
  - within the system
- depicts the process as dynamic.

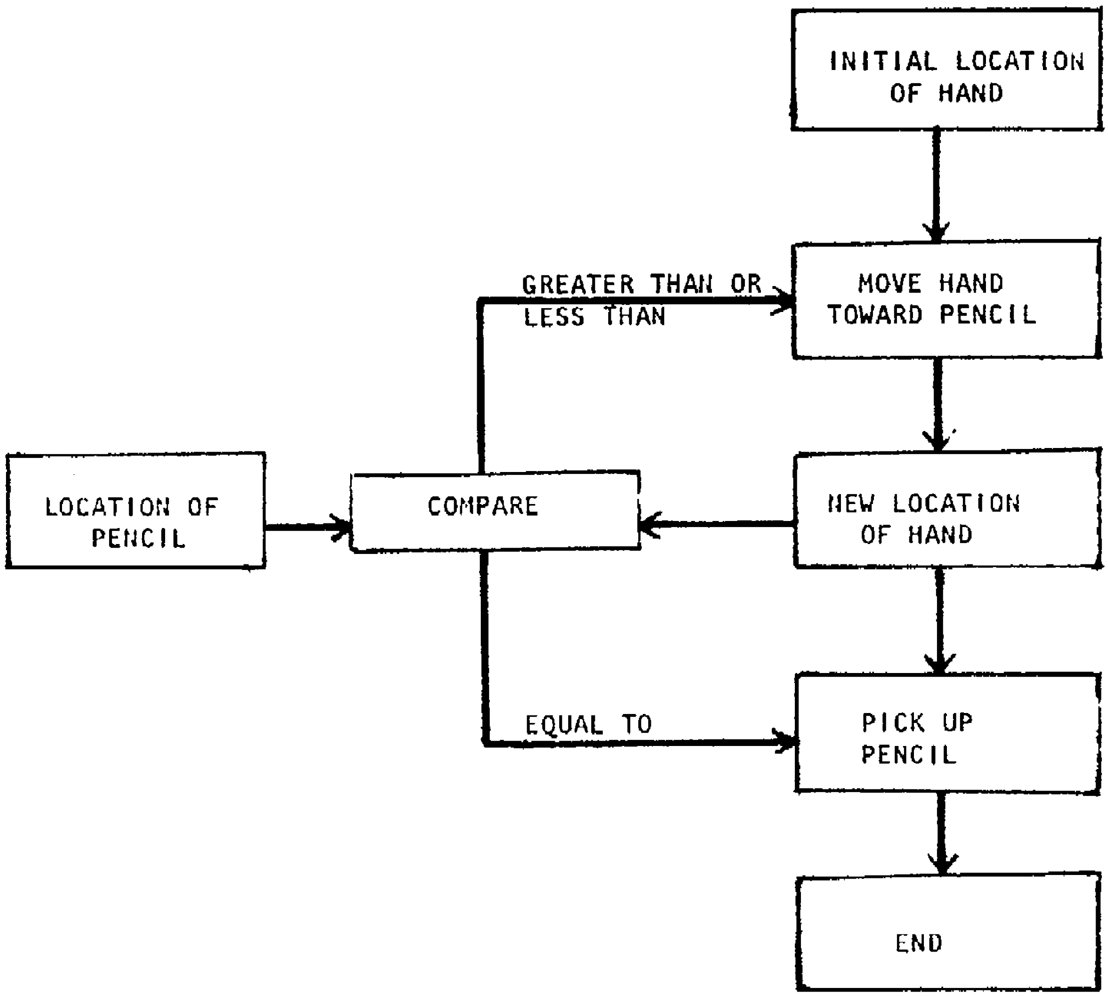
This model, supported by the explanations, is helpful in providing a basis for assessing the validity of common presumptions; it should provide fair warning that policy-making/opportunity-selecting cannot be adequately understood by simply viewing it as "a process that man performs through the act of decision-making."

C. Information plays the critical role in the process. To construct acceptable operating systems or models one must draw on information sources both inside and outside the decision making organization---a real estate enterprise.

Outside: Information about alternative kinds of operating systems that can be constructed to supplement

Inside: Existing knowledge and skills relating to the construction of operating systems;

Inside: Inside information about existing standards for constructing operating systems, which in turn, are the product of information flows that come in part from within the organization,


INITIAL LOCATION OF HAND
MOVE HAND TOWARD PENCIL
GREATER THAN OR LESS THAN
LOCATION OF PENCIL
COMPARE
NEW LOCATION OF HAND
EQUAL TO
PICK UP PENCIL
END

Lecture #6
Urbanization Today
Part I: Spatial Clustering

I. Spatial clustering is the principal physical attribute of urbanization and the basis for agglomeration economies. Wallace Smith describes four abstract levels of spatial clustering in his textbook on urban land economics entitled Urban Development (1975). The four abstract levels of clustering are illustrated in Figure 1.

A. The first level of spatial clustering is called "scatter."

1. Individuals are as far apart as possible (suppose individuals have a strong preference for isolation).
2. This maximizes the aggregate cost or potential cost of an exchange of visits, messages, or commodities.
   - Think of the cost of delivering the mail in Northern Wisconsin.

B. The next level is called a "cluster."

1. Space is a free good - a person can have as much as he wants - its just that all holdings are consolidated within the minimum convenient perimeter.
2. More efficient than scatter:
   a. The cost of getting together is less as less time is spent going back and forth.
   b. Think of the cost of delivering the mail in Dane County as compared to Northern Wisconsin.
3. The savings are considerable, but they cannot be attributed to any specific individual or piece of land.

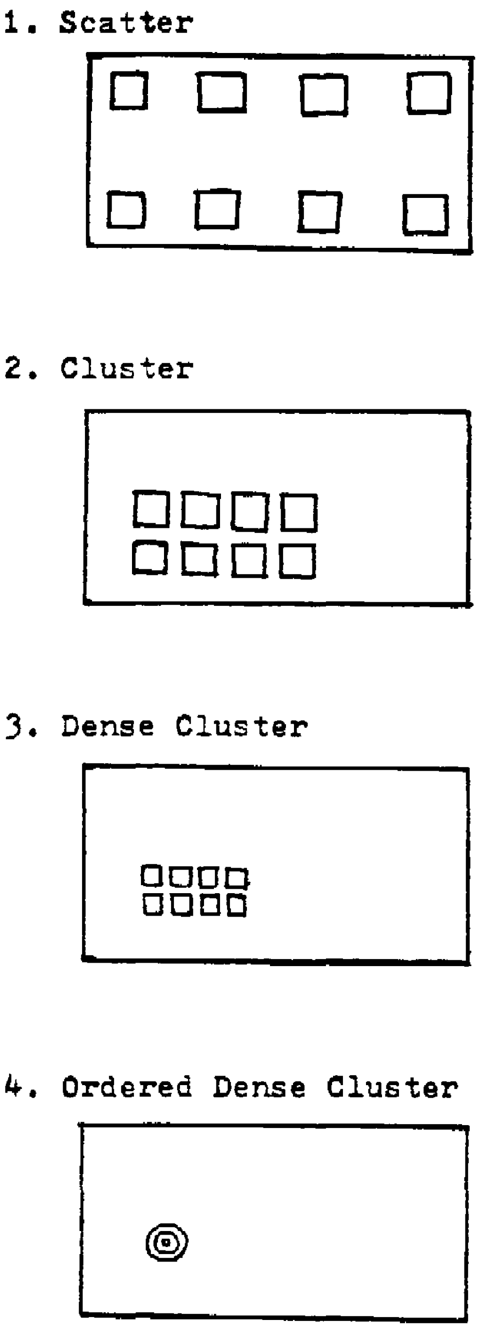
C. The third concept is that of "dense cluster" and here the economics recognizes that space is not a free good. Comparing two communities with the same number of households but one town has quarter-acre lots and the other has one acre lots, it is obvious that the lower density community will have a much greater occupied area and, therefore, the average household is farther from the center of town than his high density counterpart. The result is that all costs of travelling to the center of town or to any other household are increased (depending on the available technology).

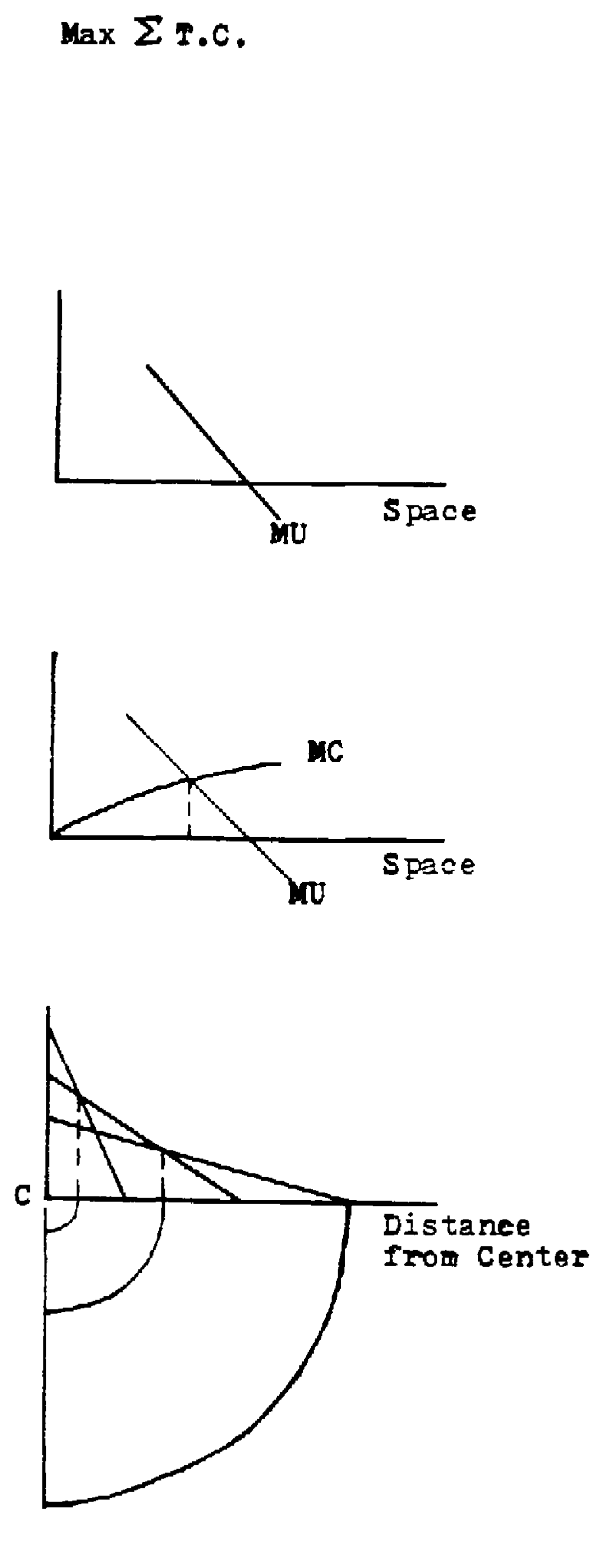
1. As space is no longer a free good, aggregate transportation costs for commodities, messages, and persons will rise as the density of the city falls. The marginal cost of lower density is represented by the MC line in the diagram next to 'dense cluster.'
   The intersection of the marginal cost line with the marginal utility function for more space establishes the optimum density for the community. This optimum is necessarily greater than the density based on zero marginal utility. Consequently, cluster gives way to dense cluster in which the group of squares are smaller for housing each activity.
2. There is a surrender of isolation and space control in the interest of economy in interaction. The savings that result occur because space is not a free good. It is a form of wealth which individuals simply pocket in the form of spending less on transportation.

Reprinted with permission of Wallace Smith, author of Urban Development, 1975.

Figure 1.

The Economic Imperative for Density





Source: Smith, Wallace. <u>Urban Development</u>, Univ. of Calif. Press, Berkeley, CA, 1975, 381 pp.

3. A dense cluster is more efficient than a cluster.
   a. The savings are attributable to the process - to recognize that space in a community is not a free good.
   b. The savings are still not attributable to the individual users or pieces of land.
   c. Think of the cost of delivering the mail in a development like Eagle Heights or Parkwood Hills as compared to Dane Co.
   d. These benefits come at a cost which is social and economic which society has difficulty funding since it is so difficult to tax the benefit.

D. The fourth stage of clustering Smith calls the "ordered dense cluster".

   1. The urban community now includes several categories of land users - e.g., retailers, manufacturers, apartment dwellers, and single-family homeowners.
   2. Economy in aggregate transportation is achieved by arranging uses in specific patterns. These patterns tend to put high density uses at the center surrounded by rings of decreasing density of people who will have to travel greater distances to the center.
   3. Within the city the transportation saving characteristic of a particular piece of land is translated into a structure of land prices. These prices allocate land among competing categories of users.
      a. In the diagram the center is labeled C and the horizontal axis measures the radial distance from the center. The vertical axis measures the value of land resulting from savings in transportation costs as an alternative to residing on the fringe where land would be free.
      b. Just as four students can outbid one working man for an apartment, four apartment dwellers can outbid the single-family homeowner for a building site.
      c. The problem is to maintain an efficient spatial order despite constantly changing circumstances - population growth, change in transportation, or a change in the linkages which people value most in their list of preferences.

E. The four concepts are brought together in a simple-minded trade-off diagram shown in Figure 2. Given all economic resources of a community, the greater the amount of transportation output, the less 'useful' output it will enjoy.

   1. The arrows labeled 1, 2, 3, and 4 show how output will be divided between transportation and useful output given increasing degrees of clustering.
   2. If transportation itself becomes cheaper, all of the arrows would slide upward and closer together. The economic payoff of clustering would be reduced and we might, therefore, choose to have less spatial order in our cities or lower densities, or both.

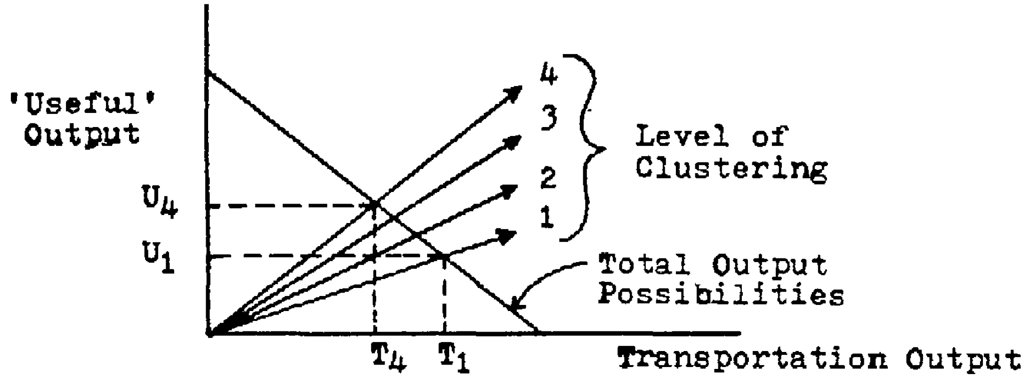


Figure 2.

F. Clustering also permits internal and external economies of scale.
   1. Internal economies of scale are realized by increased specialization and reduced distribution costs.
   2. External economies are the result of the increased logistical support from agglomeration.
   3. Not only are the costs of production and delivery reduced, but the diversity of services available in a city may provide the consumer more collective satisfaction. There is more utility when you have a large number of choices. In addition, choices require that one is aware of the alternatives. This is more feasible in urban areas where diversity of experience is a form of education.
   4. Communication is an essential by-product of clustering because it fosters innovation and reduces the costs of mistakes to many people.
   5. Nevertheless, the original and most dominant cost affecting the location of each cluster relative to one another and the internal ordering of land use priorities within a cluster was transportation costs. The greater the effort, the more product allocated to transportation, the less net output any enterprise can enjoy (the appetite of the horse for oats reduces the net surplus from the farm).

II. Today the social consensus reflects a <u>preference for highly structured density</u>.

A. Modified Pioneer Ethic
   - Land is no longer a free and unlimited good.

B. Ethic of Interdependence
   - 1954 - First significant federal assistance to the art of city planning
   - 1960 - Beginning of significant and comprehensive effort to organize urban development
   - 12 member task force headed by Lawrence Rockefeller--"When the protection of natural, cultural, or aesthetic resources or the assurance of orderly development are involved, a mere loss in land value should never be justification for invalidating the regulation of land use."

Lecture #7
Urbanization Today
Part II: Locational Concepts

I. Assuming that the economic and social benefits of clustering are positive in the abstract, there remains the next question of which places are best for a cluster as this will further refine spatial relationships among various communities. There are many different theories by economic geographers as to what is an efficient location for different types of enterprises. There are several useful answers here as there are many possible situations.

A. A weight-gaining process would be one in which the product gets heavier as it reaches the market - that is, there is an increase in the cost per mile of transportation as the product becomes more complete. A bottle of pop is an example, so is a house.

1. The more significant the weight-gaining process, the closer the enterprise should be located to its market, assuming the other costs of production are identical (see Figure 1.a.). Transportation cost not only reflects weight and distance but also bulk (e.g., modular homes), perishability (e.g., bread), and fragility (e.g., glass).
2. In general, we are talking about the costs borne by the firm and not the real cost to the economy, so if suppliers conceal costs with discriminatory rating, delivered pricing, etc., eventually the pattern of business location is less than efficient for the economy as a whole.
3. It is also assumed by the chart in Figure 1.a. that the firm is free to locate anywhere along the line between raw material and market when, in fact, locations with the desired logistics are limited and there are irrational goals as well.

B. A location diagram for a weight-losing process is shown in Figure 1.b. Examples of weight-losing processes include steelmaking and the use of water power to generate electricity. In both cases major inputs - coal and water power, respectively - disappear in the process of production and are very difficult or expensive to transport. Hence, in general, the more significant the weight-losing process, the closer the enterprise should be located to the source of raw materials, again assuming the other costs of production are identical.

C. Multiple sources and multiple markets involve location vectors as shown in Figure 1.c. There is a point P at which the aggregate transportation cost per unit of finished product is least (e.g., Gary, Indiana). This point is modified when new industrial facilities need an environment in which labor is available, urban services are available, etc. As a result new facilities are not often set down in the wilderness and the result is that existing communities grow.

D. Urban areas are generally involved in exchange processes, one of which is that of being a transportation break point - i.e., a change in the mode of transportation occurs (e.g., from barge to rail or from rail to truck). The economic advantage of locating at a transportation break point is shown in Figure 1.d.

E. There are foot-loose enterprises in which transportation and convenience costs are minimal in relation to value added, such as diamond cutting or the manufacture of transistor diodes. Many foot-loose enterprises choose to locate in high amenity areas.

F. The way station function of accommodating transients is a major function and many California towns are built around a system of 21 missions started by the Franciscan order, one day's journey from one another to provide overnight accommodations. Missions were replaced by hotels near the railroad station, then by motels at the highway interchanges, and more recently by motels at the airport. Hence, transportation advantages changed the way station function quickly and drastically.

G. In any event, there is a rough economic logic concerned with transportation linkages that determines where urban clusters locate and continue to grow once they reach a certain critical mass of population and services.

II. Assuming that urban clusters make sense and are spaced out with some logic, the question remains as to what goes where within a single urban center - i.e., what will or should be the pattern of urban land uses. Such a pattern is relative and not absolute. For the moment, our consideration of pattern will assume a "featureless plain" so that topography, water, subsurface conditions, and political boundaries have no significance. Even with this assumption, pattern can have a number of dimensions.

A. The first dimension to consider is the relative direction of various uses - such as oil refineries should be located at the opposite end of town from homes, or factories should be located outside the green belt buffer.

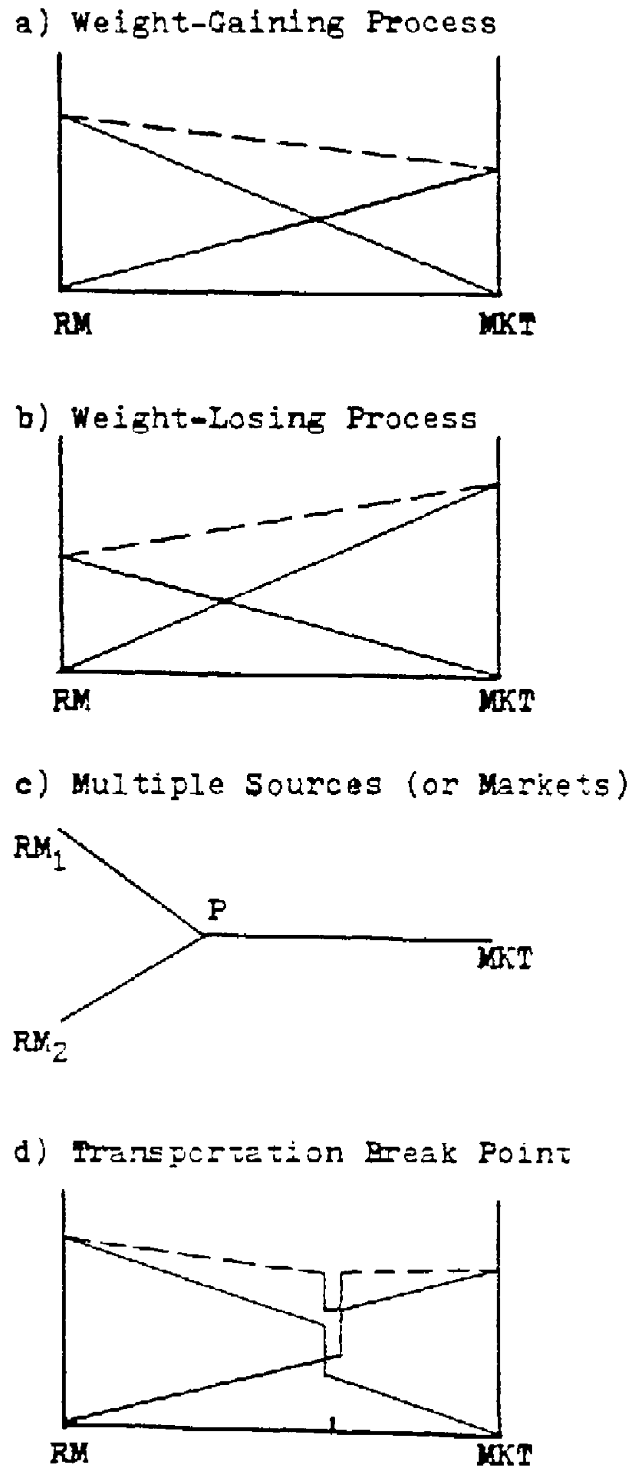
B. Another dimension is density expressed as the number of dwelling units per acre, workers per suare foot of floor area, or perhaps the ratio of building/floor area to land area.

1. Density should be expressed as a frequency distribution over sections of the city rather than as a city-wide average. Density measures lead to many different sociological topography maps.
2. Frequency distribution modes influence values, patterns of retail and public facilities, and particularly the transportation system.
3. The high density of employees in office buildings as compared to the low density of employees in factory buildings will influence their relative locations and transportation linkages.

C. A third dimension is the definition of land use categories which will influence our ability to study spatial arrangements in terms of diversity of land uses and locational tendencies of these uses. Figure 2 shows the average distri-

Reprinted with permission of Wallace Smith, author of Urban Development, 1975.

Figure 1.
Location of Processing Activities



Source: Smith (1975).

Lecture #7 Outline
The Real Estate Process
Business 550 & 705

Economic Base - Town Builders & Town Fillers

I. Key Proposition: The rate and direction of growth (employment, income, population, establishments) of a region or a city is determined by its function as an exporter to the rest of the world.

A. Proof: The level of Aggregate Demand (or income, output, employment) called Y is the sum of household consumption, C_H (food, etc.); household investment, I_H (housing); business investment, I_B (machines); government consumption, C_G (typewriters, etc.); government investment, I_G (schools); plus net spending by people living outside the city (city exports minus imports) X-M. Thus,

$$Y = C_H + I_H + I_B + C_G + I_G + X-M$$

But if households, businesses and government buy everything they consume or invest from non-residents then,

$$C_H + I_H + I_B + C_G + I_G = M$$

and therefore

$$y = x$$

or a city's level of income, of output and of employment is totally dependent on it's ability to sell outside the city!

B. Basic sector activities (town builders) are sales to the rest of the world in the form of goods, services, and labor that flow out of the region (also expenditures by "foreigners.")

C. Non-Basic Sector Activities (town fillers) are the numerous supporting activities necessary to service workers in basic industries and the basic industries themselves.

D. Both sectors are related to exogenous demand. If outside demand for the product of the region increases the basic sector expands (direct effect) which generates expansion in the non-basic sector (indirect effect).

E. Result of all this: Basic employment (or income) plus non-basic employment (or income) equals total employment (or income).

II. For every community there is a relationship between basic employment (or income) and non-basic employment (or income) called the BASE RATIO =

$$\frac{\text{Basic employment}}{\text{Non-basic employment}} \left(\text{or } \frac{\text{Basic Income}}{\text{Nonbasic Income}}\right).$$

A. Eg. This means that if for every basic worker there are 2 non-basic workers, the base ratio would be 1:2.

B. Implications: For every new job (or dollar of income created) in the basic sector, two new jobs (or dollars of income) will be created in the supporting activities of the non-basic sector.

III. For every base ratio there is a BASE MULTIPLIER.

A. Eg. If the base ratio is 1:2, the base multiplier is 3, i.e., when basic employment increases by one, a total of three new jobs (basic and non-basic) will be created.

B. Implications - Allows an estimate of the total impact on the regional economy that results from a change in demand for basic goods.

C. Useful relationships:

1. Base multiplier = $\frac{\text{total employment}}{\text{basic employment}}$

2. Total employment = (base multiplier)(basic employment)

3. Change in total employment = (base multiplier)(change in basic employment.)

IV. Implications and Uses

A. Projections

Given:	B:LM = 1:1.5	B = Basic employment
	B:TE = 1:2 1/2	LM = Local market or nonbasic employment
	TE:TP = 1:2	TE = Total Employment
	B:TP = 1:5	TP = Total Population

Suppose basic employment for Madison increases 500 employees at Oscar Mayer as a result of increased sausage demand in Chicago. You can calculate the resulting increased population, income, level of services demanded, locational preferences. (All are long-run effects.)

B. Implications

1. Fill gaps in historical data.

2. Aids in understanding past & current developments.

3. Evaluate & estimate impact of expanding or new industry.

4. Estimate future demand for types of land use (housing, retail, industrial, etc.).

5. Provide insight into nature of regional economy through interareal and intertemporal comparison.

6. Formulate growth strategy to stabilize base.
   a. Attract enterprises with stable production.
   b. Emphasize diversity with many small export firms.
   c. Continuing promotion of export firms.

C. Applications

1. Housing market demand and value.
   a. The one employer town - Seattle and Cape Canaveral.
   b. Population effects - hold or sell decisions.

2. Feasibility analysis and appraisal.
   a. Skill mix changes: impact on consumption patterns: ratio between real and personal property holdings.
   b. Base ratio changes alter the market basis of appraisal and value.
   c. Disposable income and savings levels with employment level, employment type, skill level, and age of work force.

Lecture #5 OUtline
Urban Land 550

Economic Base - Town Builders & Town Fillers

I. Growth of employment, population, and number of establishments is referred to as urban economics which in turn leads to measures of demand for space-time products to house activity and is reffered to as Urban Economics.

A. Economic base activities (townbuilders) and service or local market activities (town Fillers).

B. An economic base activity is one with exports goods and services or imports investment capital or outside income.

C. Export activities may be pure or mixed.

D. Base activities pay for jobs with outside money or finance local consumers with income earned elsewhere.

E. The export function not the size of the enterprise is critical to community economics.

F. Local market activities are those which provide goods and services within the urban district.

1. Each enterprise is export or service to a different degree.
2. They may be a seedbed for future base activity, improve external economy or base industries and may employ twice as many people as the base. industries.

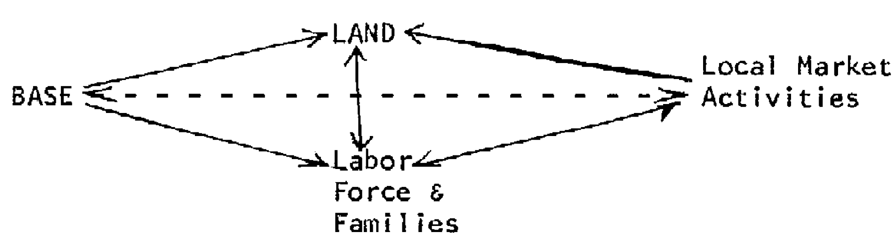
II. For every community there is a relationship between employment and total employment and population which can be measured as the economic base multiplier.

A. Measurement of the multiplier is a critical planning input.

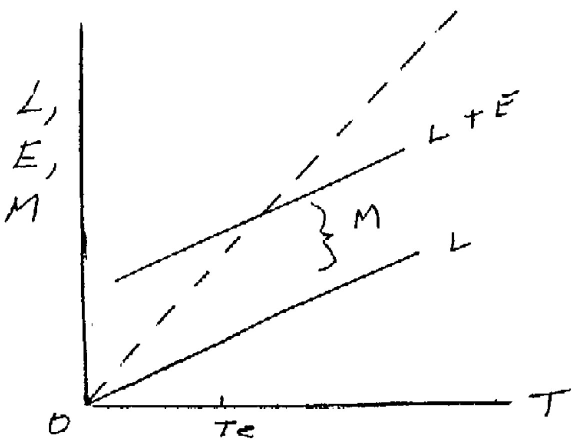
B. Oversimplified it is a pattern of ratio:

1. Assume pattern of employment ratios:

B: LM : : 1 : 2 - 1,000 : 2,000 persons
B: TE : : 1 : 3 - 1,000 : 3,000 "
TE: TP : : 1 : 2 - 3,000 : 6,000 "
B: TP : : 1 : 6 - 1,000 : 6,000 "



C. Economic base multiplier graph:



$T = L = E$
$T = L + M$
$\frac{L}{T} = g$
$1 = g + \frac{E}{T}$
$T\ (1 - g) = E$
$T = E.\ (1 - g)^{-1}$

But: $g = \frac{L}{T} = (1 - \frac{M}{T})$
Increases as T grows because M can be replaced with local production (L)

D. Suppose g = 1/2; then 1/(1 - g) = 2 which the total employment is twice the number of jobs in the base.

E. A fraction of 3/4 means multiplier of 4.

F. At the outset a primary industry like gold mining means all employment is based and all income spent outside community - growth is positive until opportunities for substituting L for M are exhausted.

G. Growth strategy to stabilize base:

1. Enterprises with stable revenue sources
2. Great diversity of many small export firms.
3. Diversity through size.
4. Continuous promotion to replace one unstable export firm with another.

H. Eventually size of city infrastructure reaches a critical mass so that the L to M equation cannot be reversed.

I. Population mix in terms of age groups, skills, flexibility, mobility, politics, favoritism, etc.

IIII Practical application of economic base theory is subject of Urban Land 557 but some techniques can be identified.

A. Techniques relate to SIC classification of department of Commerce

B. The whole industry method

C. The value added method

D. The minimum requirement method

E. Input-output analysis

IV. Economic base theory is recognized in many different levels of reports and analysis.

A. Appraisal reports may simply list time series data to infer growth and demand.

B. Planners may use body count for public facilities, utility budgeting, or retail location.

C. Regional economic models are limited only by data available.

D. Some growth models become self fulfilling prophecies as land use decisions are made as a result of the forecast.

E. Economic base can be a means of reducing the risk for a long term real estate project.

Lecture #5 - Urban Land 550 (4)

Economic Base - Export and Service Industries

I. The ordered city density cluster has a tendency to grow or contract as a result of something called its economic base. It is possible to forecast this growth and project the land and real estate requirements which are the consequence of this growth. The growth of employment population and economics is often referred to as urban Economics and this in turn leads to the inputs for space-time products to house urban activities which is the subject of urban Land economics.

A. Urban economic activity is composed of economic base activities called town builders and service activities which might be called town fillers.

B. Economic base activities represent a minority of total employment but are the most significant relative to community help. An economic base activity in any community is one which exports goods and services or imports capital for local investment or income for local consumption.

C. These export activities which bring money into the local cash cycle can be classed as pure or mixed export activities.

1. Oscar Mayer sells virtually all its products outside of Madison and so would be virtually a pure export industry.
2. Professional services offered by University Hospital serve both local residents and people from far beyond the city limits.

D. Economic base activities can take many subtle forms.

1. Government is a major economic base activity because it brings tax dollars from all over the nation or all over the state to support employees and buildings in Madison.
2. Retired people are spending their savings from the north while they live in St. Petersburg.
3. The University is a prime activity not only because of it attracts students who earned their income in other parts of the state during the summer but because it brings out-of-state students and their expenditures to Madison and various reserach grants which are spend in part in the Madison community.
4. An insurance company collecting premiums at its home office in Madison only provides economic base to the degree that its revenues are spent on Madison employees and services. An insurance agency working within the local market would only be a service industry.

E. An export firm with 10 employees is more importatn to a community in many ways than a non-export firm with 50 employees. It is the export function, not the size, which is critical because it is bringing dollars back into the community that leaked away from citizen consumption patterns otherwise.

1. When the export dollar is spent locally it creates non-export dollars in the community and eventually these dollars are used to pay for imports.
2. Bur first the export income circulates in town and it is the circulation that does the trick. Obviously it is important to maintain the

circulation despite the need to pay for imported goods so continual injections of export income is necessary.

F. Local market activities are those which sell the principle portion of their goods, services and capital within the confines of the urban district. The urban district may be defined many ways - metropolitan area within a toll free phone call, standard market statistical area, or political boundary.

1. While local service may predominate each may have some degree of economic base activity. The barber shop at a hotel is different than one in the neighborhood and a department store like Marshall Fields may draw in part from the nation as a whole.
2. Local market activities are basically urban service enterprises - town fillers.
3. They are significant because they can be a seed bed for base activity, improve the external economies available to base industries and may employ twice as many people as economic base.

G. However, the urban economist attempting to measure the urban economy may tned to overlook these activities in detail because:

1. Their response lags changes in economic base.
2. They are more stable in the long run as they may increase their services without necessarily incresing their need in land and buildings.
3. They have less economic impact because they are small acale, neighborhood oriented, and often marginal activities.

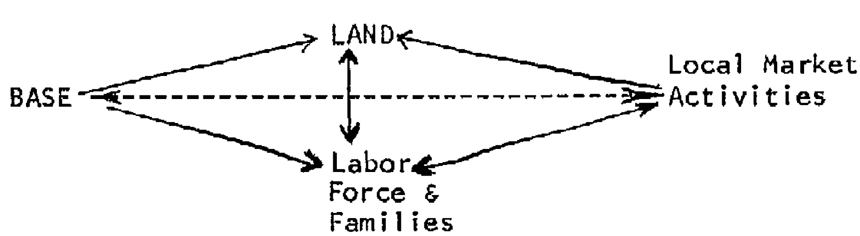
II. Because consumer spending habits are impossible to project how a given number of new jobs in export industries will affect employment in non-export industries, residential construction, and land consumption. For every community there is an economic base multiplier. For the average city there are two jobs among local market services for each job in the export base, the ratio being lower for younger communities and higher for large cities regardless of age.

A. Each city at its own point in time has its own economic base multiplier with which banks, stores, and city hall can forecast changes in their volumes of deposits, their sales, their need for city services and all the rest.

B. One way of illustrating this pattern of ratios between base (B) employment and local market employment and total population would be as follows:

1. Assume pattern of employment ratios:

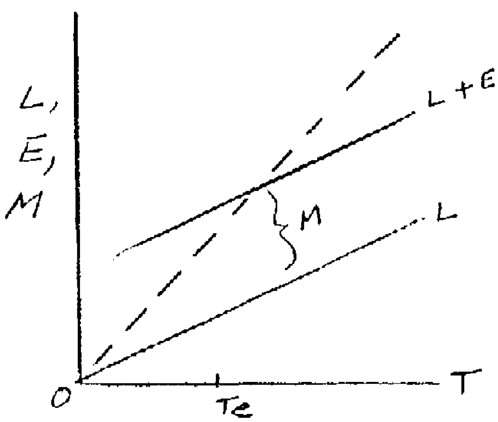
B: LM : : 1 : 2 - 1,000 : 2,000 persons
B: TE : : 1 : 3 - 1,000 : 3,000 "
TE: TP : : L : 2 - 3,000 : 6,000 "
B: TP : : 1 : 6 - 1,000 : 6,000 "



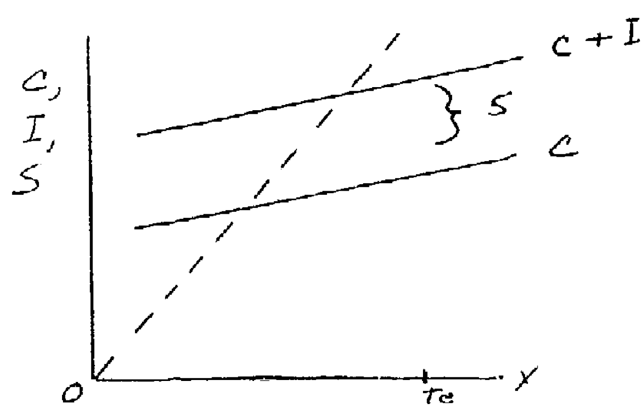
Disequilibrium short run loses 500	B : LM :: 1 : 4
	B : TE :: 1 : 5
	B " TP :: 1 : 12
Equilibrium - long run	B : LM :: 500 : 1,000 (1:2)
	B : TE :: 500 : 1,500 (1:3)
	B : TP :: 500 : 3,000 (1:6)

C. In economic terms the economic base multiplier is quite similar with the Keynesian investment multiplier which is defined with the realtionship of increase investment spending and the consequent increase in $\Delta Y/I$ national income.

a) Economic Base Multiplier



b) Keynesian Investment Multiplier



$T = L = E$
$T = L + M$
$\frac{L}{T} = g$
$1 = g + \frac{E}{T}$
$T(1 - g) = E$
$T = E \cdot (1 - g)^{-1}$

$Y = C + I, \Delta Y = \Delta C + \Delta I$
$Y = C + S, \Delta Y = \Delta C + \Delta S$
$\frac{\Delta c}{\Delta y} = k$
$1 = k + \frac{\Delta I}{y}$
$\Delta Y(1 - k) = \Delta I$
$\Delta Y = \Delta I . (1 - k)^{-1}$

But: $g = \frac{L}{T} = (1 - \frac{M}{T})$
Increases as T grows because M can be replaced with local production (L)

1. Horizontal axis measure total number of jobs in a community.
2. The vertical axis measures, alternatively, the mumber of jobs in export businesses (E) or in local non-export businesses (L)
3. The vertical axis also measures the job loss because of imports (M) which is just equal numerically to the number of export jobs since savings and investment must equal unity in Keynes.
4. In the agebraic summary T = total employment and since E and M are numberically equal in equilibrium then total employment can be expressed as the sum of local employment in employment created elsewhere by community imports.
5. The critical assumptions is that people in a community spend their money so that the relation between total number of jobs in a community and non-export jobs (L) is a constant (g) so long as there is a range of variation it is reasonable to assume that L/T is constant

D. Suppose $g = 1/2$; then $1/(1 - g) = 2$ which the total employment is twice the number of jobs in the base.

E. Since $g = L/T$, if the people in the community have spending habits which make this fraction 3/4 instead of 1/2 - spending more of their money on local goods and services, then the base multiplier is 4 instead of 2. Thus the multiplier numerical value and sensitivity of total employment to changes in export employment are derived from customary household patterns. The more ~~desirous~~ people prefer to spend their money outside the community the lower total employment in the community will be.

F. A community may begin with a primary industry such as gold mining or logging which means all the employment is economic base and all income spent outside of the community. Eventually people with no intention of digging gold or sawing wood come into the area and provide services so that the pattern changes to favor local market expenditures - i.e. L and g are initially 0 and gradually grow positive until the opportunities for substituting L for M are exhausted. At some point people will feel importing goods are preferable so New York does not manufacture its own auto, grow its own food, or make its own movies. Each service has its own economies of scale requiring a certain size population base.

1. Obviously these relationships are not strictly linear but nevertheless provides a useful base of forecasting adjustments over time. The adjustments will lag the change in economic base.
2. In Belvidere home construction lags construction of the Chryler plant by three to five years.
3. When a factory employing 1,500 people shuts down and the multiplier is 2, eventually another 1500 are going to lose their jobs or go on shorter hours. hence the concern in Madison when Gisholt Johnson, Red Dot and other closes up or the legislature decides to relocate state offices to other communities.

G. Leaving aside the issue of 0 growth in population or national product the city fathers must at least stabilize their employment through one of four separate strategies:

1. Preference to enterprises which vary stable markets and revenue sources, such as government, hospitals, etc. The alternative is to face heavy cycles such as Seattle, once dependent on Boeing or Huntsville, Alabama dependent on missile contracts.
2. Encourage diversity of small export firms such as a resort community with many small shops and resorts rather than one giant hotel. This is an application of the principle of diversification such as is occuring in Orlando or Phoenix. (30,000 new jobs and a 100,000 new people and consumption of 640 acres of ground per year on each side of town).
3. Diversity through size as Chicago is protected against massive economic instability.
4. Continuous promotion to replace one unstable export employment company with another, perhaps having the community provide low rent industrial space or other concessions.
5. Eventually the size of the city reaches a critical mass which simply does not go out of business. The infrastructure of durable goods such as houses, streets, water mains, and schools are not easily abandoned. Ghost towns may be found where the economic base was

a single mineral resource but these days the local sector of the economy tends to be part of the resource which attracts new industry because it provides real external economy. A good place to live is a good place to work and so the neat economic explanations of location theory in the 19th century are being reversed. There is a danger to date that if a city is too nice to live in it will grow too fast and be ruined making other areas more attractive. In effect the quality of an urban area tends toward a level of equal attractiveness.

H. One must also dimension total population by detailing the population mix in terms of age distribution, skills, adaptability to changing times and mobility.

1. Over time diversity and imbalance will lead to a process of adaption, favoritism and chance modifying the work pattern and time will modify the age groups. The population mix affects the governmental process and quality of its services just as in Madison the student mix is beginning to have its impact on city hall.

III. To make practical use of the economic base concept we must be able to identify those firms or activities which make up the economic base and the approcimate value of the economic base multiplier.

A. While other courses particularly Urban Land 557 are concerned with these problems in more detail we can suggest different techniques which are employed to identify or measure economic base.

B. Typically the identification system to relate to available information the SIC classifications in the Dept. of Commerce Survey of Current Business.

C. The first method for determining economic base is the whole industry method, which means all the employment in particular categories is counted as export, for example, all manufacturing, federal employment, wholesale, etc.

D. The value added method is the most complex, the most expensive to do and perhaps the ideal. It requires a survey of all business firms to determine the difference between the selling of price of products in sales outside of the community and all the amounts paid to other firms or governments outside the city. This will pick up export activities from basic local market services which have some sales outside the community. The work of government agencies must be proportioned by using the population of the city relative to the population the region serves. There is a danger that sub=contractors in the city suppling export firms will be counted as a local market activity.

E. The third method is the minimum requirement method which assumes that every city requires a certain work force in each industry category just to meet local needs. It is then possible to compare the excess jobs with the minimum required to measure employment attributable to economic base but the location quotient may understate export activities.

F. Input-output analysis is an important refinement of the economic base idea. Computer simulation of the process is required for useful application for a city but the important point is that there are multiplier impacts from an increment of production of one export firm on the product of another export firm as well as a multiplier effect on local activities. Firm A buys a gazonta from Firm B who eventually becomes a specialist in gazontas and sells to Firm C in antber town which makes widgets instead of gizmos. The interaction between of input-output relationships if the city gets one new industry it may gain a new complex of new firms as Boston gained the research power of MIT and eventually a spin-off of electronics firm started by a professor.

IV. Very careful analysis can produce rather detailed identification of growth patterns and the need for land of certain types and locations derivative of economic base. Too often the real estate professional simply infers from an implied cause and effect what the potential may be.

A. Appraisal reports will often simply list time series of information and then make the leaping assumption that since business is good an apartment house is needed at this site.

B. Planners and real estate analysts are just beginning to learn how to build econometric models which forecast population and employment trends and convert these to land use decisions. Various types of land users apply different types of criteria to make their judgments.

1. The ffre department or the school board determine site and location requirements 3 to 5 years in advance.
2. Utility firms have programs which vonvert economic base data to system requirements to forecast capital budgeting needs to transformers, transmission lines and generating capacity many years in advance. Indeed their meter records are excellent current data on the growth and stability of any particular population group.
3. Department stores are acquiring shopping center sites years in advance of actual development based on elaborate demographic models which have become more feasible with elaborate census tract data on tape coordinated with charge account sales and customer spotting by census tract and block

C. Regional economic models are coming into their own. A UCLA graduate school of business forecasting model indicated that the closing of Lockheeds plant would cost Southern California 24 to 31,000 jobs and $500,000,000. Each geographic and metropolitan region in the U.S. has an economic life of its own and business cycles in each area may differ from national cycles.

1. The south Atlantic region is continuing to grow strongly through national recessions though sectors in this region are growing at different rates.
2. Some regions with large non-durable goods industries are sensitive to smaller market areas than durable goods and therefore may be insulated from much of the national economic picture.
3. On the other hand the Chicago-Detroit area seems directly tied to the national scene because of a heavy concentration of durable manufacture with the result that the region tends to overshoot the turns in the economy.
4. Economists believe that with an adequate data base we can build from 230 metropolitan areas and 50 states to 8 economic regions and then generate a total GMP instead of working down from GMP estimates to the community level the way they do now.

D. These economic base models are beginning to affect urban land use patterns as investors use them to forecast absorption rates and land prices and governments base capital improvements policies on them with the result that there is a tnedency toward self fullfilling prophecies.

1. Elk Grove, Illinois, was given a forecast of growth by Real Estate Research Corp. The builder created a certain amount of space each year according to the schedule and the town grew at the same rate the eocnomist had forecast leading the economist to claim that his techniques were highly accurate.
2. In Milwaukee SEWRPC is developing a model to forecast which areas will develop first for what use in order to build a transportation system which would be best for that future situation.
3. San Francisco in the bay area region created BART and then built an economic model to show how population would be redistributed for convenience to the station and then attempted to buy land for the public treasury ahead of construction of the station.

E. Risk is the variance between risk and expectation. For the real estate investor much of the risk is the result of the long term character of improvements and the short term character of his market. He desperately needs models of his long term community economic base trends to have some control of his future prospects.

Urban Land 550

CITY DEVELOPMENT--THE PRIVATE VIEWPOINT

I. The term "property development" is rather vague and elastic, a generic term like theft, which covers a multitude of sins .

A. The development process spans vastly different periods of time and scale of undertaking

1. Building a duplex or building a city
2. Subdividing a single lot or converting raw land into neighborhoods of home sites.
3. One idea and a few weeks time or creative management of one project for twenty years time
4. Leasing of a gas station site or leasing of a regional shopping center.
5. Creative use of old buildings or placement of old businesses in new buildings.
6. Creative administration of public agencies for urban renewal or creation of private agencies to specialize in urban renewal.

B. Property development cannot be distinguished from property management. Development assumes property will be marketed and managed in a certain way for many years following the construction or remodeling phase.

1. Real estate is a classic example of the second law of motion--it very quickly declines and goes under without successive sustaining creative inputs in the future. Men give their lives to the maintenance of a single large building, maintaining every mechanical detail, surpervising the clean-up crews at night or the emergency crew for a leaking compressor at five in the morning.
2. Real estate is therefore essentially a service product, but these services are intangible or invisible as they are often performed when the public is not around or the public takes for granted.

C. Various phases of the development-management cycle take different combinations of entrepreneurial abilities or administrative skills.

1. Passive investment anticipating future events
2. Control, concept, and securing political approval
3. Sight development and preparation for wholesaling
4. Construction of improvements and retailing to satisfice
5. Long-term management and consolidation to optimize

II. Your experience with your own development project taught you that the developer must fit his project to many constraints, not only cash flows but also zoning, shape of site, pedestrian behavior and a host of others. Today we would like to explore some of the other complications which constrain the developer in his choice of alternatives

A. Selection of a grand strategy

1. Matching the development to the talents of the firm--entrepreneurship (concept) or management (control)

2. Willingness to accept cost of high public silhouette
3. Maximum potential loss which can be absorbed
4. Time line or planning horizon of firm
5. Number of profit centers which can be secured from control of project
6. Non-financial objectives
   a. Stabilized current investment
   b. Generate advertising and public image benefits
   c. Capture values created by primary enterprise

B. Determination of legal-political feasability within acceptable time periods has become a major risk-decision factor for developers. Every political approval or political action reduces the probability that the project can go forward.

   1. Need for zoning change or variance in building code
   2. Need for annexation
   3. Assistance of capital from public utilities or municipal budgets
   4. Control of public attitudes by local media
   5. Harassment by public officials
   6. Erosion of the political base of public good will

C. Ethical and aesthetic suitability

   1. Is the project consistent with control of sprawl, conservation, public safety?
   2. Are the capacities of the developer sufficient to protect his subcontractors?
   3. Does the design advance the environment of both the user and the neighbor?
   4. Is the project compatible with the developers image of himself and the time and energy he has to invest?

D. Many of the above considerations are taking the largest and most effective organization out of real estate development; at this point the political moves of consumer and environmental advocates may be counter-productive as they frighten off large developers and or unnwilling or unable to concentrateono small developers who continue to make their own mistakes at a duplex or single-family home pace.

III. As you may recall, the common denominantor between space-time and money-time is time.

   A. Capital cost and revenue schedule equated by timeline of development

   B. Value is a function of time lapse between outlay dollar and revenue dollar

   C. Time is critical resource to be controlled through planning and management according to plan

   D. Capital budget schedules, operating schedules, and time schedules

      1. Lead time for planning and regulatory review

      2. Construction in process time

      3. Start-up or rent-up time

4. Receipt schedule--the collection lag
5. Schedule for refinancing of equity buildup

E. A nightmare of deadline dates; for example:

1. Option date to acquire site
2. Regular meetings of regulatory boards
3. Lead time dates to meet completion dates to serve a market
4. Take-down dates on loan agreements
5. Seasonal limitations on construction factors
6. Occupancy clauses in tenant leases
7. Repayment dates on temporary financing
8. Employment dates for staff

F. Talent, time, and money have become interchangeable raw materials in the real estate development process as in no other industry.

1. Entrepreneurs trade their unique talents for equity and mortgage money
   a. Joint ventures
   b. Stock options--Levitt and ITT compensation methods
   c. Packaging for percent of profits through control of land, tenant, or concept
2. Fast track construction through intergration of design and construction phase
   a. Through full-service contractor
   b. Through architectural firm offering construction management
   c. Pre-packaged buildings

G. Very few firms have all the talent required in their own organization since they cannot carry the overhead and specialists are too scarse. Therefore the developer is becoming a central manager of a multi-business venture.

IV. Until recently, the development process was basically a disorganized series of individual investment decisions which failed to relate one aspect of the process to another.

A. Historical division by function meant the land was developed by one party without relation to a city plan, the buildings were constructed by another, and the space was sold or leased by a third party. For lack of capital or significant effective demand, projects were small scale. The developer was interested only in the physical aspects of the development. Not so today.

B. Contemporary relationship is to the total consumption system for the use of urban space. Land developers today are more often than not builders who tailor sites to the style of improvements.

1. As neighborhoods are constructed, the builder takes a permanent position by maintaining rental property, leasing gas station sites or developing shopping centers.

2. In the past, the developer took all the risks and made the biggest promotion effort to attract people to his area and them others generated a safe income from this captive market.

3. Today the smart developer continues to service the homeowner for many years after the initial home sale by servicing the mortgage, selling the insurance; owning the local utility company, and taking a percentage on sales at the local shopping center.
4. Of course, there is always the brokerage commissions as old customers move and remodeling business as satisfied customers expand their investment.

C. The current trend to develop larger units at one timec a neighborhood instead of a site or a complex of related primary and ancillary units leads to new terminology such as:

1. Planned unit development (PUD)--balanced residential community complexes
2. Industrial or office parks
3. Shopping centers
4. New towns

D. The increasing scale of development means big up front money and mistakes mean larger amounts of back up money as well. To generate big capital, the real estate industry is witnessing :

1. Creative new multiple approaches to the capital market
2. Large corporate investors--most of whom have taken
3. Insurance company equity participation
4. Vertical integration of contracting and construction material industry

E. Since the entrepreneurship and management abilities required in real estate have never been notable attributes of govern ent administration, public agencies have found it advantageous to utilize private enterprise skills

1. The entrepreneurial ego in public administration
2. Turnkey projects

BUSINESS 550/705

PUBLIC SERVICE COST/BENEFIT--PUBLIC SOLVENCY

I. There is an interplay between capital expenditures by one governmental agency and operating costs funded by local real estate taxes which illustrates the problems of who benefits and who pays.

A. Federal projects removing tax base.
B. Federal grants and gifts.
C. Federal seed money to promote new governmental functions
D. State aid formulas
E. Political fragmentation at the local level

II. Federal policies may be very unfair to local residents even though the objective of government policies is good. Consider the question of who pays for the Fderal wild river program.

A. Professor Barrows of Agricultural Economics studied the impact of wild river acquisitions of the National Park Service on the town of Springbrook in Washburn county, where it is protecting the Namekagon River. The goal is approximately 3200 acres of privately owned land which will be purchased and removed from the tax role even though the families thereon may be permitted to stay for up to 20 years as tenants. The town still must provide services including education, nevertheless.
B. NPS makes no payment to local government. In contrast the town of Springbrook receives 50¢ per acre on 43 acres preserved by the State DNR and 20¢ per acre on 7500 acres of county forest plus a share of timber sale revenues.
C. NPS had acquired in 1974 approximately 600 acres of its goal which was valued at $260,000 or 10% of the total tax base in the township. The first impression is that if the tax base drops 10%, the mill rate must increase by the same amount to make up the loss. However the issues are more complex.

D. The $260,000 tax base loss in the town of Springbrook is only 0.2% of the tax base of Washburn County and 0.3% of the school district tax base. The School tax accounts for 70% of the total property tax so the loss of tax base would hurt if it were not neutralized through the state formula for share income tax. As a result the net change in taxes looks like this:

Change in school tax rate	- .2¢ per $1,000 property value
change in county tax rate	-1.0¢ per $1,000 property value
change in town tax rate	- .5¢ per $1,000 property value
change in state shared taxes	+ .4¢ per $1,000 property value
change in property tax relief	+ .2¢ per $1,000 property value
TOTAL TAX RATE IMPACT	-1.1¢ per $1,000 property value

E. As a result state taxpayers are paying the consequences of a federal land use reservation program while federal income taxes are being used to pay acquisition.

III. Federal programs once gave communities block grants for very specific purposes.

A. Truax Field
B. Public housing facilities
C. Open space capital grants

IV. The federal government has recently recognized that urban renewal without additional social services falls short of desired impact.

A. Temporary funding of new planning positions.
B. Temporary funding of experiments in small business assistance, police, and social work, property rehabilitation, etc.
C. Administration of government grants which are conditional on maintenance of relocation services, local education programs, building code enforcement, etc.

V. State aid formulas often encourage urban sprawl or misdirection of resources.

A. Road aids to townships encourage excessive paving.
B. Fire dues for volunteer fire departments.

VI. Political fragmentation at the local level leads to misallocations of resources because of debate as to who benefits and who pays.

A. University Avenue project delayed
B. Township of Madison vs. City of Madison
C. City of Wausau vs. Marathon County
D. Private utility districts and public boundaries

BUSINESS 550/705 - PUBLIC-PRIVATE PARTNERSHIP

I. Merger of public/private interests is always required for a real estate project. The question is how that merger will be accomplished:

A. Negotiated confrontation
B. Pre-annexation agreement
C. Project invitation and competition initiated by the City
D. Tax abatement incentives
E. Special assessment for infrastructure (Hill Farms)
F. Subordinated development loans
G. City owned space frames
H. Joint ownership
I. Exactions and fees

II. Co-development requires a strong, knowledgeable government, patient developer, and a local business leadership structure with clout and money.

A. Milwaukee Development Corporation/City of Milwaukee Development Agency
B. Inner Harbor Development Corporation/City of Baltimore/private developers
C. Separate development corporations instigated by City objective but separate from civil service, patronage, and political changes in City Hall make it possible to hire expertise and sustain commitment for long periods of time.

III. Federal urban development programs have been scuttled by Nixon and Reagan and HUD is one of the few federal agencies where employment has been cut by more than half.

A. Urban development action grants - financing the gap on a "but for basis"
   1. Eligibility
   2. Private capital must exceed 2½ times public capital
   3. Jobs created per dollar of federal money
   4. Fiscal impact on sales, real estate, or other local taxes
   5. Rehabilitation preferred to demolition or relocation
   6. Public hearing and review
   7. Minority business participation

B. The UDAG grant goes to the City who in turn makes a soft loan to the development as a second mortgage at non-market rates which must repaid to the city to become a revolving fund for future urban development.

C. The HODAG program was intended for housing

IV. Community block development grants provide a capital pool which a city committee can allocate to various public groups who are pushing to advance various community organization projects.

V. Local cities can also contribute access to tax exempt financing by means of:

A. General obligation bonds
B. Project revenue bonds
C. Tax incremental financing
D. Housing revenue bonds (20% of residence must have income below 80% of county)
E. Industrial revenue bonds
F. Land leases
G. Leasebacks

TRANSPORTATION AND SITE VALUE IN USE

I. It may be that the principal economic function of the city is to bring about co-ordinated congestion to facilitate the exchange of goods and services. The cities which have grown fastest are those which have taken the lead in transporation innovation in their era, including rivers in Europe, inland canals and waterways in America, the railroad, the auto, and the airplane

A. Others will talk on the macro-econo[illegible]of urban transporation so I have been asked to discuss the implications of transporation access to individual parcels or building sites and to suggest some of the analytical techniques which may be appropriate.

B. To operate within a 50 minute period and permit as much discussion as you wish I thought I would try to make my points by reference to Madison projects which should be familiar to you although illustrati ve of more=universal problems.

C. For discussion purposes on the economics of transporation I thought I would discuss shopping centers, filling stations, and condemnation of access rights.

II. Interior mall shopping cneters under donstruction by Penney's on the east side and west side .

A. 2500 cars per hour must move on and off the lots or exit at the end of the day. Assuming one lane can handle 3 cars a minute or 180 car an hour , one needs a minimum of 12-14 lanes of access to surroundin street systems.

B. Street system must have capacity to absorb these without impeding flow hence the necessity of widening Gamin and Mineral Point Roads to 6 lanes.

C. State Highway Department data only recognizes projections from existing data so that Pyramid interchanges were obsolete when built.

D. Danger or inconvenience of parking means conditioning of shopper to go elsewhere but builing to peak parking requirement of week before Christmas means carrying excess land on tax rolls for balance of year. In Milwaukee they are leasing space for employee automobiles at a near-by drive-in theatre to make parking space more eleaborate.

E. Two other sites on West side lost out because of limited frontage due to shape of Frisch farm and judgment error by doctors owning the Dohm Plat.

F. Tosseparate goods, people and cars cars are circulated by an outside loop and drive-in services such as banks and TBA sales are held to the outside of the Loop. Hilldale Center is improperly designed relative to its circulation and entrance route.

G. Truck routes were once placed in tunnels under shopping centers but the bay spaces required for semi-trailers was incompatible with bay spaces required for retailing above. Tunnels were abandoned for screened unloading docks at multiple points of entrance.

H. Cost of providing space in a shopping center prohibits excessive warehousing on site so that the semi is regarded as a link to a local warehouse point. Indeed heavy merchandise is shipped directly from the warehouse rather than the center so that distribution is separated from display functons (opposite Illustration for obsolete store locations such as Sears and Schuster's in Milwaukee)

I. Dispersion of autos requires perimter while shopping center requires area. Develop concept of pads, sandwich, cross easements, and leasing covenants to share accessibility costs.

J. East side project illustrates problem of split road elevations preventing left furns and widening of two land road to permit queueing for turns. These costs are borne by developer so that raw land values depnd on costs of correcting for off-site accessibility

K. Right turn from lane serving customer origin dominates value. Howard Johnson, Holiday Inn and Ramada Inn examples. U.S. Post Office

L. Left turns kill value as witnessed Red Owl vs. Kohl's, Arbor Hill Subdivision and Treausre Island.

III. Accessibiltty is a function of visibility, decision-span, safety attitudes, habit, and declining frustration tolerance with increasing proximity.

A. For filling stations accessibility depends on distance travelled by the car during the decision-making process after station becomes visible.

B. A $50,000 tower sign for an interstate filling station increases the decision span no more than 2 seconds but gives the driver an opportunity to commit to the exit ramp. (Pure attributes 100,000 gallons a month to its sign)

C. The filling station on the right on the way home from work at the far sied of a controlled intersection is the preferred location by far. A red light provides a decision span but creates a frustration facotr which is relieved by crossing the intersection on a green light before turning off the road for gas.

D. A narrow apron from road to fillings station ramp requires too much precision and therefore generates frustration for the woman driver just as she sees the station she wishes to use and this often is transformed into a negative attitude relative to the brand.

E. Brand reinforcement can occur from frequent sightings of a particular brand even wehn access may be less than ideal - Shell Oil in Madison.

IV. A major source of litigation relative to condemnation cases involves the loss of value to the site as a result of a partial taking which disturbs accessibility.

A.

A. It's a general premise in real estate that you cannot sell a piece of land without access without implying a floating easement over the adjoining land to reach the nearest public right of way.

B. Similarly, a land-locked parcel means almost total loss in value
   1. Before and after valuation to measure damages as a result of a taking
   2. Constructive loss of access as in the West Virginia Steel Plant Case puts an economic constraint on highway design within available budgets

C. A partial taking of access may mean a drastic change in highest and best use of a parcel and therefore its value. The problem comes in determining when the after-value reflects the impact of police powers which are not compensable and when the loss of access is directly due to the taking. (For example, the state line restaurant and truck stop which lost farm acreage and diversion of traffic stream)

D. While the law requires access it does not compensate for circuity of travel explicitly but may do so implicitly as a result of change in highest and best use. (Milwaukee auto dealer case)
Improved access may mean an increase in value which negates any award at all for the taking.

E. Platting and all development adjacent to a state, - county- or city street requires approval by the appropriate authorities.

F. Invisible prohibitions of access will wipe out proximity values such as at the intersection of 12-18 and interstate 94. There is virtually no appeal from the State Highway Department's rulings on access and no compensation for properties not contiguous and suffering a partial taking.

URBAN LAND 550

Real Estate & Transportation Policy

I. Introduction to the Urban Transportation Problem.

If there is anything more talked about and less acted upon than the weather, it must be the crisis in our public and private transportation systems. Despite the clamor of the public, legislators, and transportation service suppliers; the flush of recent funding to public transit from the feds; plus the energy shortage and increasing travel costs; our transit problems are getting worse every day.

It is the battle ground of computer-age hardware and antiquated public policy decisions.

A. Public transportation got off to a good start with:

1. Long haul railroads in mid 1800's.
2. Short haul commuter systems like the New York Subway opening in 1904.
3. Inter-urban railroad electric street cars introduced at the end of the nineteenth century.

B. Off setting this pattern of a strong primary public transportation system were:

1. Henry Ford and his model T priced to be financially accessible to every American family.
2. The American love affair with the automobile for its status potential, source of mobility, and mechanical appeal.
3. The introduction of truck transports and the bias freight rates in favor of truckers.

C. The result of this conflict is that today:

1. Only 8 out of the world's 46 urban rail systems are located in American cities.
2. Since World War II inter-urban rail service has been cut by 80% while one quarter of all railroad paggenger cars still in service were built before 1940.
3. Detroit has transformed the modestly priced and efficiently designed "tin Lizzie" into a genuine plastic wood grain vinyl four-on-the-floor super eight overhead cam 380 hourse power magnesium hubcapped sterophonic automatic 36-month-to-pay gas-guggling polluter!
4. Americans are now chained to the private automobile and its accessories: The super highway, parking lots, and traffic jams because of uncoordinated and distant home to work commuter patterns.
   a. Highways and automobiles consume space in an urban fabric originally designed with minimum space to spare.

b. Forced land use activities to over crowd in some urban areas while spreading them too thin in other places.
c. The automobile and bus have so conqured their opposition: The train, street car, and pedestrian that there is very little freedom of choice left in the urban structure--accept the auto or become a prisoner of space.

II. The Dilemma of New Urban Land Use Problems in Old City Perspectives

A. Frank Lloyd Wright--"Big cities are 'vampires' that must die. The universal use of the automobile has made conventional patterns of urban living indefensible." Is there any going back in time or space?

B. We live in central cities which are the product of nineteenth century thinking; or the blighted urban grey areas which were strongly influenced by the linear travel patterns of the street car routes, or more preferably the suburban fringe where distance is measured in minutes rather than miles.

C. The contemporary urban man has responded to the motor age in much the same way that the renaissance man yielded to the first pressures of urban growth by breaking down the town walls to afford more land for his swelling urban structure. Both have found themselves vulnerable to the unknown forces that wish to disrupt the process.

D. Transportation developments have combined with the telephone, television, and other communications to turn the whole country into one giant metropolis.

1. By 1970 the suburbs contained 74 million people, 19 million more than in 1960; the central cities contained 62 million, an increase of less than 3 million.
2. 70 percent of the population is living on 1 percent of the land.
3. Bus patronage in 1970 was only 7.3 billion rides, less than half the volume of 1930.
4. Rapid transit has declined almost 30 percent over the same period.
5. Railway commuting is carrying less than half of the 440 million passengers it served in 1930.
6. In 1910 ninety percent of the urban work force either walked or used a street car to reach their place of work (a 3 mile trip that took 30-45 minutes).
7. By 1930 the same 3 miles now only consumed 10-15 minutes by automobile.
8. By 1970, the average daily commuting distance was between 8-10 miles and the travel time rose to a little less than 30 minutes.

E. The cities already built cannot be abandoned, but in the process of maintaining, replacing, and expanding them it is possible to begin transforming them.

1. The volume of movement in cities can be reduced substantially by making good housing and neighborhoods accessible to work places.
2. Providing service and commodities distribution easily accessible to the residential dwelling unit.
3. Design and redesign streets and other transportation infrastructure to help bring about new uses of land, reduce the pollution resulting from motorization, create new sites for housing, shopping and industry, and also possibly enhance the appearance of the city.
4. Return to the concept that walking is the most efficient method of short-haul movement.
5. Consciously match transportation technology and impacts to all densities of the urban structure.

    a. The average cost of maintaining an automobile for commuting purposes is over $1000./year.
    b. 25 to 30 percent of the U.S. city is devoted to the automobile, while more than 50 percent of the usable land in the central business district is dedicated to the streets and parking lots.
    c. Ten miles of freeway in a city may cost $100 million and remove 2500 housing units from the market as well as an equal number of business locations. For every one dollar it takes to build an elevated super highway, it takes two dollars to build a roadway at grade and four dollars to build a depressed roadway.

III. The Interrelationship of Housing and Urban Transportation

A. Urban households choose their housing locations and urban transportation modes so as to maximize their total real incomes.

1. Make trade-off decisions to either maximize housing satisfaction and economy while substaining high transportation costs, or reduce transportation costs at the expense of higher cost and less satisfactory housing accomodations.
2. Work-trips will vary in length and expense in relation to the type and quality of housing the wage earner desires (assuming his work place is in the CBD).
3. Substitutions can also be made between travel time and travel cost.

    a. Travel slower but cheaper.
    b. Go public and travel cheaper.

4. As residential densities decreases, the travel time, cost, inconvenience and sheer technological incapabilities of the various public transportation systems increase rapidly.

5. American commuting households apparently have made the choice of spending more on transportation and less on housing.

a. Large housing cost savings per mile traveled for those residing at the lowest densities encourage long-distance travel.
b. As distance traveled increases, commuters are encouraged to spend more money on transportation in order to obtain time savings obtained from using faster commuter systems.
c. Wage earners with high incomes and larger families normally will desire considerable amounts of housing and yard space. They thus go to the fringe of the city where it is the cheapest and thus trade personal time lost in commuting and higher travel costs for benefits of more satisfactory housing.
d. For people who choose to reside at high density, potential housing cost savings from commuting longer distances are diminished and they have little incentive to spend much money on transportation.
e. Lower income people working in downtown areas will accept either higher residential densities closer in or very long trips (in time or distance) to obtain the housing services they desire. They are also more likely to use slower but cheaper transportation.

6. Theoretically the worker will select the dwelling unit location which ensures the greatest degree of economic equilibrium between the internal economics of arrangement of space and scale of the dwelling unit and the external economics of locational requirements and expense.

   a. This abstract expression of the ideal residential location for every household overlooks the fact that:

      -- dispersed economic activity results in job opportunities being located in areas other than the CBD.
      -- no such thing as a single "local labor market."
      -- this prevents a single residential site from being accessible to all employment possibilities.
      -- thus the number of sites available to a household which provides the potential for equilibrium between the internal and external economies increases.

7. The "price" the wage earner pays for a certain property in his attempt to capture the most perfect locational advantage for his residential location, the highest utility; is called position rent.

   -- position rent = pure wage minus (transportation cost + manifest daily wage)

Wingo states that an equilibrium set of rents may be defined as:

$$_kR_i + {}_kX_{i-o} = L, \quad k=1,2,3,\ldots.g \quad i=1,2,3,\ldots\ldots.h$$

where $_kR_i$ = the position rent for worker k at any point i
$_kX_{i-o}$ = the annual transportation costs to worker k of the journey-to-work from any point i to the employment center at o
L = location costs, a constant for all i and k
h = position at which a set of g (g less than h) households may locate with respect to a single employment center o.

Given the transportation function expressed as a function of distance from the center s_o, it becomes possible to express the spatial structure of position rents by rephrasing the preceding equation.

$$_kR_i = L - {}_kX_{i-o} = {}_kX_{m-o} - {}_kX_{i-o}$$

where L = location costs
$_kR_i$ = position rent at point
$_kX_{i-o}$ = transportation costs between center and point i for household k
$_kX_{m-o}$ = transportation costs to the margin point m from the center o for household k.

The following functions relate to the expressions listed in the model diagram:
i = residential site for worker k
j = employment site for worker k at employment center o
m = marginal location wage
R = position rent
v = policy variables for constrained velocity
kW = hourly wage for worker k at employment site j
N&n = population and relative characteristics
X_{i-j} = distance between home and work

[9] J. R. Meyer, J.F. Kain, M. Wohl, The Urban Transportation Problem (Cambridge, Massachusetts, Harvard University Press, 1965), p. 108

URBAN LAND ECONOMICS 550
Lecture Outline - REAL ESTATE AND SOCIAL DISORGANIZATION

I. The land and building decisions in real estate form the walls and lid of society's terrarium. Churchill - "We first shape our buildings and then they shape us."
   A. ~~XXX~~ Real estate form has some direct influence on
      1. Individual mental illness and isolation
      2. The strength of the family unit
      3. Social stratification and conflict
      4. Street crime and vandalism

   B. Potential conflict between what individual consumer wants and aggregate consequences of consumer preferences must be considered in land and building decisions.
      1. Culture creates environment which then modifies cultural behavior.
      2. Recent studies on interaction of space and society include the Hidden Dimension by Hall, Defensible Space by Newman, or Community and Privacy by Chermayoff and Alexander.

II. From Community and Privacy consider the six domains of urbanity, or a hierarchy of real estate spaces affecting community and private social behavior:
   A. Urban-Public. The places and facilities in public ownership: Highways, roads, paths, civic parks.
   B. Urban-Semi-public. The special areas of public use under government and institutional controls: City halls, courts of justice, public schools, post offices, hospitals, transportation exchanges, parking lots, garages, service stations, stadia, theaters.
   C. Group-Public. The meeting ground between public services and utilities and private property requiring joint access and responsibility: Places requiring mail delivery, garbage collection, utilities control, access to fire-fighting equipment or other emergency rescue devices.
   D. Group-Private. Residential components under control of management acting on behalf of private or public interest for the benefit of tenants or other legal occupants: Reception, circulation, and service spaces; community gardens; playgrounds; laundries; storage; etc.
   E. Family-Private. The spaces within the private domain controlled by a single family that are devoted to communal family activities such as eating, entertainment, hygiene, and maintenance.
   F. Individual-Privage. The "room of one's own," the innermost sanctum to which individuals may withdraw from their family.

III. A variety of detailed courses are available in Urban Sociology, Urban and Regional Planning and Psychology but the 6 domains of urbanity can be illustrated to show impact of land planning and building design on social disorder.
   A. Jane Jacobs - Death and Life of Great American Cities - Rittenhous Square
      1. The one use time ghetto of office buildings surrounding a park leads to a social vacuum which attracts the social outcasts.
      2. Rittenhous Square has heterogeneous land uses which generate continuous pedestrian traffic which provides a self policing activity level and therefore and unusually low rate of street crime.
   B. Physical design can provide automatic surveillance and therefore remove opportunity for concealment or secrecy for anti-social behavior.
      1. Design of a library control point
      2. Design of open parking ramps and stairwells
      3. Design of public buildings with see-through corridors.

C. Group-public spaces as typified by shopping center
   1. Separation of truck and car
   2. Separation of circulating traffic from building zone with peripheral roads and free standing traffic generators
D. Group-private is well demonstated in book called <u>Defensible Space</u>.
   1. People relate to small areas which are close to their own units and shun large plazas where everyone is a stranger and therefore a threat.
   2. Control of corridors and stairwells
   3. Channeling of pedestrian traffic through subtle use of curbs, textures, and views.
E. Family-private can be affected by design.
   1. Family life and the kitchen
   2. Front entry colors and textures affect attitude
   3. Circulation patterns which permit communication or reduce anxiety
F. Private spaces with both visual and auditory privacy

IV. In addition to individual building design and location contributing to social disorder, land use and financing policies have long term impacts in the aggregate which are undesireable.
A. The FHA Home Loan program led to suburban sprawl, excessive dependence on the automobile, and social stratification by income required or mortgage loan elegibility.
   1. The NAREB virtue of neighborhood homogeneity has indirectly led to exclusion of land uses and certain minority groups when heterogeneity of land use and social groups would reduce conflict for lack of communication or understanding.
   2. Unwillingness of mortgage lenders to lend in declining neighborhoods acceler ates decline and increases quality gap between central city and suburbs.
B. A change in loan restrictions imposed suddenly leads to price inflation and further flight to the suburbs.
C. The Rockford experiment at scattering public housing units throughout the community.
D. Court pressure toward dispersing public housing can be nullified by legislative or administratioe action catering to suburban pressure.
   1. The NOCHA case - equity vs. social environmental impact
   2. Defusing HUD as a force for social reform
   3. Clipping the wings of the New York Urban Development Corp.
E. Real estate decisions create a spatial fabric of society which modifies social behavior for good or bad.

URBAN LAND - 550
URBAN RENEWAL AND RECYCLING OF THE CITY HARDWARE

I. Title I of the Housing Act of 1949 began federal program of financing urban redevelopment efforts, with an emphasis on residential areas and new residential construction.
   A. Planning grants and loans to a local urban renewal authority (LPA) for communities certified as having a workable program.
   B. LPA would assemble parcels through purchase and condemnation, remove old structures and improvements, provide a reuse plan, complete public improvements, and market to private developers.
   C. Sale subject to detailed conditions of master plan would be at a price only a fraction of cost to acquire. The loss or write down between total cost of assembly and clearance and sales price would be split - 2/3's paid by federal government, 1/3 by local community.
   D. Local government share could include cash, cost of public improvements, or credits for a new investment by public institutions like Universities, hospitals, or state government.
      1. Legislation gradually liberalized credit system so fed's contributed 100% of cash.
      2. City vulnerable to blackmail by institutions with credits
   E. Original definition of eligible areas required high percentage of dilapidated or substandard dwelling units and 90% of resold area had to be for residential contruction. Over the years housing laws liberalized definition of eligible area and percentage of re-use area to go into non-residential purposes.
   F. Beginning with Eisehower, purpose of urban renewal was shifted from demolition to conservation with 3 project types:
      1. Total clearance: concerned with the demolition and clearing of areas whose physical components are incapable of being salvaged.
      2. Rehabilitation: concerned with the rehabilitation of the areas that can be economically restored.
      3. Conservation: long-range aspects of maintaining the physical condition of urban housing components.
   G. A major innovation and feature of urban renewal was the requirement that property acquisition was contingent on proper relocation of residents and businesses before their existing buildings could be demolished.
      1. This requirement caused delays which public associated with urban renewal.
      2. The equity of the urban renewal approach led to reform of federal and state rules of compensation for victims of eminent domain actions.

II. A variety of real estate economic factors gradually distorted the original intent of the federal program and of projects which resulted.
   A. City Hall became obsessed with re-use plans to increase the real estate tax base via high residual land value and intense building construction per acre.
      1. Tax revenue would give rapid payback of city's 1/3.
      2. Plans favored high-rise apartments, offices and commercial buildings.
      3. Public uses of cleared land provided political clout or stabilized surrounding private property values.
   B. After 1954 Universities, hospitals, or politically powerful private interests use federal programs to push back blight from their property and provide cheap land for expansion.
   C. Planners lacked real estate sense by failing to provide necessary linkages or creating awkward sized development parcels subject to impossible design constraints.

1. Clearance isolated in center of ghettos
2. High-rise projects with big open areas, a planning ideal, proved unworkable.
3. Successful projects began at the edge of natural border of stabilized areas and moved toward blighted blocks.
4. Re-uses which focused on middle or upper income family not only provided more tax base but also meant fewer welfare costs.

D. Planners in charge resented sale of land to private redevelopers and therefore made acquisition program extremely expensive and unpleasant so that no one came forward to purchase sites.

1. Complicated bidding, design competition, and negotiated acqisitions
2. Restrictive covenants which often made titles unmarketable or purchase too risky.
3. Adverse publicity and incredible delays of the developer after developer had committed funds.

E. Original emphasis on residential uses and residential re-use either forced existing commercial and industrial job opportunities to migrate into the suburbs or freed firms wishing to relocate from unsaleable fixed assets which tended to hold them where they were most needed.

F. Racial segregation and lack of low priced housing alternatives for relocated families meant disequilibrium in supply and demand with several results:

1. Useful lives of blighted properties were artificially extended, preventing natural land use successsion.
2. Segregation in the suburbs meant failure to disperse the ghetto and break the poverty cycle by reducing educational and economic segregation.
3. Overcrowding led to creeping blight.
4. Constant dislocation meant break-down of neighborhood social and political fabric.

G. As the complex problems of urban renewal were better understood from the mistakes of simple-minded idealism and institutional opportunism, 2 factors appeared:

1. A political backlash against urban renewal in any form
2. More generalized block grants for multiple faceted software as well as hardware renewal.

Urban Land - 550
Low and Moderate Income Housing

I. There is no such thing as low cost, decent housing. All the basic physical elements of land, structure, mechanicals, and operating services are expensive. There is some evidence that these elements are more expensive for the government to buy than for private enterprise but whoever must purchase land, labor, materials, and management expertise - the result is an expensive problem and it is growing more so.

A. A 980 squ. ft. 3-bedroom minimum National Homes prefab costs about $13,500 or $14,000 on a minimum city lot with sewer and water about 1962 when I first taught the appraisal course. The same unit today, new, in Madison, would cost about $23,000 but most families wouldn't qualify to buy such a house today. Only 50% or less of Wisconsin households might even qualify at the margin for such a house and probably less at todays 9 1/4% interest rate.

B. Therefore we are really looking for methods for reducing the monthly cost to buy or rent modest housing, the monthly cost for the family, that is, as somebody else must somehow make up the difference.

C. Following the back door to feasibility we must approach the problem by determining the payment that a given family can afford to pay and then adjust the cash flows of the desired housing to conform within that payment. For the family with $10,000 a year income, they can only afford a maximum of $200 a month rent including all utilities and parking.

D. It will be useful to consider all the cash outlays which must be covered by this $200 and the mechanisms by which we can reduce each outlay.

II. The cash costs to the renter or buyer include:

A. <u>Operating costs</u> for heat, light, maintenance, and repairs (subsidy as in public housing, increased quality of construction, self help by tenant or buyer, location)

B. <u>Real estate taxes</u> (fee in lieu of taxes as in public housing, homestead exemption for assessed value, state or federal subsidy, shift of tax collection to other sources to reduce mill rate)

C. <u>Collection losses</u> due to delinquency and default servicing charges

D. <u>Administrative costs</u> (incurred in marketing, managing, debt servicing, subsidy administration, etc.)

E. <u>Interest cost</u> on permanent financing (non-market terms, subsidy as in 236, reduce loan required, reduce market rates of interest)

F. Principal payment - repayment of loans outstanding
(Extend terms up to 50 years, reduce original loan balance)
(Reducing loan required can be by subsidy of land cost, reduction of construction cost, government subsidy of construction cost, or reduction of indirect cost including interest on construction loans and administration of government paper work, or attracting more equity capital).

G. Cash return to equity is the spendable cash to the equity investor
(Cash income to equity can be increased as a ratio by increasing leverage if terms of larger loan will still mean lower interest and principal payments; or cash profits to equity can be increased without increasing rental dollars by increasing tax savings to other income by means of investment tax credits, shorter useful life, higher percentage of accelerated depreciation, more liberal capital gains definition or tax offsets).

H. Equity appreciation due to equity buildup or appreciation in resale price.

III. Cash flow computer models permit one to test alternative proposals for housing assistance to determine which one accomplishes the most for a subsidy dollar. Housing policy cannot be based on cash sensitivity alone. (Otherwise public housing seems to be cheapest but it leads to undesirable social spinoffs or political resistance which impede the speed and scale of additions to the supply of housing choices within the effective demand of low income families).

A. The sensitivity of rents to alternative forms of subsidy might analyze four alternative projects and sponsorship type as was done by O'Block for the New Jersey Finance Agency:

1. New construction, nonprofit sponsorship
2. New construction, limited-dividend sponsorship
3. Rehabilitation, nonprofit sponsorship
4. Rehabilitation, limited-dividend sponsorship

B. A summary of the tables which follow which should not be generalized too indiscriminately would indicate the most efficient way to allocate a $100,000 subsidy in terms of rent reduction per dollar spent would be:

1. Construction or rehabilitation cost
2. Land acquisition or land and building acquisition
3. Debt service payment as a function of interest rate
4. Debt service payment as a function of mortgage term
5. Real estate taxes

C. The following tables are from Chapter 9, Urban Analysis, Harvard Graduate School of Business Administration 1970.

URBAN LAND 550
Land Economics, Urban Blight, and Origins of HUD

I. The growth in the urban character of America has paralleled growing recognition urban blight or the spread of slums in the popular vernacular. Blight is an elusive concept.
   A. Blight has become a broad generic term for areas where social disorganization or economic or artificial economics barriers have had a tangible and visible impact on the spatial product.
   B. Social disorganization may be marked by high rates of crime, suicide, disease, and psychosis.
   C. In the vernacular or popular useage blight may refer to:
      1. A structure(s) in a state of disrepair.
      2. Mixing of land uses, usually industrial and residential with a connotation of cause and effect
      3. High density residential areas of relatively lower income, education, or social status groups.
   D. In more technical publications, "blight" may refer to:
      1. Old residential areas in an advanced stage of obsolescence and deterioration, ie. "slums".
      2. Areas of declining population and property abandonment except in times of acute housing shortage or economic depression.
      3. Residential areas serving successive waves of nationality and racial groups during assimilation.
   E. Before 1900 Congress authorized a study of blight in 7 cities and found a correlation between slums and alchoholism. Eventually, Congress concluded prohibition was the answer to slums.

II. A symptom of blight is physical deterioration but causes are more difficult to identify, anticipate or correct.
   A. Blight can be typical of all urban land use classes in their pure form.
      1. Obsolete or socially isolated residential neighborhoods
      2. Obsolete commercial-retail strips
      3. Outmoded schools and parks
      4. Obsolete manufacturing districts
   B. Historically zoning has defined a heirarchy of preferred land uses by exclusion of presumeably less desirable land uses.
      1. Only recently have planning concepts pushed for heterogeneous compatible land uses, zoning which defines an area by what is should be rather than by what is ain't.
      2. Physical homogeneity seems to lead to social disorganization.
      3. Physical heterogeneity seems to promote a more stable succession of uses.
   C. From an urban economics ~~xxxxxxx~~ viewpoint, blight is a symptom of institutional disorganization and failure of the land use succession process. That is the process or cycle by which investment decisions recognize a decline in productivity of a particular land use to a point where a competitive use can afford to purchase the real estate and alter management, remodel, or replace existing improvements with more profitable use.
      1. The ideal pattern of succession would expect that as a land use area and improvement became obsolete, parcels would be reassembled and converted to more profitable land uses.
         a. Conversion of mansions to boardinghouse to apartment
         b. Langdon Street
         c. The famous Plaza Hotel

D. Blight becomes virtually irreversible if the pattern of succession due to economic logic is distorted through:
   1. Renewal or appearance of next use pattern too often blocked or delayed by many factors. (zoning, shortages, financing)
   2. Effect of the blighted condition of the dead or dying use pattern. (Cleland Urban Renewal High-Rise or Bluff Street)
   3. The cumulative effects of this deterioration on the succession process, on investment incentive for new uses or small groupings in isolation; situs of new uses, environment and approaches, accessibility may be excellent. Blight of shopping areas and school.
   4. Low grade transition devices, rooming houses, gas stations, parking, and inferior conversions (both commercial and residential).
   5. Continuing demand for low cost units; profitability of decaying structures; low pressure for maintenance; heavy overcrowding and deterioration.
   6. Community segregation of racial and nationalist groups. (closes door on replacement through economic substitutions and causes supply to remain constant relative to increasing quantity of demand or level of effective demand)

E. Anything which provides non-economic income, permits a non-economic charge for operating costs, doscourages reinvestment of capital earned in the area, or otherwise provide a negative investment incentive disrupts succession of uses.
   1. Demand through segregation prolongs economic life.
   2. Reduced operating costs due to milding or reduced real estate taxes prolongs economic life.
   3. Anything which discourages developers from undertaking redevelopment because of public relations, city hall attitude, or uninformed citizens means that succession must wait on dramatic overeaction rather than subtle progressive economic adjustment.

F. The rigidity of real estate in terms of land layout and improvements on the land creates an inherent inability to adjust to change and therefore obsolescence is a coexistent fact. The amazing thing is that our real estate has proven sufficiently elastic to adjust to drastic changes in every aspect of our society:
   1. Family size and life style
   2. Economic restructuring of the society from agricultural to industrial to service activities.
   3. Modification of our institutions in terms of real estate laws. union rules and social customs.
   4. Technology of transportation and marketing distribution.
   5. Technology of building equipment, etc.

G. Currently the blight of accumulated mismanagement of land use succession coupled with the social revolution and political awakening of the silent minority is exerting a push for exodus from blighted areas at a pull to the suburbs - a time of social disorganization which accelerates the impact of economic barriers and the obsolescence of immobile and far too durable real estate investments.

H. It should be understood that there are some permanent and some temporary groups who find blight to their advantage:
   1. Those who have resigned from society - the Skid Row halfway point.
   2. Economic circumstance or romantic preference may find the lowest priced real estate useful to begin a new business, a new life in a new country, or identification with common causes of a neighborhood.
   3. Blight can be cheap and compassionate or exploitive and cancerous.

III. Problems of urban decay were considered to be local problems until World War I.

A. First recorded move of Congress relative to blighted housing was recorded July 20, 1892 when they spent $20,000 on research of slums in the nation's 4 cities of over 200,000 population.

B. The first federal public housing was built by the U.S. Shipping Board Emergency Fleet Corporation which financed housing built by real estate companies owned by shipbuilding companies.

C. The depression led to the Federal Home Loan Bank Act of 1932 and the Home Owners Loan Corporation in 1933, both ideas conceived by the Hoover Administration.

D. Roosevelt organized a four man committee to develop a national housing program and their recommendations together with legislative review produced the National Housing Act of 1934, which created:
   1. The Federal Housing Administration
   2. The Federal National Mortgage Association
   3. Federal Savings & Loan Insurance Corporation

E. The National Industrial Recovery Act produced the first public housing for the poor.
   1. A Constitutional misunderstanding led to concept of local public agency
   2. Local public agency and States' rights vs. efficient Fasciest solution

F. Roosevelt started the "Settlement Administration" under the NIR and built a number of Greenbelt towns in Maryland, Greendale Milwaukee, and Indianapolis.

G. In November of 1941 Roosevelt was about to propose a major national effort at urban revitalization but plans were shelved until 1945 and bogged down when the Omnibus Bill began an urban-rural split in Congress. The National Housing Agency was created during World War II and provided a core for the Housing & HOme Finance Agency in 1947.
   1. Bulldozer clearance was the initial concept. Legislation was premised on the simple view that social disorganization was largely the product of physical environment.
   2. The initial skirmishes of urban vs. rural led to considerable "pork barrel" provisions for rural areas and log rolling for some of the more debatable agricultural subsidy legislation.

H. The 1948 Housing Act authorized 95%, 30 year loans for low cost home and 90% mortgages with 40 year ~~xxx~~ terms for low cost cooperative housing. The 80th Congress shelved the bipartisan Wagner-Elender-Taft Housing Bill which became the major theme of the Truman campaign against the "Do Nothing" Congress.

URBAN LAND 550

Lecture Outline- Dept. of Housing and Urban Development

I. HUD has undergone an incredible and confusing metamorphis in both organization and philosophy in only 25 years time. Because of its rapid series of reorganizations, its impact is often underestimated or scorned and its management talent not given credit fairly for what it has accomplished.

   A. Its principal functions can be attributed to its antecedent agencies now merged into HUD:
      1. The Public Housing Administration (PHA)
      2. The Federal Housing Administration (FHA)
      3. The Community Facilities Administration (CFA)
      4. The Urban Renewal Administration (URA)
      5. Federal National Mortgage Association (FNMA)

   B. Approach to housing and urban renewal philosophy growing out of the problems of PHA, CFA, and URA.

   C. PHA was a Roosevelt program to have the federal government condemn slums and build modest but decent housing for the urban poor.
      1. The local public housing agency as a pattern based on mistaken Constitutional law.
      2. LPA's retained parochial-political narrow-mindedness of the community which the federal government tried to correct by progressively tighter specifications and conditional incentives.
      3. Public housing in Milwaukee was an outstanding exception.
      4. Public housing violently opposed by National Assoc. of Real Estate Boards and other conservative groups of industry.
      5. The result was a strict income limitation on those elegible to rent public housing, a concept which still persists.
         a. Policy is counter-productive in that it discourages self improvement.
         b. It forces separation of best peer group example and leads to adverse selection of tenants without effective social structure or motivation.
      6. Public housing failed to get much money at the federal level and little support at the local level despite well meaning local public housing people. Public housing projects became a social and community stigma.

   D. Alternatives to public housing were developed using subsidized loans to encourage housing producers to deliver rental housing with cash requirement. low engugh so that poor families could afford them despite prive ownership.
      1. Non-market interest and mortgage terms.
      2. Special income tax incentives
      3. Special incentives such as 100% loans for non-profit failed because non-profits lacked managerial discipline.

   E. To avoid strict income limitations and to provide choice between renting and buying, the 235 and 236 programs were developed.
      1. Elegibility tied to artificial definition of income limits of public housing to a maximum of 1.35 of public housing limits.
      2. A sliding subsidy paid to the landlord of a 236 project tied to tenants' income and not to exceed an amount which would be more than the interest payments on the mortgage less 1% interest on the balance.

3. Developer able to sell tax shelter for more than the required equity, stimulating construction despite faulty projections as to operational revenue and expenses. In 1968, subsidized housing represented 10% of the nation's total, by 1970 it was 29.3%, and in 1972 fell to 14%.
4. 236 operating experience in central cities has been terrible. Tax shelter--a tax trap.
5. Smart money built 236 in the suburbs and rented to lower, middle income college educated families.
6. The work ethic and equity between those who qualified for new and those with income too high to qualify but too low to buy new led to restrictive government specifications undermining quality.
7. High cost of 2.5 billion per year and 50 billion by 1980 suggested subsidies might be 2 1/2 times actual cost to construct indicating it might be cheaper although slower to make outright grants.
8. These subsidy programs are strongly advocated by the housing producers such as the national association of home builders and the mortgage bankers and generally depend on FNMA or GNMA for investment money.
   a. It is profitable but inequitable.
   b. It applies only to the most expensive form of housing, new construction, encouraging urban sprawl.
9. On Jan. 8, 1973 Nixon terminated all subsidized housing programs, a decision which is being contested in the courts and of doubtful legality.

F. Nixon housing policy statement and legislative proposal recently released perports to foster freedom of choice by type and location of housing for low income people, freedom from project stigmas, and lower cost of adminstration.
   1. It proposed a gradual development of a housing allowance or direct cash assistance program.
   2. Administration proposal is suspect as experiments give local realtors significant control of base allowances.
   3. The housing allowance is suspect because it has problems in Europe and Sweden where producer's subsidies were also required to avoid price inflation created by an increase in effective demand without an increase in supply.
   4. The President's program is more interested in improving supply of money for middle class suburban home buyers.
   5. Nixon administration wants "out" of federal housing programs and HUD, thus reversing the cycle.

II. Community Facilities Administration was a pork barrel agency with administrative responsibility for construction of a variety of public works.
   A. CFA began as an agency to build public facilities for communities suddenly overwhelmed by federal installations such as a military base or defense plant.
   B. Its role expanded into construction supervision and grants in urban areas so it gave HUD the opportunity to include something for everybody in its housing bills and thereby maintain congressional support.

   C. The staff of CFA eventually became the core for a variety of open space, water pollution, education, and similar programs within HUD.

   D. All these programs were on a specific grant basis, item by item, so the time delays became enormous. Each time developers found a way to subvert federal intentions of social reform or assisting a particular low income group, more red tape was added to control the 10% who cheated.

1. To break red tape jam, HUD decentralized to ~~the~~ regions and eventually to each state.
2. Delegation of detail work to certified lenders and turnkey contractors.
3. A partnership of federal money and local private and public expertise was faster, cheaper, and more sensitive to local needs.

E. Experiments with block grants for broad range hardware and community software.
   1. Liberals lost control of specific programs which would bribe localities to overcome racism, vested interest, or apathy.
   2. Block grants avoided red tape of federal bureaucratic efforts to have comprehensive social-political-economic approaches to urban problems.
   3. Remains to be seen if local communities are now sufficiently enlightened in their power structure to use the funds to equalize opportunities and reduce economic and social segregation.

Notes on the New Direction of HUD

I. On January 8 outgoing secretary of HUD, George Romney, loyally completed his last piece of messenger boy service for Nixon by announcing at the annual convention of the NAHB in Houston that he had instructed HUD offices to freeze on all applications on subsidized housing that had not received feasibility approval as of the close of business January 5.

A. The three programs affected were public housing of all types, FHA 235 home ownership assistance program and FHA 236 rental assistance program. These programs had accounted for 300,000 units of new construction in 1972 or 12% of all new units built in 1972.

B. Also frozen were commitments for three categorical aid programs to local communities - water and sewer grants, open space grants and public facility loans. Said Mr. Romney the freeze would last until these programs could be replaced by the community development special revenue sharing package that congress had failed to act on when it was proposed in 1972. While called a "temporary hold", Mr. Romney indicated that these programs would remain frozen and the urban renewal and model cities programs would expire so that congress would have to enact the administration program.

C. In addition, the Farmers Home Administration which has subsidized 70,000 units of rural housing plus disaster relief loans for farmers, farm labor housing loans and rural elderly programs were all discontinued "for budget cutting".

D. While congressmen called Nixon's action political blackmail, the elderly John Sparkman, Chairman of the Committee of Banking, Housing, and Urban Affairs and grand champion of NAREB and NAHB rumbled "We cannot let stand this arbitrary exercise of executive power taken in violation of the intent of congress and in complete disregard of the housing heeds of the poor and ill housed of our nation." Representative Patman said he would start to hold hearings on the matter immediately.

E. By the end of July the rumor mills claimed that some funds for housing the elderly will be available and perhaps there will be funding to complete some urban renewal projects but it looks by 1973 that there will be a new ball game in terms of the federal role in real estate credit and housing policy priority.

II. It would appear that much of the federal HUD central Washington program will be dismantled in favor of state administered programs funded in large part by block grants and specially controlled revenue sharing funds. Manipulation of capital markets and the market of mortgages and mortgage base securities will continue in the federal domain.

A. While some states already have statewide development agencies or housing programs and a few like Wisconsin have enabling legislation which must be tested in the courts, most states would need to set up some type of development control agency for utility, open space, and public facilities to allocate funding and subsidies. Any agency with money to spend which has not been levied directly from the legislators districts will have great political clout and spark a tremendous amount of maneuvering.

F. Enough commitments have already been made that these programs will contribute 250,000 units to 1973 production but the lead time on these matters is one or two years so that there is a question as to what will be done in 1974 and 1975. Another 7.3 million is already in the pipeline for community development programs for sewer and water and Nixon stated that any additional funds would simply raise prices rather than output.

II. Since housing has always enjoued strong lobbies and emotional critics 1973 will be noteworthy for a legislative battle on housing policy.

A. Some strong arguments can be put forward for continuation of housing and community development subsidy programs.

1. Cutbacks hurt the poor people directly and can create discontent which may hurt all of the citizens in the community.
2. Labor can point out that with existing overbuilding in real estate areas, cutbacks in housing may cause severe unemployment and unnecessary shutdown and startup costs for suppliers.
3. Some charge that Nixon is renegging on the national housing goals passed by ocngressional statute.
4. There are those who argue priorities should produce budget cuts in other places such as defense.

B. There are some good arguments for suspending or terminating present programs.

1. Housing subsidies have already committed the American taxpayer to future payments ranging from 57 billion to 82 billion depending on ones assumption about inflation and rising income.
2. If the same programs were used to improve shelter for 6 million families now living in sub-standard conditions it would cost another 180 billion and that Americans will not pay out a quarter of a trillion dollars for programs that have had only mixed results and have profited the wrong people.
3. Nixon could document the failures of current programs by playing back examples dramatized by the Democrats last year and indeed he has put the Democrats on the defensive by having them advocate continuing programs which were scandalous before November 1972.
4. Income eligilility limits are too high in many areas so that developers get subsidized financing while housing middle income families.
5. Subsidies are tied to the structure or the house, not the family inhibiting the poor from relocating to take advantage of jobs or integration into the community at large.
6. Evidence suggests that FHA efforts to regualte make the cost of subsidized units higher and the quality lower and that there are less expensive ways to help the poor to quality housing.

C. On balance less expensive subsidy program must be found while government remains involved to lower the cost of housing to the poor. Over the long run however the government must reduce the cost of housing units by drastic reformation of building codes, building style, and land planning which will be fought by labor, material suppliers, and NAREB who have a vested interest in the wasteful practices of the present. Aggressive consumer action in the style of Ralph Nader is the only hopeful political counterforce.

D. For communitty development programs there will be a definite shift to broad gauge federal funding rather than special purpsoe project by project grants. Both the Senate (using the term consolidated grant) and the House (using the block grants) are working on approaches much like special revenue sharing and there is opportunity for agreement. The housing scene is much less clear and housing production will fall.

III. It would appear that much of the federal HUD central Washington program will be dismantled in favor of state administered programs funded in large part by block grants and specially controlled revenue sharing funds. Manipulation of capital markets and the market of mortgages and mortgage base securities will continue in the federal domain.

A. While some states already have statewide development agencies or housing programs and a few like Wisconsin have enabling legislation which must be tested in the courts, most states would need to set up some type of development control agency for utility, open space, and public facilities to allocate funding and subsidies. Any agency with money to spend which has not been levied directly from the legislators districts will have great political clout and spark a tremendous amount of manuevering.

B. Already HUD is allocating such resources as it has to state housing agencies where they exist and it is thought that the states that would be able to take over existing federal personnel in order to staff up for their new role.

1. Given the fact that the poor and minority groups within a state have found much less sympathy than they have in federal civil service agencies, the state's rights theory is playing right into the hands of the Nixon-Wallace block and will disperse and defang the relatively liberal socially oriented staffing of HUD.
2. That means no one will be pushing very hard to desegregate the suburbs when the suburbs control the legislature or to house migrant farm workers who don't vote locally at all. Social reform through the leverage of federal finance will be lost.

C. One bright spot is further impetus to experimental housing allowance program. Since 1932 various housing studies have suggested a test of providing a direct subsidy to low income families in need of housing to improve effective demand rather than a direct subsidy of a special supply of subsidized housing units.

1. The 23 lease program and the special welfare assistance program represent the first kind of direct family subsidy programs.
2. However, HUD has constructed a major test for direct family subsidy and the details of this very elaborate program are provided in a supplementary handout.
3. These studies are not only concerned with impact on individual housholds but the long term impact on supply, filtering, and demolition of obsolete substandard units. Moreover, the direct subsidy method is being designed for effic ency of administration and a 5 year test is under way. If the tests work and the systems work it would be the first time a federal program was designed and tested in the field before it was recommended to Congress.

   The present crisis may not permit the nation to wait for the nation to wait for the test.

THE REAL ESTATE PROCESS AND THE ECONOMICS OF URBAN POLLUTION

I. Location of economic activity is finally graduating from the "Cowboy Economy" approach to "Spaceship Earth"
   A. "Free" goods and limitless natural resources
   B. Rising expectations & environmental concern - a matter of pollution perception.
      1. Income elasticity of demand
      2. The affluent society
   C. Rapid urbanization concentrates and emphasizes abuse. Rural per capita waste discharge probably higher but less noticeable.
   D. Solution requires awareness, technology, financing and social mechanisms for pollution decisions

II. What is Pollution? A set of interdependent externalities to the economist.
   A. Basic malfunctioning of the market system through External Effects: actions of one person or institution may affect the welfare of another in ways difficult to regulate by private agreements
   B. Interdependencies: Smallest environmental program has major impact on Real Estate Process
      1. Impact on individual consumption decisions (demand side) Altered housing patterns
      2. Impact on developers, altering cash flow, solvency, feasibility, present value of investment. (supply side)

III. Types: Water, Air, Solid Waste (litter, garbage), Aesthetic deterioration (scenery), social tension (neuroticism), Noise.
   A. Water as an environmental sink is naturally limited in assimilative capacity.
      1. In 1963 industrial waste amounted to 75% of the total. In 1973, the percentage was closer to 80%
      2. Suspended solids, heat, nutrients (phosphates and nitrates), long-lived inert chemicals complete the picture
      3. Trends:
         a) Sewage separation, home oxidation systems both imply increased housing costs & corresponding demand effects
         b) More complicated & costly sewage treatment financed by real estate taxation, bond issues imply increased land development costs, faster land turnover. The sanitation engineer ascendancy - cost benefit fallacies
   B. Air Pollution - extensive, unavoidable, long term social costs
      1. Sources nationwide: 60% automobiles (L.A. 95%), industry 16%, electrical generation 14%, space heating 5.5%, refuse disposal 3.5%
      2. Classic example of lack of property rights, pervasive effects, no market transactions, huge private transactions cost and reliance on government intervention.
      3. Criteria: MSB=MSC of successive increments of abatement or marginal increment in damage equals the marginal cost of additional abatement
      4. Real estate effects
         a) Changing land values as consumers seek to minimize pollution impact
         b) User charges will increase transportation costs in absence of viable alternatives - trend to greater concentration less sprawl
         c) Burden of public transportation measures falls on taxpayers,

homeowners, land developer holdings through bond issues, real estate taxes

d) Increased building cost as firms adjust to new space heating & waste burning regulations.

C. Solid waste disposal

1. Facts: 365 million tons per year, 10 lbs. per capita per day. Only 50% collected. Industrial waste burned (10%), 90% of municipal waste is dumped on land fills. Substantial industrial recycling.
2. Trends: Increasing cost of removal implies increasing efforts to recycle, re-use, re-power, restrain wasteful and inefficient use. <u>Awareness of real social cost creates incentive to find alternative uses</u>.
3. Effects on real estate process: increased emphasis on separators, efficient intra-firm collection, sophisticated (and costly) public facilities for recycling. All imply increased land and structure taxation, greater land acquisition cost and more costly structure requirements.

D. Noise, Privacy, Aesthetics

1. Close relationship between income & level of privacy. Social tension increases <u>not</u> in high density urban areas but in housing with many individuals per room.
2. Privacy is a resource whose value is measured by the productive and creative potential of the central city. Privacy is a space attribute leading to essential sensory regeneration.
3. Residential design to enhance privacy, aesthetics, and freedom from noise, imply greater development costs.

IV. Economic Solution: <u>Internalize Costs</u>

A. Methods:

1. Legal penalties
2. Subsidies
3. Effluent fees (Right-to-Pollute?)

B. Problems: Individual investor is subject to cash flow solvency limits. <u>Any</u> economic entity will suffer to a greater degree when costs cannot be shifted. <u>But</u> some market reallocation of goods <u>and</u> activities is required because of long-term pollution products misallocation. (it is cheaper to pollute)

C. Final guidelines

1. Avoidance of the catastrophic loss
2. Maintenance of large choice set for future generations
3. Maintenance of institutional flexibility and ability to change.

ECONOMICS OF URBAN POLLUTION

I. Location, location, location is now environment ecology and effluent

A. Population density and take-off principle

B. Tolerate is both physical and mental

C. Urban technology or environmental quality requires hardware, money, and a social mechanism for decisions and financing.

II. Technology of water and air quality is obsolete. Problem of water and air quality is interrelated.

A. Water is used as vehicle for solid waste disposal but limited in capacity both in nature and in processed form.

1. Primary treatment

2. Secondary treatment

3. Advanced treatment

4. Sewer taps limit urban growth

5. Recycling of sewage water in Denver

6. Cost to transport fresh water or remove waste water

7. Combining waste disposal with agricultural irrigation

8. Recycling of sewage sludge as animal feed

9. Grinding sewage and pumping solids

10. Vacuum systems

11. Oxidizing of sewage

B. Water quality and solid waste

1. Vacuum system to collect garbage

2. Sanitary land fill and water table pollution

3. Incineration, sterile fill, and recharged area

C. Industrial waste such as sulphite liquor

1. High volume, low quality by-products

2. High value, low value by-products

III. Air pollution related to invention of fire and use of fossil fuels

A. Economics of smoke control

B. Air pollution result of single family home and car

C. Electric capacity related to coal and natural gas

1. Purification of exhausts means contamination of water

2. Transmission problems mean inefficient land use

3. Inert gas and transmission line insulators

D. Atomic power, water pollution, and air pollution

IV. The gasoline engine and tne private automobile

A. Paving for automobile destroys necessary green oxygen producers

B. Exhaust is major source of urban pollution

C. Public transportation or electric automobile requires urban density and compactness.

1. Modern location theory implies private mobility and inertia of convenience.

2. Environmental theory for urban economics requires public systems of mobility and consumer preference for active motion.

V. Privacy is a resource

A. The hierarchy of residential design layout for privacy

B. The counterpoint of natural environment

VI. Market economy does not work well to internalize cost of environment controls. Economics of controls differ for society as opposed to individual investor in the urban site.

A. Marginal benefit vs marginal cost for society

B. No benefit for cost incurred for investor

C. Competing claims for investment productivity

D. Some urban environment has benefit for developer

1. Good esthetics can be good merchandising

2. Environment undisturbed lowers cost

E. Legislative mechanisms to internalize cost

1. Uniform cost allocations shifted to consumer through price

2. Legal penalties

3. Incentive in the form of subsidies, tax relief or privilege

4. Education to create social approval or disapprovalfor individual actions.

F. Problem remains to define environmental quality required, rate of investment innovations, consumer education and political implementation.

To be discussed in final lecture on the next 20 years.

Lecture - Urban Land Economics - The Next 25 Years

I. Urban space problems may be grouped for discussion purposes into problem areas which are converging into a major crisis:

A. Unresolved mechanical problems

1. Population pressure - space users
2. Urban construction technology bottlenecks - space forms
3. The money constraint - space quantity and quality

B. Technical solutions need implementation through decision making:

1. The urban political constraint - space control through community action.
2. Space control - a concensus on environment desired

C. Luxury of democratic process versus efficiency of autocratic management.

II. Population pressure magnified physical urban problems and reduces opportunity to create intangible sense of community.

A. Population estimate - 250,000,000 by 1987 and 324,000,000 by 2015. 85% of increase in present metropolitan statistical areas.

B. A fall in the average number of children per family from 3 in 1957 to only 2 in 1965 reduced the forecast from 360,000,000 by the year 2000 and 500,000,000 by the ear 2015!

C. Rising population - require increasing economic base for jobs, increasing productivity as percentage of population at working age falls, further productivity increase to provide rising standard of living.

III. Technical constraints on urban engineering

A. Inadequate natural capacity to absorb sewage contamination.

B. Inadequate water resources to operate water flush sewage system.

C. No acceptable engineering alternative to present sewage systems available for a mass market adaptation.

D. Air pollution is primarily attributable to the family car, the family home furnace, and electric power production for home consumption.

E. A fossil fuel shortage will complicate choice of energy system requiring a transportation alternative to the automobile which presently determines all urban planning.

F. A codified residential building system and style which wastes resources as well as land and capital.

G. Construction materials are finite. Resource conservation requires that we respect the resource rather than the user - Malthus still has something to say to an industrial society with rising standards of resource consumption per capita combined with increasing number of heads.

IV. Technological innovation is subject to the money constraint, both private and public.

A. Annual income of $9,200 a year required for minimum standards in good life suburbia. (Department of Labor study)

B. In Madison in 5 years useable land has increased 80% in value and construction costs more than 15%.

C. A national prefab of 920 sq. ft. sold new for $13,000 in 1960 including a $3,000 lot. Virtually the same house today by the same builder costs $17,500 with a lot costing at least $4,200.

D. Housing costs are outstripping purchasing power gains of the young family requiring new space.

E. Public budgets are increasing. Madison tax increase of 6 mills over 48 mills previous year is an increase of over 12½%.

1. 40% of population in Madison is under the age of 9 and about 50% of our city budget goes for education. Average age in Madison is 10 years below the national average so Madison is a prototype for other communities in the 70's.

2. Area serviced by city has tripled in 10 years so that lower density of population means public transportation cannot operate at a profit, sewer is not immediately available, and public services are increasing in cost per capita.

3. Public budgets cannot build or service existing public plants so there is little public financing power to research and install innovations for air and water pollution, transportation, energy systems, inequities in education, or reconstruction of decaying areas.

V. Basic constraint is the value system of urban residents as the form and quality of future cities will reflect standards operating through the urban political structure.

A. Political division is between pro-urbanites and non-urbanites.

1. The pro-urbanites are those actively engaged in developing a community life, ironically the rich elite and the under-privileged minority.

2. The non-urbanite is the city dweller who is essentially disengaged and alienated from the process of creating a sense of community. This group is preoccupied by the insecurities of job, family, and home.

B. This working American in the $6,000 to $10,000 income group involves 20,000,000 American families and is the dominant political force in the center city.

C. All his aspirations are basic American images of accomplishment through work and family independence which requires so much of his time that he is relatively isolated from much of his community and non-sympathetic to other elements in the community.

D. Most zoning, land planning, political systems, and real estate financing require homogeneity and conformity of isolated land uses. Political action toward a concensus requires social bridging, cooperative activity, and land use diversity. Diversity requires security, economic and social until the political majority are pro-urbanites.

URBAN LAND ECONOMICS - The Next 25 Years

I. It is said we are living in the space age, and by my definition, the space age is the age for urban land economics. Earlier in the semester I defined urban land as manufactured space for urban activities, and since we must produce, finance, and allocate more space in the next 30 years then we have built in total since the beginning of history - I view the next 30 years as the space age - rental space, open space, private space, and even classroom space.

A. It is very gratifying to a worrier to see that more people are worrying about the same problems. Perhaps the frontier of space could be divided for conversation purposes as follows (Chart 1):

slide #1

1. Population pressure -- space users.
2. Urban technology bottleneck -- space forms.
3. The money constraint -- space quality.
4. The urban political issue -- space control thru community action.
5. The space industry -- opportunity for the pro-urbanite.

B. As I suggested in a previous lecture, form of the urban structure has always reflected the value system of the people living within it. Remember the medieval fortress town, the African village, and the Chinese temple city? In exploring our space age problems above , it should be clearly understood that the decisions to solve these problems are not automatic once solutions are found.

1. Instead a majority of our citizens must agree to what shall be done and only then can urban land economics suggest satisfactory contributions.

2. City building requires not dollars and cents but rather a community sense - a concensus on what the community should be.

3. The worry is not that technology cannot find solutions - the worry is that communities will not find agreement and sufficient collective sacrifice to take advantage of the solutions at hand.

II. Population pressure magnifies our physical urban problems and reduces our opportunities to create a sense of community.

A. The Bureau of Census suggests that even if the size of the family averages two children or slightly less our population, now almost 200 million, will reach 250 million by 1987 and 324 million by the year 2015 - 3/4 the size of India today. 85% of this increase will be located in our present metropolitan statistical area.

B. If the number of children per family stayed at the level of 1957 births, the average family would have 3 or 4 children, not 2. In that case, our population would be 250 million by 1980, 360 million by the year 2000 and almost 500 million in the year 2015. A difference of one in the average numer of children born to each woman means a difference of 275 million in the national population growth in the next half century!

C. While those people who will live in the U.S. in the first quarter of the 21st century are only guesses, all those who will be age 24 or over in 1990 are already born. Farmily formatin and the market for homes and the space for jobs is primarily concerned with the age people 24 or over.

D. (On Chart # 2) Notice the tremendous increase of percentage in population in the 15-24 age group from 1960-70; 8.4 to 47.5% and in the 25-44 age group which moves from 2.4 to 29.2% of the population in 1970-80. The first age group are apartment dwellers while the second age group are the home buyers who populate the suburbs.

E. This bulge is reflected in the marriage trend - family formation per year (Chart #3).

F. These new families will be able to afford increasingly higher rent or higher priced homes as family income dramatically shifts to favor people in the $10 to 15,000 dollar income range (Chart #4).

G. This market is here today coming up through high school and the first years of college. If national expectations of economic growth prove to be true, then these families will have effective income to demand something better than our present $17,500 dollar house or town house in the suburbs.

H. Ironically, there is a real question as to whether we can even provide the current standard of urban life to an adult population of the size we know we shall have, for reasons that are technical, economic, and political.

III. We only have time to identify some of the critical technical bottlenecks:

A. If the city became possible because of the development of cast iron pipes for sewer and water, it is soon to become impossible because we do not have the water resources to continue expansion of water operated sewerage plants. The most efficient sewerage plants of any size are 90% effective at best and the balance of the contamination is processed naturally in our rivers and lakes. However the 10% of the increase in untreated sewage related to the population of 1990 greatly exceeds the natural capacity of all of our surface waters to absorb and to process. Moreover the majority of our sewerage treatment facility are nowhere near 90% efficient. If we burn sewerage or oxidize it as fuel we will create both an air pollution problem and a heat problem. We can postpone the problem by using vacuum systems rather than water flushing systems but nowhere in the United States is such a system permissable or under experimentation. The deadline is 25 years away.

B. The primary contaminate of air is the family car and the family home furnace, not the industrial smokestack. The ask and billowing black clouds of even the industrial smokestacks will soon be eliminated. The real problem is invisible sulpher dioxide and carbon monoxide and related gases, all derivitive of fossil fuels for energy. The urban area is possible because of 20th century energy conversion systems. The natural balance does not have a tolerance for doubling of consumption of fossil fuels.

C. Urban areas form around transportation and communication systems. While communication is making great strides, transportation has stopped dead center. The use of the automobile must be drastically changed to maintain present levels of convenience and safety and operating costs not to maintain its relationship to pollution.

D. You have heard enough of the problems of changing our building technology for the structures which form our urban space.

E. My objective in just suggesting the existing and very real technology bottlenecks is to point out that in the next 25 years the form of our land and buildings and their mechanical dependence on what we call utilities and transportation must change drastically.

1. The family house will be assembled from factory built module components, self contained, generating electricity from its sewage, reprocessing its water quota, having a useful life of 20 years, built on a leased site as part of a larger neighborhood complex, which in itself has a cooperative shopping complex and grade school system. The neighborhood will be tied to a larger town structure which has other divic activities built around the high school, which will be further tied to a metropolitan complex through a system of electric cars, buses, and trains. The family car will be for trips to the country, the monthly payment to the savings and loan will include the entire residential package including taxes, insurance, furniture and appliances and escape clauses to permit relocation by cancelling the lease rather than selling a house.

2. These things not only will come, they must come as in the next 25 years we will have to prove that cities can be made to work. The first objective is not to build cities better but just to prevent their being any worse.

IV. The introduction of technology to maintain and improve the quality of urban space is always subject to the money constraint, both public & private.

A. For the private family, the U.S. Department of Labor has recently estimated that it is necessary to have an income of $9200 a year if it is to enjoy even a modest participation in the good life of suburbia.

Consumer Housing Dollar
Cost of money - 42¢
Cost of building - 33¢
Cost of land - 25¢

1. In the past five years, there has been an average yearly increase of 15% in the price of raw useable land, a total 80% increase. In the same period, construction costs have risen in Madison about 15%.

2. A minimum prefabricated house in Madison at 920 sq. feet sold for $13,000 in 1960 including a $2000 lot. Today virtually the same house new costs $17,500 on a lot worth a minimum of $4200.

B. On a national basis we must reconsider the practices, instruments and institutions that govern the financing of home purchase as cost gains are outstripping purchasing power gains in this area of need for young families - the 20 to 40 year old group which will grow so explosively so soon.

Milwaukee - March 1967 - $22,200 home lumber cost
1967 - ~~lumber~~ - $2,920
1968 - $3,469
1969 - $4,712
currently - $3,895

C. By the same token municipal and state budgets and taxes on land are mushrooming. Madison has a tax increase of 4% this year over last despite a proposed tax on cars and a slight increase in the state income tax rebate.

1. The city budget was slightly reduced and much of the cost was related to school cost. Madison has an average age of 25, almost 10 years below the national average, and 40% of its population are under the age of 9. Madison is therefore a good representation of what will happen to other communities in the 1970's. Obviously we must restructure our real estate tax assessment and educational tax policies.

2. In addition, the geographic area served by city services has exploded - tripling in the past 10 years. With lower density of population in this area, the result has been that public transportation cannot operate at a profit, public water and sewer is not immediately available, and public maintenance cost increase per capita and per tax unit.

D. Since public budgets cannot service the existing public plant, there is little local financing power to advance the innovations required for problems of air and water pollution, inequities in the pattern of education, decay at the core, improvement of public transportation, or research and development of new building methods and energy systems.

E. Thus we reach an impasse which can be sketched as follows:

1. Population pressure relative to the balance of land and technology requires significant change and innovation in the techniques of city building.

2. Technical solutions to the predictable problems of population increase are not at hand but will require total reformation of our land use, construction methods, utility systems, transportation patterns, and financing institutions.

3. Redesign and reform of each segment of the city building process requires research and political action and public investment which the public cannot make because the present tax structure cannot carry present programs equitably and the political tax issue blocks any increase in taxes even for researching long term economies.

4. Thus the form of our future cities must first be determined by the electorate operating through the urban political structure. Here lies the nub of the problem for the urban land economist who must operate within goals determined by the community - values backed with an allocation of private and public money, both of which have real constraints and limitations even in a rich country such as ours.

V. In essence the urban crisis is a political crisis which is not solved by lowering interest rates, changing building codes, or permitting higher density development. Robert Wood, an undersecretary of HUD, has described the problem this way:

A. When America was a collection of small towns, there was a sense of community - a cohesive society of some quality. The challenge today is to retain a sense of community, a concensus of value and cooperative effort as in the small town, at the same time that we double the volume of fixed structures in less than 40 years.

B. The modern American city is no longer divided between urbanites and suburbanites so much as it is divided between pro-urbanites and non-urbanites.

1. The pro-urbanites are those of widely differing backgrounds who are actively engaged in developing community life at some level, be it the neighborhood, the city, or the retion. Ironically the educationally rich elite and the underprivileged minorities have the strongest sense of community and join together in common educational, cultural, and political endeavors.

2. The non-urbanite is the city dweller who is essentially disengaged and alienated from the process of creating a sense of community.

C. The non-urbanite is the greater majority of working Americans in the $6 to $10,000 income group, the working American, the backbone of the community.

1. The working American is not the holloweyed, mute, exploited, and poverty stricken hero of Grapes of Wrath.

2. Neither is the man sitting before the TV set for football and westerns and oblivious to the great issues of the day a fold-hero.

3. He is the steady, employable, contributor to the gross national product. He has a better record of family stability than the pro-urbanite from the central city or the established suburb. 70% own their own homes and 94% drive their own cars, even where they earn only $6 to $7,500 a year.

4. There isn't time to provide a picture of the working American family, but it involves about 20 million American families, the great political center.

5. At an average age of 35, his career expectations are fixed and he has too many obligations, too much family, barely enough income for a reasonable standard of living, and few skills to match opportunities to aspirations. These aspirations are innerdirected.

6. The working American is preoccupied now with the nation, not with community, or even neighborhood, but with the protection of highly personal possessions - his job, his family, and his home.

D. Insecurity is a real economic fact - job security is still tough to come by during a time when rapid economic change (impersonal and unpredictable) means layoff, reduction, strike, plant relocation, or technical unemployment.

1. Yet we are appealing to him to bring about upward mobility of the minority by sharing his job opportunities, and his neighborhood.

2. If job protection is his first concern, family and home is his second major concern.

3. He has no elaborate concept of neighborhood or community. The working Americans' contact with the world are basically two - his family and his fellow workers. He need only conform to their beliefs.

4. Home serves as a haven against the outside world. It is a place for family and close neighbors to get together. It keeps out other people, legally and easily from other minorites -- the upper middle class, the political action worker, or the Negro. Property rights are a gut issue as witnessed by the strength of political resistance to opern housing, condemnation, building code and zoning changes.

5. The homes justify an unconscious and pervading attitude. The working American compares his new house, new car, refrigerator and patio to what the media tell him about the core of the city - the drabness of slums, the rising crime rate, welfare costs, and rising costs of special education. He wants no part of them as they present only a threat to his home and family.

6. The working American still holds political power in the major urban cities. Until he chooses to endorse public expenditures for major reform of the institutions of urban land economics, nothing significant will ahppen. The form or formlessness of our present urban community has its roots in the failure of the great political center to share in the aspirations for construction of a better urban America.

VI. Robert Wood further expressed this problem as follows:

> "The future of city-building in modern America, turns less on the indignation of the disprivileged or the conscience of the exceptional than commonly supposed. The issue becomes increasingly how to dispose the working American to reorient his life from one of relative isolation and alienation and to find real aspirations in participation in a genuine community. How does he find new satisfaction in a modern metropolitan area akin to the old town atmosphere of mixed population - where butcher, blacksmith, baker, give life and character to the community."

A. Most of our zoning, land planning, political structures, and real estate financing require homogeneity and conformity of isolated land uses. Yet political action requies building bridges from one area of isolation to another by means of creating special opportunities for cooperative and collective activities. Diversity in land use must also have diversity in the people who benefit from these land uses. City building does not begin with land and brick but rather with a design to build a sense of community from our basic resource - decent, working Americans in search of an identity and income security in a metropolitan population already too large.

B. City building may begin from such wasteful and seemingly low priority items as:

1. Job security and guaranteed income.

2. Insured equities to protect the homeowner from property value cycles.

3. Subsidy of community heros in professional sports, extravaganzas, and other devices to build common interests.

4. Financing for individual aspirations to have a small shop, a family business, further education - to realize that fantasy can produce concrete goals and is in the old American mythology to strive is to succeed.

C. Security, expansion of participation level from family and job to other levels of community life, identification with the city would gradually transform non-urbanites to pro-urbanites who may one day become the source of a consensus on urban form.

D. Careers in real estate offer an opportunity to participate, to gain a sense of identity, and to succeed financially as in days of old. This course is teaching a system of economics that soon will be obsolete - but it is a subtle way of bringing some of you into the ranks of the pro-urban minority.

Lecture # 5

Bus. 550 & 705

I. Lecture introduces the concept of market segmentation as applied to real estate decision making. Recall the definition of real estate as: artificially delineated space over time with a fixed reference point to the earth.

A. Implications of definition
  1. artificial delineation; the modification of given resources, production of space/time.
  2. the time nature of modification
     a. short-run; success determined by consumption
     b. long-run; success determined by design of offering, how does it fit demand.

     c. examples of space/time perspectives and impact, short term
        -building significant new housing to satisfy temporary demand; ie. student housing if not for shortage at present
        -building low quality housing because of locked in market segment; student housing
     d. long term perspective can frustrate objectives also
        - VIP Plaza, carrying costs while not rented-up
        - Medical Office building on corner of Regent and Park
        - efficiency apartments in CBD, geared to influx of single, generally clerical employees--student market temporary user until demand by more desirable workers

B. Identification of the relevant space/time unit; the Revenue Unit
  1. Nature of Use
     a. motel/hotel; room/night
     b. Blackhawk Ridge; camper/night, skier/day
     c. Tennis Club; court/day
     d. Coliseum; event/week
     e. Football Stadium; tickets/game
  2. Distinction of Buyer vs. consumer/user. It is critical to identify the decision-maker. Who pays the tab?
     a. motel; the salesman or his company
     b. Tennis Club; the tennis player or the socialite
     c. Coliseum; the promoter or the spectator
     d. Football Stadium; the fan or the scalper
  3. Criterion of success
     Given the correctly identified space/time concept, the ultimate measure of success is determined by the acceptance of the offer by the ultimate consumer. Problem exists where producers receive their pay-off prior to utilization.
        a. elderly housing example; developer.
        b. condominium developer; unscrupulous ones

II. The Real Estate Process; An Historical Perspective
  A. Traditionally, the real estate developer has been the initiator/synthesizor of the various production entities: the owner, lender, government, buyer, and market.

B. Relative satisfaction was determined by the bargaining strength, or lack thereof, by the participants.
   1. strength of position = f(nature of offering + ability to pay)
   2. multi-family housing example
      a. for those who could not afford a single-family home
      b. product by observation and convention
      c. little innovation, primary research
      d. today, apartments/condominiums/etc. often selected by those who prefer ease of living, mobility etc.
      e. characterized by ability to pay, available alternatives, effective demand for product
      f. product based on extensive research, observation (ie. Owens-Corning Glass, <u>The Waiting List</u> etc.); product designed with effective demand user in mind.

C. Today, the developer must respond not only to those with ability to pay, but also to consumer-oriented, organized users.

III. The role of market segmentation; the determination of the offering

A. Site/Structure in Search of Use
   1. begin with space/time concept
   2. identify attributes of concept (static,situs,behavioral)
   3. identify probable buyer segment of aggregate market; recall buyer/user relationship
   4. construct rank-order of attributes for segments
   5. select segment which best fits attributes of offering perceived
   6. merchandising decisions; the offering = product + price; what is the value? Value=Benefits+Cost; subjective to segment

B. Illustration
   1. 25 year-old, 32 unit apartment building in CBD
   2. Space/time concepts: renovate; redevelop
   3. Redevelop due to physical obsolescence
   4. Alternative concepts: commercial, office or retail; residential, condominium or rental, family or single
   5. Identify attributes of site/structure concept
   6. Select segment which fits rank-order of attributes; highest value segment
   7. Refine concept through research, as needed
   8. Produce and present offering; monitor success, feedback merchandising

C. Use in Search of Site/Structure
   1. aware of opportunity; aggregate data, market feedback
   2. delineate segments; breakdown to merchandising target
   3. identify selection criteria of target market; rank-order
   4. search for suitable space/time concept (define situs and dynamic needs, then interface with product
   5. present offering, monitor and feedback

D. Illustration of Use Search
   1. Aware of demand; Questions to Answer
      Oscar Mayer announces hiring of 1,000 new employees
      - determine how many employed from existing supply of unemployed; say 250.
   2. Define and Delineate Segments: Method
      a. use reverse directory/City Directory to determine where people work who live around Oscar Mayer in apartments
      b. survey those apartment residents to profile, determine product/price needs
      c. determine nature of the Oscar Mayer employee; look at present, assume certain degree of homogeneity; 40% live in houses, 60% apartments; 75% married, 25% single of those in apartments; married apartment residents have 75% no children, 20% one child, 5% two plus; pay $175-200/month rent in 1974.
      d. Select site; design with pre-architectural program unit mix, size, amentities, price range etc.

E. Other examples of Use search; the role of observation and primary research.
   1. observe no vacancy in one-bedroom apartments in CBD
   2. review survey by City Planning showing buildt-up, stable demand.
   3. observe construction activity by sector; by type of revenue unit.
   4. monitor rental advertising in newspaper; free rent, trips etc.
   5. look at turnover in ownership or businesses; State Street.
   6. seek to identify dissatisfaction of users by survey.

F. Other Methods to Segment non-residential
   1. survey competition, note nature of tenants' business
   2. spot license numbers
   3. get trade publication mailing list
   4. charge account customers
   5. survey customers of uses which would be supportive of concept

Urban Land 550
Lecture Outline #6

I. Any cash cycle begins with a customer who has a certain number of dollars to spend.

A. The home buyer

B. The residential or commercial tenant

C. The industrial owner-tenant

II. Refer to housing cost calculator matrix.

A-D. Matrix

E. Limits on family housing costs including utilities, etc.

1. FHA low income family tenants - 25% of adjusted income
2. Low income owners - 20%
3. Lender rule home should not exceed 2 x regular disposable income
4. Average value is 1.5 x income

F. Effective demand is a function of:

1. Downpayment
2. Borrowing power and monthly cost
3. Definition of disposable income

G. Housing matrix suggests that real estate market is many little micro-markets with different combinations of consumer preferences and needs.

III. Tenant is borrowing use of a capital asset.

A. With some obvious exceptions tenant is a tenant by choice.

B. Cost of mobility, flexibility and total care services is high.

C. Tenant can find infinite variety of trade-offs but there is a pattern of market segmentation.

IV. Location decision of a manufacturing firm involves qualitative constraints and eventually a return on investment to consider location or relocation alternatives.

A. One criterion is net income/total capital or equity capital at each alternative site.

B. Net income is a function of:

1. Sales
2. Cost of raw materials
3. Cost of distribution
4. Cost of labor
5. Cost of occupancy
6. Cost of management

C. Total capital at alternative locations may be affected by:

1. Cost of money
2. Scrap value of plant abandoned
3. Cost of new site (net of subsidy)
4. Cost of new plant and equipment (net of subsidy)
5. Cost of retraining (net of subsidy)
6. Impact of additional financing cost considering the subsidy.

D. Highest rate of return is chosen.

E. Alternatives are first narrowed down by technical or qualitative criteria.

F. Value of site varies differently with marginal cost marginal revenue characteristics of user.

1. Sellers can only guess at effective demand.
2. Buyers very secretive on formula by which they make decision.
3. Real estate is therefore the last great camel bazaar.

G. Monday we will look at an investment formula which is more precise than buy low, sell high.

Lecture #6 Outline

Intro to Real Estate Investment Analysis

I. Intellectual hostility to the city is contradicted by urban expansion.

   A. Is there no choice, or do people see life better in the cities?

   B. Urbanization and growth of economic product are highly correlated.

   C. Four abstract levels of clustering (see attached diagram)

   D. Scattering versus some cluster leads to a net social product gain from cluster even where land is a free good.

   E. The concept of dense cluster results from removing the assumption of land as a free good since lower density communities will have higher aggregate transportation costs.

   F. The ordered dense cluster results when density differences are used to weight transportation advantages which is translated into land price.

   G. Social product of clustering reflects trade off between cost of transportation output and net useful output.

   H. Clustering also permits internal of external economics of scale.

      1. Internal economies are realized by increased specialization and reduced distribution costs.

      2. External economies are the result of the increased logistical support from agglomeration.

      3. Consumer satisfaction is increased by diversity of choice from clustering.

   I. Clustering increases communication which fosters innovation and reduces error and duplication.

II. To put last three lectures in perspective it is first useful to recall that there are two basic real estate decisions situations:

   A. A site and structure in search of a use for which there is effective demand.

   B. An effective demand in search of the best combination of site features and structural attributes.

   C. Effective demand means that there are uses which can pay the costs of the space-time unit desired.

   D. Because tastes and requirements differ so greatly there is no single real estate market. Instead there are hundreds of sub-sets in small user groups each seeking a special set of site attributes and prices.

Concepts for Basic Financial Analysis of Real Estate

I. Risk - variance between assumptions and realizations, or between proforma budgets and historical accounting record.

a. static risks - those contingencies which only cause a loss
b. **dynamic risks**
c. explicit assumptions
d. implicit conditions

II. Risk management is the control of variance due to contingencies which upset assumptions and conditions of the budget plan.

a. priority of risk management objectives:
   1. preservation of existing net worth
   2. realization of future income expectations

b. functional steps to risk management:
   1. identification of significant sources of variance (sensitivity study)
   2. identification of alternative risk management methods available
   3. selection of a risk management method
   4. monitoring cost effectiveness of risk management procedure

c. alternative risk management methods include:
   1. avoidance
   2. shift by insurance contract
   3. shift by private contract
   4. limited liability
   5. hedge
   6. improve forecasting through better data collection and analysis

III. Heuristic models identify one set of projections which follow from a single set of assumptions, assuming conditions of certainty

a. capacity for variance indicates vulnerability to surprise
b. percent of equity recovered (payback) as a cumulative ratio to original cash-investment
c. default ratio - cash break even point as a ratio of gross potential rent
d. net income as a percent of market price is the reciprocal of the price-earnings ratio

Urban Land 550
Lecture Outline #6

CONSTRAINTS ON THE REAL ESTATE CONSUMER

I. Each establishment which needs a location and shelter has a series of constraints imposed on its choice or set of alternative courses of action. Many of these constraints are personal or technical but often they constraints boil down to the question of money and some basic value judgements about location, density, coverage and quality. A. To illustrate the basic constraints within a cash constraint we want to look at the household as an owner, as a tenant, and then at the business firm as an owner and tenant.

B. For the household the decision to rent or buy may involve value judgements about mobility and fixed cost vs. roots and equity investment.

C. For the business we will assume the classic arguments of opportunity costs and liquidity in the buy-lease decision.

II. A housing cost calculator was developed by Stanford Univ. some years ago to indicate the order of magnitude of monthly cost differentials or different types and sizes of dwelling units. The original concept was to create a national housing corporation which would allow you to move about the country while retaining your eligibility for a housing unit and status as a tenant, a tenant with option to buy, or as an owner of scattered sites with maintenance provided by the local branch of the national corporation.

A. Size and quality of the improvements is indicated across the top of the chart ranging from one to five bedrooms.

B. Location and density are indicated on the left hand margin. The improved cost per acre ranges from $20 to $100,000 and that divided by the density provides the land cost per unit.

C. Building types range from detached single family to moderate-rise elevator apartments.

D. At the bottom of the chart is an explanation of items included in arriving at an annual cost of 12% of total land and improvement costs. Note interest cost was 5%--today it is 9% so you might add 32% to monthly cost just because interest costs have risen and there is nothing which can be built for $6 or $9 a sq. ft. and $20,000 land per acre isn't available either.

NOTE: THE MONTHLY COST OF HOUSING = .01[Cost of Building (size x quality) + Cost of Land (Location/density)] with...

E X A M P L E
A 1,600 sq ft, three bedroom (12 to the acre) row house of $12 per sq ft quality on $60,000 per acre land costs

$\boxed{\$242/\text{Mo}}$

SIZE ranging from 800 sq ft for a one bedroom apartment to 2,400 sq ft for a detached home
TYPE ranging from 4 units per acre for detached homes to 20 per acre for elevator apartments
LOCATION ranging from $20,000 per acre to $100,000 per acre for land with community services
QUALITY ranging from a $6 per sq ft to an $18 per sq ft in-place cost of building construction
Annual cost of MONEY*Invested in the building and in LAND* calculated at 5 percent per year
Annual cost of BUILDING* maintenance and UTILITY* services calculated at 4 percent per year
Annual cost of COMMUNITY* taxes, insurance, and MANAGEMENT* calculated at 3 percent per year
monthly cost is 1 percent of total value or one twelfth of an annual cost of 12 percent per year
Variations in any of the SIX INGREDIENTS (*) of housing that change the annual total by 1.00 perce
(like MONEY from 5% to 6%) result in a corresponding charge in monthly cost of 8.33 percent.

The above figures include the same interest rate on both equity and mortgage money invested in the property but no amortization. Life-time maintenance and planned replacement of building components precludes obsolescence, thus eliminating depreciation of the property.

E. There are a variety of rules of thumb about how much a family should spend on housing. TheFHA says low income families should spend no more than 25% of income on rental housing or 20% on single family plus utility. They are talking an adjusted income which reflects disposable income and we will look at their formulas later in the semester.

1. Lenders often state that the price of the home should not exceed twice the family income and then provide various definitions of income which may discount or ignore the wife's income, or not include car payments and income deductions on a check-off system, or use average income for self employed professional, etc.

F. The important point to remember is that effective demand for housing depends on savings available for a downpayment and income which will meet the lenders criteria for a loan and a loan balance no higher than you can carry with the debt service consistent with the lenders definition of your income.

1. Once the consumer has a definition of dollars available for housing there are a wide number of alternatives which you can choose for the matrix we had looked at this morning could be further be refined in terms of new or old, urban, suburban and rural, contemporary or traditional in style and so on.
2. As a result there is no such thing as a single housing market but rather there is a complex set of micro-markets for which it is necessary to design a consumer profile with much detail to both their effective means and their priorities in terms of all the trade-offs which they could make. The real estate industry is obly now beginning to do the detailed market research which has characterized many other industries.

G. Since the cash cycle of any real estate enterprise begins with a consumer expenditure, in this case, for housing, a major technical problem becomes the forecasting of the price and unit mix of a real estate marketing program.

III. The tenant in a real estate project is borrowing the use of a capital asset, an apartment, an office building, a store, or what have you. The student is given the key to a $15,000 apartment unit so it is not surprising that there is some tension on both sides of the transaction when you consider the reluctance you would have to turn over the car keys to your $3,000 automobile to a virtual stranger.

A. Since 95 and 100% loan can be available, a tenant is generally a tenant by choice. He has placed a high priority on having freedom to move, fixed costs for a specific period of occupancy , and a provision of services to some degree that he might otherwise have provided for himself.

B. The cost of mobility or flexibility is high:

1. A motel room for the night with a high level of service amenities may be $20.00 or $600.00 a month.
2. A motel room by the month might be $12 a day or $360 a month.
3. An efficiency apartment for 9 months may be $150 a month so there is no need to sublease during the summer and you're expected to make your own bed, do your own cleaning, take out your own garbage, etc.

Lecture #6

4. Signing a year lease may bring the cost to $130 per month but note that the savings have come at the cost of considerable mobility and increased responsibility to provide ones own domestic services. Gross rents do represent a fixed cost no matter what happens to real estate taxes or maintenance, etc.

C. The prospective tenant could look for an infinite variety in terms of trade-offs between full service and self help (rental bungalow versus recreation community), between mobility (no lease versus 5 year contract) or pooling of group costs versus direct user charges (gross rent versus meters for all utilities and services).

D. The business tenant may also be looking for a variety of trade-offs to house his activities.

1. Cheap cubage versus locational linkage (warehous location versus display location)
2. Customer appeal and impression versus employee convenience and efficiency (A. O. Smith)
3. Financing decision (lease or buy arguments)

E. The matrix of tenant alternatives is even more complex than that of residential.

IV. The location decision for a manufacturing firm may involve a variety of considerations to measure the true cost or the amount of money which it may pay to buy or rent.

A. One decision criteria will be net income divided by total invested capital or equity capital.

B. The net income will be a function of how the location will affect:

1. Sales
2. Cost of raw materials
3. Cost of distribution
4. Cost of labor
5. Cost of occupancy
6. Cost of management

C. The total capital and alternative locations may be affected by:

1. Cost of moving
2. Scrap value of plant abandoned
3. Cost of new site (net of subsidy)
4. Cost of new plant and equipment (net of subsidy)
5. Cost of retraining (net of subsidy)
6. Impact of additional financing cost considering the subsidy.

D. Whichever location results is the best income to capital used to the preferred location.

E. Of course the alternatives to be studied will first be narrowed down by a set of screens or criteria on the technical requirements or living environments of alternative communities and neighborhood.

Lecture #6

F. Each commercial enterprise will significantly differ marginal revenue and cost which a seller can only guess at. Thus a filling station might be willing to pay $100,000 for a filling station site which is worth only $40,000 to somebody else because internal economics of scale.

1. The seller may never know how much his buyer might have been willing to pay.
2. Buyers may never wish to reveal the precise formula by which they are making their decision.
3. Thus real estate is the last of the great camel bazaars where value is determined by negotiation ability and careful intelligence gathering of information,there is often a great disparity between asking price and the actual transaction price.

G. Our first task will be to look at cash cycle approach to real estate investment as a decision tool for investors which is more precise than buy low, sell high.

Lecture #7
Urban Land 550

PROBLEMS OF RISK AND YIELD FOR REAL ESTATE INVESTMENT

I. Measuring yield - risk - problems in definition and viewpoint

A. The question of yield
1. Definition of dollar benefits - which profit centers and which line on the P & L?
2. Definition of equity - net historical cash or liquidating value
3. Should ratio be average (retrospective) or marginal (prospective)?
4. Present value or internal rate of return or modified internal rate

B. The question of Risk and Risk Management. Facts of fixed dollar investments must be replaced by assumptions in real estate made under conditions of uncertainty.
1. Risk is the variance which could occur to these assumptions, a variance measured as the probable difference between expectations and realizations.
2. First priority of risk management - conservation of existing net worth and good will.
3. Second priority is to reduce variance and future expectations.
4. Static risks can only cause a loss and are external to organization while dynamic risks reflect entrepreneurial ability and could produce a profit or a loss.
5. Tools of risk management:
   a. Adequate information about costs
   b. Adequate information about consumers
   c. Shift of variance by contract
   d. Scheduling to provide liquidity and holding power
   e. Incentive contract for entrepreneurial execution of plan

II. Some initial measurements of the risk characteristics are useful in dimensioning the business and financial risk of the project.

A. After tax cash recovered - cash equity ratio (payback) =

$$\frac{\text{Accumulated spendable cash after taxes + accumulated tax on other income}}{\text{Cash Equity required}}$$

B. Default ratio =

$$\frac{\text{Operating Exp. + R.E. Taxes + Prin. \& Interest on Mtge. + Working Cap. Loan Prin. Repayment}}{\text{Gross Income}}$$

C. Net Income - cost to acquire ratio

$$\frac{\text{Net Income}}{\text{Market Value for the same period}}$$

D. Prospective yield is measured by one of four standards.
1. Current period return on Net Worth before taxes=

$$\frac{\text{Cash Throw-off + Change in Net Worth}}{\text{Net Worth at End of Previous Year}}$$

2. Current period return on net worth after taxes =
   Spendable cash + tax savings on other income +
   (change in net worth - change in cap. gains tax)
   Net worth at the end of previous year less capital gains tax of previous year
3. Cash Return on original cash equity before taxes =
   Cash throw-off
   Total initial investment less initial Mortgage Debt
   (This is adjusted for staged projects)
4. Cash Return on original equity cash after taxes =
   (This is adjusted for staged projects)
   Spendable Cash after taxes = Tax savings on other income
   Total initial investment cost less initial mtge. debt

E. The assumption relative to resale price is handled differently by many investors.
   1. One appraisal method tests value at alternative resale prices
   2. Insurance company equity departments assume 100% decline in 50 or 60 years
   3. Resale price should be reduced by transaction costs
   4. Others count spendable cash at 100%, equity build up at 50%, and appreciation at 25%.

III. The 3 last lines of mini-mod present alternative measures of retrospective yield. The appraisal fraternity emphasizes present value concepts while the financial fraternity relates to internal rate of return.

A. Present value of project before taxes =
   Original mortgage balance + PV of received stream of cash throw-off + PV of net worth if sold at end of year indicated by column number.

B. Present value of project after taxes =
   Original mortgage balance + present value of received stream of spendable cash after taxes + PV of received tax savings on other income + PV of (net worth less capital gains tax) if sold at end of year indicated by column number.

C. The internal rate when applied to real estate has 2 problems, the opportunity cost of capital issue and the computational problem of the non-conventional investment.
   1. Low equities in real estate mean high rates of return but projects are discreet and separated in time. Temporary reinvestment occurs at a low rate while opportunity costs for real estate investors with risk preference are volatile. These elements conflict with assumption of IRR of reinvestment at the discount rate.
   2. IRR equation has as many routes as there are a change in direction from net outlays to net receipts.
      a. Conventional investment has one or more outlays followed by one of more receipts.
      b. Non-conventional investment has one or more outlays intersperced with one or more receipts - hence, multiple routes for IRR

D. Modified internal rate in mini-mod converts non-conventional investment to the conventional and permits setting of an opportunity cost - reinvestment rate different from the IRR rate.
   1. The modified IRR is the rate which equates present value of the outlays and the future compound value of receipts.
   2. There is theoretical difference of opinion as to whether receipts should be compounded.
   3. Computer computation involves the use of logs and so a negative equity means a negative log and rejection of the run by the computer.
   4. The modified IRR rate equals Exp (Y) - 1
      Y = [Log (X) - LOG (Original Investment)]/N
      $S = \sum^{N}$ [(Spendable Cash After Taxes + Tax Savings) * (1. + Cost of Equity Cap)N-1]

E. Yield will be highly sensitive to the amount and timing of equity capital investment.
   1. An increase in cost financed with mortgage increases of interest and principal payments reduces cash throw-off over many years and may reduce equity yield slightly.
   2. An increase in cost which requires additional equity immediately and drastically reduces yield because the leaverage is reduced.
   3. Two strategies follow from this fact and the present value of money. You make your money when you buy, not when you hope to sell well.
   4. Yield is very sensitive to cost to acquire and price negotiations when it means additional equity money for the investor and relatively insensitive to price when the additional price can be financed at favorable rates for long term.

Lecture #9 - Urban Land 550

Yield and Risk Analysis in Real Estate

I. A cash flow forecast for real estate produces so many different numbers, some basic approach for analysis is important, particularly an approach which is relevant to alternative strategies and tactics.
   A. The basic elements of financial analysis or format are useful to review without adding the embroidery of profit centers, finance packages or taxes. These are:
      1. Timeline
      2. Cash outlays
      3. Cash receipts
      4. Measures of yield
      5. Measures of risk
   B. In measuring yield there are a number of problems in establishing definitions and a viewpoint. There is no one measure of yield or one correct approach. It must be regarded as a decision tool and whichever tool works best for a particular investor is the right one. (10% ain't a bad margin) Among the problems we'll cover today are:
      1. Definition of a return - is it net income as the Finance Dept. would claim, cash throwoff as the appraisors claim, spendable cash after taxes or should there be some adjustment for equity build-up ?
      2. Definition of equity investment as original cash, unrecovered cash balancd, liquidating value at end of previous or an average carefully defined standard?
      3. The ratio of returns to equity may be retrospective or prospective - i.e., andaverage rate for the entire timeline of the investment or the marginal rate for one year at a time.
      4. A major argument today is the need to modify internal rate of return for real estate equity to reflect the opportunity cost of money and possibly the reinvestment rate.
   C. When investing in a bond all the necessary assumptions are provided by the contract or the transaction. There's a coupon rate, a purchase price, a par value, and a maturity date. The possibility of prepayment is covered by a call feature. In real estate all these assumptions are provided byuthe development. All those numbers in a cash flow seem like hard numbers but many are subject to variance.
      1. Risk is the variance which could occur to the various assumptions on cost to acquire, operating results, and resale and therefore some way is needed to qualify the ratios of yield anticipated by conditions of uncertainty. Risk is a variance between our assumptions or expectations and our realiaations.
      2. The highest priority of the risk manager is to conserve our existing assets and net worth, to minimize loss to existing assets including our credibility with those involved in the operation.
      3. The second priority is to reduce the uncertainty of future expectations.
      4. The risk manager is concerned with both static risks - those contingencies which could only cause a loss, and dynamic risks those entreprenerial matters which can produce a profit or loss.
      5. The techniques of risk management include:
         a. adequate information and planning for cost control
         b. adequate information about the number, the means, and motivation of consumers.

c. shift of unforeseeable variance by contract

d. scheduling of financial plans to provide liquidity and holding power

e. incentive contracts for management to penalize or reward achievement in reaching assumptions as to cost and revenue

II. Reference to the minimod output will provide demonstration of the various ratios.

A. After tax cash revovered - cash equity ratio (payback) =

$$\frac{\text{Accumulated spendable cash after taxes + acumulated tax savings on other income}}{\text{Cash equity required}}$$

B. Default ratio =

$$\frac{\text{Operating Exp. + R.E. Taxes + Prin. \& Interest on Mtge. + Working Cap. Loan Prin. Repayment}}{\text{Gross Income}}$$

C. Net Income - cost to acquire ~~market value~~ ratio

$$\frac{\text{Net Income}}{\text{Market Value for the same period}}$$

D. Prospective yield is measured by one of four standards.

1. Current period return on Net Worth before taxes =

$$\frac{\text{Cash Throw-off + Change in Net Worth}}{\text{Net Worth at End of Previous Year}}$$

2. Current period return on net worth after taxes =

$$\frac{\text{Spendable cash + tax savings on other income + (change in net worth - change in cap. gains tax)}}{\text{Net worth at the end of previous year less capital gains tax of previous year}}$$

3. Cash Return on original cash equity before taxes =

$$\frac{\text{Cash throw-off}}{\text{Total initial Investment less Initial Mortgage Debt}}$$

(This is adjusted for staged projects)

4. Cash Return on original equity cash after taxes =
(This is adjusted for staged projects)

$$\frac{\text{Spendable Cash after taxes + Tax savings on other income}}{\text{Total initial investment cost less initial mtge. debt}}$$

E. Other real estate investment models may discount the paper profit of equity build-up or appreciation. Insurance companies assume the value of improvements to decline 100% in fifty or sixty years. Resale price should be reduced by transaction costs, which are as much as 6%.

F. Many conservative investors just consider spendable cash after taxes and tax savings to other income

III. The last three lines of minimod analyze retrospective yield.

A. Present value of project before taxes =
Original mortgage balance + PV of received stream of cash throw-off + PV of net worth if sold at end of year indicated by column number.

B. Present value of project after taxes =
Original mortgage balance + present value of received stream of spendable cash after taxes + PV of received tax savings on other income + PV of (net worth less capital gains tax) if sold at end of year indicated by column number.

C. While the appraisal fraternity thinks in terms of present value the financial fraternity thinks in terms of internal rate of return. The internal rate applied to real estate has two problems, the opportunity cost of capital and the problem of the nonconventional investment.

1. Low equities can mean high yields and without continual reinvestment since projects are discrete and separated in time, temporary reinvestiment is necessary. Real estate investors are risk preference investors so opportunity costs may be high, too. Both these facts conflict with the internal rate assumption of reinvestment at the same rate at IRR.
2. A conventional investment has one of more outlays followed by one or more returns. Many real estate investments involve a seriesof outlays interspersed with a series of receipts. This situation provides as many roots to the IRR equation as there are changes in direction so a modified internal rate maybe more appropriate.
3. In minimod the modified rate is determined by discounting outlays by the opportunity cost and compounding receipts by the reinvestment rate. Then the IRR is computed which equates the present value of the outlays and the futre value of receipts. The formula involves the use of logs and so a negative equity cannot be calculated for minimod.
4. The modified IRR rate equals Exp (Y) - 1
   Y = (LOG (X) - LOG (Original Investment)/N
   X = $\sum^{N}$ [(Spendable Cash Aft Taxes + Tax Savings)*(1. + Cost of Equity Cap)N-1]
5. It is important to note that yield will be highly sensitive to how soon equity captial must be invested and relative changes in equity. An increase in cost which can be financed with the mortgage increases interest and principal payments and decreases cash throwoff over many years. However an increase in cost which requires additional equity hits the leverage factor immediately and drastically reduces yield.
6. Two corollaries follow from this fact:
   a. You make your money when you buy, not when you sell.
   b. Yield is very sensitive to price negotiation when it means additional equity and relatively insensitive to price when additional price can be financed for the mortgage on longterms at favorable rates.

Business 550/705
Real Estate Risk Management

I. As you begin to struggle with cash flow forecasting it should be very apparent that as an investor all you buy is a set of financial assumptions about the future, about the interaction of the project with users, the infrastructure, and management. Stocks and bonds are risky too, in both a general market system and individually but real estate does not depend primarily on random walk methods of risk management through diversification. Real estate management is the control of risk.

   A. Risk is the variance between assumptions and realization, between proforma budgets and actual P&L statements.

   B. Risk management is the control of variance, a reduction of financial upset and insolvency in terms of frequency and severity as the result of surprise or unpredictable obligation.

   C. A real estate enterprise faces a great variety of risk types but they can be basically divided as follows:

      1. Static risks - external, sudden, and generally destructive such as fire, death, earthquake and which can only cause a loss of resources by surprise to upset a plan.
      2. Dynamic risks - partially controllable, internal occurrances over time which can produce a profit or a loss depending on management finesse and forecasting ability.

   D. Most static risks can be controlled by insurance while many dynamic ri risks can be minimized through management. Dynamic risks facing the real estate investor would include:

      1. Non-systematic business risks (those inherent in the management and marketing of the property).
      2. Systematic business risk (those inherent in the level of general economic activity).
      3. Financial risk (adequach of cash available for debt service on time each period and in the aggregate in the event of foreclosure).
      4. The interest risk (the possibility that interest rates will rise relative to contract mortgage rate, transferring value from lender to borrower).
      5. Liquidity risk (the rise in interest rates will depress resale price of the mortgage so that if lender needs cash, he must sell mortgage investment at a loss).
      6. Inflation risks (loss of purchasing power of dollars which remain invested in outstanding balance).
      7. Creditor risks (redefinition of remedies in the event of non-payment by statutory of judicial actions or innovative legal gambits).

   E. Risk management has two objectives

      1. First priority - conservation of existing enterprise assets despite surprise events.
      2. Second priority - realization of budgeted expectations of income despite surprise events.
      3. It is both a philosophy of inquiry in terms of validating assumptions or a management process of attempting to answer sytematically the "What if..." questions.

F. The alternative methods for controlling variance, avoiding loss, which everyone subconsciously uses, include:

1. Eliminating risk exposure
2. Reducing the frequency or severity of loss (fire proof construction versus sprinklers or diversification or lower loan to value ratios).
3. Combine risk exposure to improve predictability - scale of operations, research.
4. Shift risk by contract (sub-contracting, escalator clauses, variable rate mortgages.
5. Shift the risk by insurance contract
6. Limit maximum loss (corporate shell, limited partnership, exculpatory clause)
7. Hedging (options, contingent sales, sale and leaseback, Change in conditions clause)

II. A real estate project becomes a complex web of contractual arrangements which adjust and allocates the risk among all the parties of interest more or less in proportion to their vested interests and the benefits. Different parties are making different assumptions about the future and therefore approach their risk management plan differently.

A. A land lease tied to the cost of capital for a savings and loan.

B. Consider a mortgage closing:

1. Title
Survey
Construction contract
Mechanics liens
Property and liability insurance
Mortgage guaranty insurance

C. Control of dynamic risks with postiive, negative, and bailout incentives (pleasure pain and bailout principle)

D. The percentage lease - base rent to protect the landlord, overage rent, to reduce the tenants financial risks.

E. Shared appreciation mortgage - protect the borrower against high interest rates and a high default point - protect the lender against devaluation due to continued inflationary pressure on interest rates.

F. Physical design for flexibility of future use,capacity for the 100 year storm.

G. Public regulation is intended to eliminate the worst of land layout, construction technique, or other variance from the public land use plan with sanctions to control small levels of variance.

III. Cash flow forecasting is not important in itself but as a base for developing risk measures, including:

1. Default ratio, payback ratios, debt cover ratios, etc.
2. Sensitivity studies as to capacity for errors in the basic assumption
3. Identification of revenue and cost elements to be controlled and defined by contract
4. Development of risk/yield payoff matrices for the decision maker

Lecture #8
Operating Revenue - Expense Determination

I. Some basic patterns or concepts of relationships between values or budgets and income or cash flows.

A. Purchase Value = PV of payments to lender + PV of cash stream to equity investment + PV of reversion or salvage value to fee owner.

B. The reversible equation - if seller names the price, then buyer may name the terms.

C. One approach to financial feasibility ignoring income tax:
1. Front door approach:
Total project cost = mortgage balance + equity capital
Cash dividend on equity + debt service = net income
Net income + expenses + real estate tax + vacancy = required gross receipts
Required gross receipts/space units = rental price/unit

2. Back door approach:
Gross rents - vacancy + expenses = net income available for debt service + equity dividends
Gross rents X desired default point = maximum expenses and outlays
Break even cash - expenses = income available for debt service
Income available for debt service / $1,000/year of loan debt service = maximum loan
Maximum loan + equity capital to be committed = total project budget

II. Assuming for the moment the real estate investor's only profit center is in the net income line or below, cash flow analysis begins with productivity analysis.

A. Productivity analysis is concerned with the attributes or features of the space-time product which prospective users or investors convert into expectations of future flows of services or dollar return; it is these expectations which are the basis of bids and offers in the market.

B. Services expected by a tenant are translated into the rent he is able or willing to pay.

C. To understand the problem of translating the space-time product to money, it may be useful to:
1. Correctly describe the space-time product, such as apartment per semester, clinic per year, motel room per night, GLA, front foot, building site, access to an opportunity.
2. Identify who really signs the check or the lease.
3. Determine devices for creating a prospect list.

D. Definition of amenities and services or features of space-time unit.
1. the competitive standard
2. the competitive edge

E. Converting potential space-time to potential money-time (ie. gross revenue).
1. Gross revenue equals number of time units X rent per unit of time X units per year.

For example: 12 apartment units x 12 months = 144 unit months x 150 per month = potential gross rent
100 motel rooms x 360 days = 36,000 room nights space-time

2. The vacancy rate is also determined in terms of space-time units. For example: If it was assumed that 1/2 of the aprtments would turn over to new tenants each year and it would take one month to make the transfer, then:
12 apartments x .5 turn over x 1 would = 6 unit months of vacancy x 150 would = a $900 vacancy loss

3. Vacancy may include at least four elements, including:
   a. Normal vacancy turn over rate
   b. Seasonal rent adjustments or concessions (unit months at seasonal price cut)
   c. Collection losses (loss per unit month)
   d. Franchise fees, deposit returns, sales taxes, etc.
4. Details provide a gross rent schedule

F. The gross potential rent less the vacancy adjustment = effective gross rental income.

III. There are 2 viewpoints for revenue and expenses - productivity as economic surplus or productivity in terms of hard cash.

A. Economic viewpoint that of the appraiser over long term of 10 to 40 years.

1. Economic rents rather than actual cash rents and average expenses smooth over projection period, all in constant dollars.
2. Expenses include a non-cash item called reserve for replacement for special componants in the structure like roof or boiler which may be replaced before the end of the forecast period.

B. Cash cycle analysts make projections for each year and sometimes by quarters as plan becomes refined. Short term forecast is for 5 or 10 years at most. Cash rents are the basis and cash expenses can be classified into 4 basic outlays further subdivided by account to arrive at cash income available for debt serviee:

1. Fixed expenses excluding real estate taxes
2. Variable expenses
3. Repairs and maintenance (which are deductible for income tax purposes)
4. Replacements (items which must be capitalized and then depreciated for income tax purposes)

C. Fixed expense includes insurance, acoounting, and legal. Variable expenses are costs which vary by occupancy or by season.

D. Repairs and maintenance vs. scheduled replacements.

E. Sources of expense data:
1. (Best) Similar buildings managed by the same people
2. Reliable trade sources such as:
   a. Dollars and Cents of Shopping Centers - ULI
   b. Office Building Managers and Owners Annual Report
   c. Apartment Building Owners and Managers Report
3. Local property management firm with estimating manual

F. Common denominators for expense comparison:
   1. Percentage of gross rent or effective gross
   2. Pennies per sq. ft. of total building area
   3. Pennies per sq. ft. of GLA (gross leaseable area)
   4. Per room or per guest (motels)
   5. Gross cubic footage (industrial)

G. Expense projections can be subject to much variance and varaince in revenue and expense estimates is called Business Risk.

   1. Risk shifted by means of percentage rents or escalator clauses
   2. Percentage rent as a base rent as against a percent of tenants sales, whichever is more.
   3. Escalator clauses shift in increase and expense above some base number to the tenant.

H. Real estate taxes vary greatly across the country - Milwaukee 33% - Phoenix 12%.

IV. Cost of money as a demand on cash cycle varies greatly by time loan was made, type of property, location, ratio of loan to value, etc.

A. Essential points are interest cost and rate at which loan must be repaid.

   1. A 7 1/2% interest monthly payment loan to be repaid over 15 years would cost $11.14 per year per thousand.
   2. The same loan with a 25 year repayment would only cost $8.87 per thousand.
   3. At today's rate of 10% the 25 year loan would cost $10.90 per thousand which means you could borrow about 19% less money for the same debt service.
   4. For 15 year amortization at 10% the cost would be $12.90 per thousand.

B. Credit crunch changes both cost and other selection criteria such as default point or preference for property type.

C. Financial risk reflects coverage of debt service commissions by net income (debt cover ratio) or cash break even (default point) as a percent of gross cash flows.

The Real Estate Process - 550

Lecture Outline #9
Introduction to Real Estate Law

I. The shift from an agricultural to a technological society is producing a corresponding shift in our definition of property rights.

   A. The status of a person receives increasing protection as job seniority, pension, rights to welfare, etc. have been advanced to the status of property which cannot be taken without due process.

   B. Great majority more dependent for economic well-being on status rights than rights in land.

   C. Greater awareness of the depndency of society as a whole on land as the source of life is producing a corresponding contraction of traditional European and English doctrines of land rights.

   D. To the American Indian the land was the "mother of life". The white man thought in terms of survey lines as a way of defining legal possession and control. Essentially panthesism versus an anthropocentric religion which demanded man exercise dominion over the earth and the lesser creatures.

   E. Only the environmental sciances have sensitized Americans to the inextricable interrelationships of one parcel to another which flow across artificial legal boundaries.

   F. Elements of law - space definition, time dimension, rights of use.

   G. The critical legal problem of real estate is to create a body of law which recognizes that land cannot be neatly divided into mine and yours.

II. In the desperate, makeshift search for control of land use decisions real estate has already become the most regulated industry in the U.S.

   A. The mythology of private property gives the citizen a greater sense of independent action than he really has.

      1. Private rights of claim and access
      2. Public rights of claim and access
      3. Common rights of claim and access

   B. Claim rights - the rights of benefit

   C. Access rights - the rights to control decisions about use

   D. The constitution gives government:

      1. First claim on productivity (the real estate tax)
      2. First prerogative of decision making (the Police Power)
      3. Priority to recover private rights (eminent domain) for cash

E. The concept of private property is therefore defined by what is not public or common and it is therefore shrinking. The semantics remain middle English common law but the substance of private property varies inversely with the growth of social interdependence.

III. Much laudable legislation for environmental control has been blocked by the constitutional dichotomy between "taking" and "regulating" property.

A. A taking is eminent domain and requires compensation. Regulation is use of the police power and does not, even though it causes great economic hardship.

B. Distinction between these concepts is very complex because courts can apply the doctrine of de facto taking, where it feels economic hardship is unacceptable and thereby declare law unconstitutional.

1. That possibility makes many environmental controls well beyond cash resources of government who must pay for taking.
2. What is definition of value cash cost to acquire or present value of potential future expectations.
3. Must risk of eminent domain be compensated by payback of original cost or present value of future benefits?
4. To what degree must society pay as though future benefits were certain rather than risky, what set of assumptions provides indemnity?
5. Dilemma is clear - regulation may not be extensive enough to solve a land use problem - such as flood plain or reducing development potential from multi-family to single family in a water recharge area - but legislation forceful enough to do the job is a taking and government may not have enough money to buy the flood plain of the Kickapoo or the coast of California.

C. In about 60 years our law may have gone full circle. At one time government powers for land regulation were much broader and more powerful than today. Three cases may hint at this cycle: (the advanced student may wish to read "This Land Is Whose Land? Changing Concepts of Land as Property," Prof. Donald Large, Wisconsin Law Review, Vol. 1973 #4).

1. Hadacheck v. Sebastian was a brick yard outside of Los Angeles that was zoned out of existence by the city in 1910 although it was there long before the city. No compensation was provided, apparently because the court thought its many profitable years had refunded the owners original money outlay, and it suggested that as a matter of constitutional law government could eliminate pre-existing non-conforming uses.

2. United States Supreme Court in 1922 in Pennsylvania v. Mahon struck down a state law which forbade the mining of coal in such a way as to cause the houses above to collapse. The court held in favor of future expectation. "What makes the right to mine coal valuable is that it can be exercised with profit. To make it commercially impracticable to mine certain coal has very nearly the same effect for constitutional purpose as appropriating or destroying it."

3. However in <u>Just v. Marinette County</u> in 1972 in Wisconsin the court established a simple distinction between eminent domain and the police power. According to the Wisconsin Supreme Court a taking occurs when government restricts an individuals use of his land to secure an affirmative benefit for the public. Police power occurs when government only wishes to preserve the status quo or prevent an act of the land owner that may cause harm to the public.

D. Further redefinition of what is private, public, or common interest in land and who bears the cost of regulation and what is the bench-mark of indemnity will occupy the balance of our century in our courts. Nonetheless a quiet revolution in property is well along, perhaps further along than those on the left really understand.

IV. Real estate law covers a variety of subjects from contracts to buy and sell, contracts to lease between landlord and tenant, contracts to lend, and degrees of tort between all persons and the land. The advocates of consumerism have won almost as many victories affecting the law of contract for real estate as environmentalists have won relative to land use controls.

A. Regulation of land use and buildings can be studied across a spectrum including:

1. Private controls among users of a particular site
2. Association of users with a common interest
3. Local municipal zoning, building codes, subdivision rules, etc.
4. Metropolitan joint action
5. REgional planning constraints
6. State regulation, both direct and indirect
7. Federal regulation, both direct and indirect

B. For a long time federal government delegated land use control to the states by default and states generally transferred its powers to municipalities at the very local level by enabling legislation.

1. Result is political fragmentation and lack of coordination
2. Financial interest within artificial boundaries bias local land use regulation
3. States are reluctant or unable to recover powers
4. Federal government interested in bribing states to carry out federal land use policy by funding planning costs

C.

Thus our series of lectures will first trace regulation of land use on a site basis and local government basis to show where it falters. Then we'll look at the federal government ferment to see why it wants to shift land use policies to the state. Finally we'll look at the state level to see how legislatures are responding to the squeeze.

Lecture #9
Urban Land 550

I. To date we have expanded the elements of real estate cash flow analysis to a point where some decision rules are necessary relative to yield and risk.

A. Basic elements and their expansion are:
1. Time line of project onset and liquidation
2. Cash outlays
   a. Capital costs
   b. Operating expenses
   c. Debt repayment
   d. Tax payments
3. Cash receipts
   a. Profit centers in construction
   b. Profit centers in operation
   c. Operating revenues
   d. Financing proceeds
   e. Tax savings to other income
4. Measures of yield
5. Measures of risk

B. Measuring yield - problems in definition and viewpoint
1. Definition of dollar benefits - which profit centers and which line on the P & L?
2. Definition of equity - net historical cash or liquidating value
3. Should ratio be average (retrospective) or marginal (prospective)?
4. Present value or internal rate of return or modified internal rate

C. Facts of fixed dollar investments must be replaced by assumptions in real estate made under conditions of uncertainty.
1. Risk is the variance which could occur to these assumptions, a variance measured as the probable difference between expectations and realizations.
2. First priority of risk management - conservation of existing net worth and good will.
3. Second priority is to reduce variance and future expectations.
4. Static risks can only cause a loss and are external to organization while dynamic risks reflect entrepreneurial ability and could produce a profit or a loss.
5. Tools of risk management:
   a. Adequate information about costs
   b. Adequate information about consumers
   c. Shift of variance by contract
   d. Scheduling to provide liquidity and holding power
   e. Incentive contract for entrepreneurial execution of plan

II. Some initial measurements of the risk characteristics are useful in dimensioning the business and financial risk of the project.

A. After tax cash recovered - cash equity ratio (payback) =

$$\frac{\text{Accumulated spendable cash after taxes + accumulated tax savings on other income}}{\text{Cash equity required}}$$

B. Default ratio =

$$\frac{\text{Operating Exp. + R.E. Taxes + Prin. \& Interest on Mtge. + Working Cap. Loan Prin. Repayment}}{\text{Gross Income}}$$

C. Net income - cost to acquire ratio

$$\frac{\text{Net Income}}{\text{Market Value for the same period}}$$

D. Prospective yield is measured by one of four standards.

1. Current period return on Net Worth before taxes =

$$\frac{\text{Cash Throw-off + Change in Net Worth}}{\text{Net Worth at End of Previous Year}}$$

2. Current period return on net worth after taxes =

$$\frac{\text{Spendable cash + tax savings on other income + (change in net worth - change in cap. gains tax)}}{\text{Net worth at the end of previous year less capital gains tax of previous year}}$$

3. Cash Return on original cash equity before taxes =

$$\frac{\text{Cash throw-off}}{\text{Total initial investment less initial Mortgage Debt}}$$

(This is adjusted for staged projects)

4. Cash Return on original equity cash after taxes =
(This is adjusted for staged projects)

$$\frac{\text{Spendable Cash after taxes + Tax savings on other income}}{\text{Total initial investment cost less initial mtge. debt}}$$

E. The assumption relative to resale price is handled differently by many investors.

1. One appraisal method tests value at alternative resale prices
2. Insurance company equity departments assume 100% decline in 50 or 60 yrs.
3. Resale price should be reduced by transaction costs
4. Others count spendable cash at 100%, equity build up at 50%, and appreciation at 25%.

III. The 3 last lines of mini-mod present alternative measures of retrospective yield. The appraisal fraternity emphasizes present value concepts while the financial fraternity relates to internal rate of return.

A. Present value of project before taxes =
Original mortgage balance + PV of received stream of cash throw-off + PV of net worth if sold at end of year indicated by column number.

B. Present value of project after taxes =
Original mortgage balance + present value of received stream of spendable cash after taxes + PV of received tax savings on other income + PV of (net worth less capital gains tax) if sold at end of year indicated by column number.

C. The internal rate when applied to real estate has 2 problems, the opportunity cost of capital issue and the computational problem of the non-conventional investment.

1. Low equities in real estate mean high rates of return but projects are discreet and separated in time. Temporary reinvestment occurs at a low rate while opportunity costs for real estate investors with risk preference are volatile. These elements conflict with assumption of IRR of reinvestment at the discount rate.

2. IRR equation has as many routes as there are a change in direction from net outlays to net receipts.
   a. Conventional investment has one or more outlays followed by one or more receipts.
   b. Non-conventional investment has one or more outlays interspersed with one or more receipts - hence, multiple routes for IRR.

D. Modified internal rate in mini-mod converts non-conventional investment to the conventional and permits setting of an opportunity cost - reinvestment rate different from the IRR RATE.
   1. The modified IRR is the rate which equates present value of the outlays and the future compound value of receipts.
   2. There is theorletical difference of opinion as to whether receipts should be compounded.
   3. Computer computation involves the use of logs and so a negative equity means a negative log and rejection of the run by the computer.
   4. The modified IRR rate equals Exp (Y) - 1
      Y = (LOG (X) - LOG (Original Investment)/N
      S = $\sum^{N}$ [(Spendable Cash Aft Taxes + Tax Savings) * (1. + Cost of Equity Cap)N-1]

E. Yield will be highly sensitive to the amount and timing of equity capital investment.
   1. An increase in cost financed with mortgage increases of interest and principal payments reduces cash throw off over many years and may reduce equity yield slightly.
   2. An increase in cost which requires additional equity immediately and drastically reduces yield because the leaverage is reduced.
   3. Two strategies follow from this fact and the present value of money. You make your money when you buy, not when you hope to sell well.
   4. Yield is very sensitive to cost to acquire and price negotiations when it means additional equity money for the investor and relatively insensitive to price when the additional price can be financed at favorable rates for long term.

THE REAL ESTATE PROCESS - Business 550

Lecture #9

I. Analysis of a specific site and improvements may lead to identification of appropriate uses because the patterns of static, linkage, law and dynamic attributes suggests the most probable users.

A. The critical questions are "who needs it?" and "can they afford it?"

1. Short term perspective - highly specialized
2. Long term perspective for full capital recovery - full flexibility

B. Necessity of correctly identifying space-time unit of demand

1. - motel - room per night
2. Shoreline frontage or consumption of a weekend
3. Office space - per doctor or per clinic
4. Colliseum - ticket per game or event/day

C. Need to identify buyer vs. consumer

1. Husband buys home chosen by wife
2. Office branch located by corporate real estate manager
3. Elderly housing bought by citizen board

II. At this point it will now be useful to tie clustering concepts, economic base, market segmentation inherent in site analysis all together.

A. The University in Madison is a major component of the Madison economic base; a change in enrollment or location will have many impacts on different land use patterns. Consider housing with the following tree diagram by consumer segment:

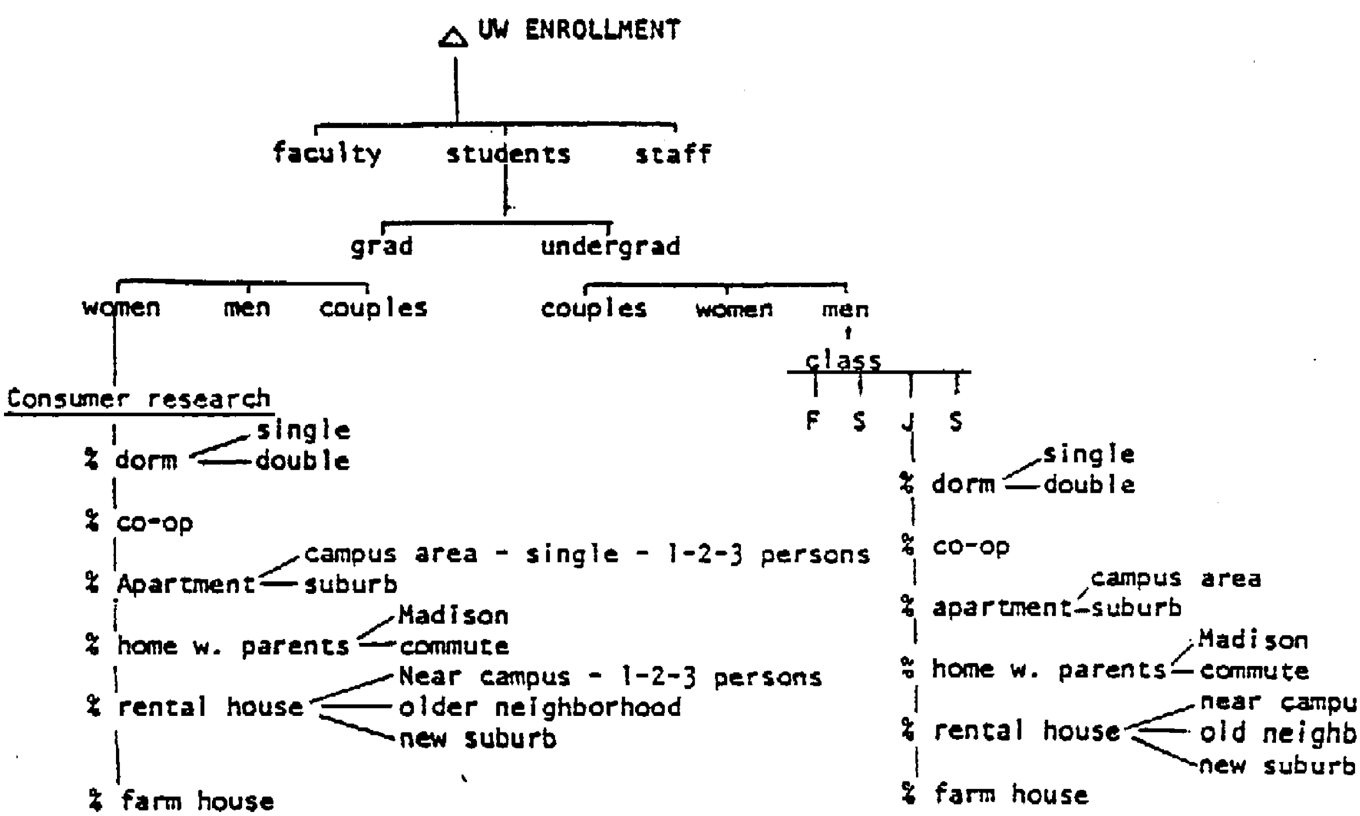


EXHIBIT 2

DEMAND FOR ELDERLY RESIDENTIAL CARE UNITS

Persons in County age 65 and over in 1970		21,914
Adjustment 1970-1974 to reflect the number of persons moving into the 65+ bracket and the application of mortality rates by age and sex		245
Estimated persons in County age 65 and over in 1974		22,159
Less persons 65+ presently in nursing and residential care facilities in County	1,792	
Less persons 65+ presently in government subsidized housing for the elderly	638	
		2,430
Persons age 65+ in the conventional housing market in County in 1974		19,729
Estimated number of persons financially qualified for and seriously interested in moving into the proposed residential care development		4,270
Household equivalent (÷ 1.519 persons per household)		2,811
Less estimated number who will not convert serious interest into any form of action (50%)		1,406
Less the percentage who, while seriously interested, said (before they heard the hypothesis) that their next home would probably be outside County (13.3% from survey questionnaire)	187	
Less those disqualified because their current health status necessitates care beyond the scope of services to be provided in the residential care units (5.4% (from survey)	76	
		263
Elderly households in County qualified for and seriously interested in moving into the proposed development		1,142
Plus an allowance for those elderly households coming from outside County to enter the proposed development(10%)		127
Elderly households qualified for and seriously interested in moving into the proposed development		1,269
Share of market opportunity area who stated in survey that for their next dwelling unit their first preference would be an apartment, in a highrise, midrise, or garden building: Highrise or midrise 28.0%; Garden 49.1; 77.1%		978
Less estimated numbers of households who might move into competitive developments available supply of units		270
Households that can be considered candidates for the proposed development		708

That share of households who said they would be willing to move:

Within 1 year from now	15.6% - 110	households
Within 2 years	31.2% - 220	"
Within 5 years	53.4% - 378	"
	708	

A project of 100 units requires a capture rate of:

91% for a 1 - year absorption rate
90% for a 2 year " "
14% for a 5 year " "

Lecture #10 — Users as Cash Cycle Enterprises

I. The choice of location and building type for any particular user has profound and subtle influences on the internal cash flows of the user. Implicit in location or situs factors are a series of opportunities for revenue, intangible satisfactions, as well as shifts in cost and benefits among the various parties. Keep in mind in each case who benefits and who pays since the consequences are not all reflected in the bank account or the asset position of each user.

A. Consider a small manufacturer who can choose between his current Site A in a northern city where he has operated for 25 years and Site B in a southern town, closer to raw materials but more distant from his market. The southern town will subsidize the cost of land and building to attract the firm as an addition to their economic base.

1. Refer to Table 1
2. Note that most of the workers are left behind in the city of Site A which must pay unemployment benefits, perhaps lose real estate tax income and eventually suffer the losses of a declining economic base.
3. On the other hand capital must be efficient and the company remain competitive

B. Consider the constraints on a supermarket in terms of the variables which will affect its ability to pay rent, build a quality building, and find a site of both adequate size and accessibility.

1. Refer to Table 2
2. Consider the mayor's proposal for a 40,000 sq. ft. supermarket on Block 53 and compare that to the average grocery budget of residents of the neighborhood. Valuable land and expensive construction means higher grocery prices or higher volume. Higher volume means smaller neighborhood stores lose the minimum sales necessary to survive which makes other neighborhoods less desirable and rents falter. Who pays and who benefits?

C. Consider the cash cycle of a family buying a house. Today it takes family income of $20-22,000 of income a year to buy a small house, even if they devote 35%of family income for shelter costs.

1. Consider the example in Table 3
2. If interest rates fell or repayment terms were extended they could buy more house or use less income
3. If they don't have the downpayment, they must borrow more and have higher income for debt service.
4. There are many tradeoffs to be made in terms of residential density, neighborhood status and amenities, amount of floor area, and quality of design.

II. Public real estate decisions have the same impact. Consider the MATC fight. A Truax site was cheapest for MATC but a high cost risk for the federal government FAA, expensive for the city, and expensive for a student to drive longer distances or rent more expensive apartments in the suburbs. The city would lose taxable values down town and share new private construction with the Town of Burke. A more expensive site costs MATC and residents in 7 counties but lowers cost of transportation for students and stimulates development for Madison.

TABLE 1

Industrial Site Alternatives

	Site A Northern City	Site B Southern Town
Unit sales	11,000	10,000
Price per unit	$110	$110
Dollar sales	$1,210,000	1,100,000
Freight costs (materials)	$11,000	$5,000
Raw materials	$110,000	$100,000
Productive labor hours per unit	10	10
Productive hours as % of clock time	.8	.95
Total hours on wage bill	12.5	10.5
Direct labor cots	$4	$4
Indirect labor cost	$1	$ .50
Total labor cost per unit	62.50	47.25
Total labor cost	$687,000	$472,500
Real estate taxes	60,000	20,000
Heat, light and power	75,000	60,000
Administrative salaries	90,000	150,000
Shipping and sales expenses	55,000	110,000
	$1,088,000	$ 917,500
Net profit before tax	122,000	182,500
Investment in land	50,000	20,000
Investment in buildings and machinery	400,000	150,000
Cost of relocation	0	100,000
Net capital employed	450,000	370,000
Rate of return on capital	.27	.49

Number of years for payback of relocation cost $\frac{100{,}000}{80{,}000 - 50{,}000 + 60{,}000}$ = 1.1 yrs

TABLE 2

Retail Store Cash Cycle - Store Rent

5,000	Families
.20	Market penetration
1,000	Families visit store
x $20,000	Average family income
x .12	% family income spent in supermarkets
24,000,000	Total potential supermarket sales
.5	1-5 leakage of food purchases to other sources
12,000,000	Potential sales
÷ $300	Sales per sq. ft. of sales floor area/year
40,000	Sq. ft. optimum building size
12,000,000	
.05	% of sales allocated to rent expense
96,000	Net rentable per annum or $2.20/sq. ft. net

8 parking stalls/1,000 sq. ft. GLA
80 stalls x 300 sq. ft. - 24,000 ft.
Gross building coverage - 44,000
Minimum site area 68,000 ft. or 1.56 acres
2.20 ÷ .10 cap rate = construction budget of $22/sq. ft. GLA

or $\frac{40,000}{44,000} \times 22$ = .9 x 22

or 19.80/gross ft of building

TABLE 3

Household Cash Cycle - Home Purchase

$20,000	Family income
.35	% family income for shelter
$ 7,000	
.30	% of housing cost for utilities, maintenance, etc.
$ 2,100	
$ 4,900	Available for debt service, real estate taxes and insurance

.11 = Annual mortgage constant for 9.75% interest loan
.018 = Annual real estate tax at 2% of assessed value or 90% of market
.002 = Insurance for fire and liability

.130 = Cash outlays capitalized per annum

$\frac{.13}{12}$ = .01083

$\frac{\$\ 4900}{.01083} = \frac{\$45.370}{.9}$, mortgage value

= $50,000 house with $5,000 down payment.

Tradeoff between neighborhood, lot size, building size and quality

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Inflation chart

Build a home today:		In one year that same house will cost:				
Price $	Monthly payment (principal & interest) $	Price one year later $	Additional down payment $	Additional monthly payment (principal & interest) $	Additional yearly payment (principal & interest) $	Salary increase required to offset payment increase $
30,000	211	33,000	600	21	253	1,011
35,000	246	38,500	700	25	295	1,180
40,000	281	44,000	800	28	337	1;349
45,000	316	49,500	900	32	379	1,517
50,000	351	55,000	1,000	35	421	1,686
55,000	386	60,500	1,100	39	464	1,854
60,000	421	66,000	1,200	42	506	2,023
65,000	457	71,500	1,300	46	548	2,192
70,000	492	77,000	1,400	49	590	2,360
75,000	527	82,500	1,500	53	630	2,528
80,000	562	88,000	1,600	56	670	2,692
85,000	597	93,500	1,700	60	713	2,860
90,000	632	99,000	1,800	63	756	3,030
95,000	667	104,500	1,900	67	798	3,196
100,000	702	110,000	2,000	70	840	3,360

Numbers rounded to nearest dollar; monthly payment calculations assume 20% down, 10% interest, 30-year term; cost of new construction assumed to increase 10% annually based on recent trends; salary increase assumes principal and 25% of gross income; present homeowners will have increased equity to offset some inflation in new house prices. Chart courtesy of John Pollis, Wick Building Systems, Inc. Additional source: NAHB Economics and Statistics Division.

HOUSING COST CALCULATOR

Monthly Cost of different type and size dwelling units

MONTHLY COST CALCULATED AT 1 PERCENT OF THE TOTAL UNIT COST FOR

SIZE (area in sq ft)

800 sq ft (1 bedroom) | 1200 sq ft (2 bedroom) | 1600 sq ft (3 bedroom) | 2000 sq ft (4 bedroom) | 2400 sq ft (5 bedroom)

QUALITY (dollars per sq ft)

TYPE OF DWELLING (units : acre)

LOCATION COST (thousands of dollars per acre)

Type of dwelling	Location cost	800: 6	9	12	15	18	1200: 6	9	12	15	18	1600: 6	9	12	15	18	2000: 6	9	12	15	18	2400: 6	9	12	15	18
		4000	7200	9600	12,000	14,400	7,200	[illegible]	[illegible]	[illegible]	21,600	9,600	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	43,200
Detached (4)	150	298	322	346	370	394	322	358	394	430	466	346	394	442	490	438	370	430	490	550	610	394	466	[illegible]	610	[illegible]
	80	248	272	296	320	344	272	308	344	380	416	296	344	392	440	388	320	380	440	500	560	344	416	488	560	632
	60	198	222	246	270	294	222	258	274	330	366	246	294	342	390	[illegible]	270	330	390	450	510	294	366	[illegible]	[illegible]	[illegible]
	40	148	172	196	220	244	172	208	244	280	316	196	244	292	340	388	220	280	340	400	460	244	316	388	[illegible]	[illegible]
	20	98	122	146	170	194	122	158	194	230	266	146	194	242	290	338	170	230	290	350	410	194	266	338	410	[illegible]
Attached (8)	100	173	197	221	245	269	197	233	269	305	341	221	269	317	365	413	245	305	365	425	485	269	341	413	485	[illegible]
	80	148	172	196	220	244	172	208	244	280	316	196	244	292	340	388	220	280	340	400	460	244	316	388	460	[illegible]
	60	123	147	171	195	219	147	183	219	255	291	171	219	267	315	363	195	255	315	375	435	219	291	363	435	[illegible]
	40	98	122	146	170	194	122	158	194	230	266	146	194	242	290	338	170	230	290	350	410	194	266	338	410	[illegible]
	20	73	97	121	145	169	97	133	169	205	241	121	169	217	265	313	145	205	265	325	385	169	241	313	385	[illegible]
Row (16)	100	131	155	179	203	227	155	191	227	263	299	179	227	275	323	371	203	263	323	383	443	227	299	371	443	[illegible]
	80	115	139	163	187	211	139	175	211	247	283	163	211	259	307	355	187	247	307	367	427	211	283	355	427	[illegible]
	60	98	122	146	170	194	122	158	194	230	266	146	194	242	290	338	170	230	290	350	410	194	266	338	410	[illegible]
	40	81	105	129	153	177	105	141	177	213	249	129	177	225	273	321	153	213	273	333	393	177	249	321	393	[illegible]
	20	65	89	113	137	161	89	125	161	197	233	113	161	209	257	305	137	197	257	317	377	161	233	305	377	[illegible]
Walk-up ([illegible])	100	111	135	159	183	207	135	171	207	243	279	159	207	255	303	351	183	243	303	363	423	207	279	351	423	[illegible]
	[illegible]	98	122	146	170	194	122	158	194	230	266	146	194	242	290	338	170	230	290	350	410	194	266	338	410	[illegible]
	60	86	110	134	158	182	110	146	182	218	254	134	182	230	278	326	158	218	278	338	398	182	254	326	[illegible]	[illegible]
	40	73	97	121	145	169	97	133	169	205	241	121	169	217	265	313	145	205	265	325	385	169	241	313	385	[illegible]
	20	61	85	109	[illegible]	157	85	121	157	193	229	109	157	205	253	301	133	193	253	313	373	157	229	301	[illegible]	[illegible]
Elevator ([illegible])	150	98	122	146	170	194	122	158	194	230	266	146	194	242	290	338	170	230	290	350	410	194	266	[illegible]	410	[illegible]
	80	88	112	136	160	184	112	148	184	220	256	136	184	232	280	328	160	220	280	340	400	184	256	328	400	
	60	78	102	126	150	174	102	138	174	210	246	126	174	222	270	318	150	210	270	330	390	174	246	318	390	[illegible]
	40	68	92	116	140	164	92	128	164	200	236	116	164	212	260	308	140	200	260	320	380	164	236	308	[illegible]	[illegible]
	20	58	82	106	130	154	82	118	154	190	226	106	154	202	250	298	130	190	250	310	370	154	226	298	370	[illegible]

Figure 2
Industrial Site Alternatives

	Site A Northern City		Site B Southern Town	
Revenues:				
Unit Sales	11,000		10,000	
x Price/Unit	$ 110		$ 110	
= Dollar Sales		$1,210,000		$1,100,000
– Expenses:				
Raw Materials		$ 110,000		$ 100,000
Transportation: Raw Materials		11,000		5,000
Finished Goods		55,000		110,000
Labor: Productive Labor Hours/Unit	10.0		10.0	
+ Productive Hours as Per cent of Clock Time	0.8		0.95	
= Total Hours on Wage Bill	12.5		10.5	
Direct Labor Cost/Unit/Hr	$ 4.00		$ 4.00	
+ Indirect Labor Cost/Unit/Hr	$ 1.00		$ 0.50	
x = Total Labor Cost/Unit/Hour	$ 5.00		$ 4.50	
= Total Labor Cost/Unit	$62.50		$47.25	
Total Labor Costs		687,500		472,500
Administrative Salaries		90,000		150,000
Real Estate Taxes		60,000		20,000
Utilities: Heat, Light, Power		75,000		60,000
Total Expenses:		1,088,500		917,500
= Net Profit Before Taxes:		$ 121,500		$ 182,500
Capital Costs:				
Land		50,000		20,000
Building and Machinery		400,000		250,000
Cost of Relocation		0		100,000
Net Capital Employed:		$ 450,000		$ 370,000
Rate of Return on Capital:		0.27		0.49

Number of Years for Payback of Relocation Cost:

$$\frac{450{,}000-370{,}000}{182{,}500-121{,}500} = \frac{80{,}000}{61{,}000} = 1.3 \text{ years}$$

Figure 3
Retail Store Cash Cycle

I. Determination of Optimum Store Rent:

Number of families in area	5,000
x the store's capture rate	.20
= Number of families visiting the store	1,000
x Average family income in area	$20,000
x % of family income spent in supermarkets	.12
= Total potential sales for the store	$24,000,000
x Leakage of food purchases to other sources	.50
= Expected potential sales for the store	$12,000,000
÷ Sales/(sq. ft. of sales floor area)/year	$400
= Sq. ft. optimum building size	30,000
Expected potential sales for the store	$12,000,000
x % of sales allocated to rent expense	.075
= Net rent allowed per year	$90,000
÷ Optimum building size	30,000
= Optimum net rent/sq. ft.	$3.00

II. Determination of Optimum Building Cost:

Parking stalls required/300 sq. ft. GLA	1
100 stalls x 300 sq. ft. each	30,000
+ Gross building coverage	34,000
= Minimum site area	64,000
x Price of land/sq. ft. of $2.00 (approx. $86,000/acre)	$128,000
x 10% interest on land	12,800
= Annual budget for improvements	77,200
÷ Capitalization rate of 11.5%	.115
= Total budget for building and site	671,300
÷ 34,000 gross feet	$19.75/sq. ft.*

* This budget is too low for 1980 building costs; developer must reduce size of store and cost of site or capture more of potential market of grocery sales.

C. The monthly payment calculator could be expanded to include duplexes, townhouses, condominiums, low-rise and high-rise apartments, both new and old in a variety of locations from downtown in the big city to a small rural site in the country. Most consumers have a significant number of trade-offs and choices they may make relative to housing price and monthly cost.

D. Monthly cost data is actual cash outlay and may not reflect the real cost and purchasing power for a variety of reasons:

1. Indirect costs of transportation from site to work and other consumer services.
2. Opportunity cost of equity money invested in home.
3. Value of their own self-help services for maintenance, construction, etc.
4. Appreciation of asset value offsetting debt service cost.
5. Inflationary increases in income at the expense of fixed dollar cost of mortgage, shifting purchasing power from lender to creditor.
6. Modification of both net spendable and net worth position due to income tax subsidies to home ownership.

II. There are a variety of cash flow programs available which attempt to compare costs of ownership vs. renting or to optimize the proper purchase price for a home relative to an individual's income tax. For example:

A. RENTBUY analysis for (name?) 6314 Hammersley Rd.

```
 1. Monthly rent? 195
 2. Rent growth rate? .02
 3. Purchase price?  40000
 4. Down payment? 2500
 5. Mortgage interest rate? .095
 6. Term in years? 25
 7. Resale value growth rate? .0175
 8. Real estate tax mill rate ($/1000)? 47.65
 9. Equalization rate? .65
10. Income tax rate? .27
11. Savings interest rate? .0525
    Additional data optional, do you wish to enter it? Yes
12. Growth of real estate taxes? .015
13. Rental area (sq.ft.)? 1350
14. Purchased area (sq.ft.)? 1350
15. Real estate sales commision rate? .05
18. Special charges? 0
19. Special charge growth? .0
Enter years for analysis
(E.G. for 1st, 5th, and 10th years, Enter:  1,5,10)
? 1,3,6
```

MONTHLY ANALYSIS
FOR
6314 HAMMERSLEY RD.
AT THE END OF

YEAR 1	YEAR 3	YEAR 6	MONTHLY
33.55	40.54	53.85	PRINCIPAL PAYMENT
294.09	287.10	273.79	MORTGAGE INTEREST
--------	--------	--------	
327.64	327.64	327.64	MORTGAGE PAYMENT
103.24	110.15	121.38	PLUS:REAL ESTATE TAX
-107.28	-107.26	-106.70	LESS:INCOME TAX SAVINGS AT 27.%
--------	--------	--------	
323.60	330.53	342.32	AFTER TAX CASH COST
-33.55	-40.54	-53.85	LESS:EQUITY ACCUMULATION
10.94	10.94	10.94	PLUS:LOST INTEREST ON DOWN PMT
--------	--------	--------	
300.99	300.93	299.41	EFFECTIVE COST
-59.28	-61.39	-64.69	LESS:RESALE VALUE APPRECIATION
--------	--------	--------	
241.80	239.63	234.82	ECONOMIC COST
195.00	202.88	215.30	RENT
1.24	1.18	1.09	RATIO:COST/RENT
179.11	177.50	173.94	ECON. COST/1000 SQ FT
144.44	150.28	159.48	RENT/1000 SQ FT
1.24	1.18	1.09	RATIO ECON. COST/RENT FOR EQUAL AREA

CUMULATIVE ANALYSIS
FOR
6314 HAMMERSLEY RD.
THRU

YEAR 1	YEAR 3	YEAR 6	CUMULATIVE
1,291.92	3,877.12	7,746.95	TAX SAVINGS
385.64	1,275.54	2,969.80	EQUITY ACCUMULATION
705.64	2,154.49	4,425.03	RESALE APPRECIATION
--------	--------	--------	
2,383.20	7,307.15	15,141.78	TOTAL SAVINGS
2,977.86	8,783.23	17,372.63	ECONOMIC COST
2,340.00	7,161.34	14,761.00	RENT
2,035.28	2,107.72	2,221.25	R.E. COMMISSION ON SALE
2,205.82	6,506.10	12,868.61	ECON. COST/1000 SQ FT
1,733.33	5,304.69	10,934.08	RENT/1000 SQ FT
1.27	1.23	1.18	RATIO ECON. COST/RENT FOR EQUAL AREA

III. Family cash income and real income do not always parallel their needs for residential space and services. These may be out of phase due to the life cycle, occupational cycle, or economic cycle of family income and inflation.

A. Life cycle moves from single person household with few services, to couple, to couple with children, to empty nesters desiring more services, and the elderly single person household requiring a high level of supplementary services.

B. The family occupation-income cycle will peak as the couple approaches the empty nester stage and has less need for space, while the elderly find it increasingly necessary to move to new locations at a time when they are less able to cope with the resulting disorder and disorientation.

C. Since baby booms move in clusters as does the migration of people to jobs, families with the most needs and the lowest means generally find themselves in a sellers market. Since debt service is fixed and incomes inflate the buyer typically spends a declining amount of real income on housing over the years.

IV. Housing preferences don't seem to change very much relative to income in terms of idealized objectives. Limits on purchasing power mean that different groups trade off one objective for another in different ways. Market researchers are just beginning to study how cash power of the consumer leads to compromise on his ideal housing objectives in order to keep his choice within his means.

A. Locational preference for a specific parish or neighborhood will typically lead to a trade off of new for old housing, smaller lot, and even less than superior education for the kids.

B. The family with two working parents will trade away the suburban ideal with one commuting parent for a residential location close to the wife's employment.

C. Families will trade off transportation costs for outlying locations to avoid real estate taxes (and broader services) to reduce housing cost at the expense of transportation cost without perceiving the pay-off.

D. Families will accept smaller lots and structures if sight lines are controlled to provide trees on the skyline and water views, etc.

E. Ultimately each household will include in their housing costs trade offs in location, amount of space, transportation cost, recreation cost, and opportunity cost of employment adjustments to location so that the cash cost of housing is more subtle than the rent or buy program suggests.

F. Much federal intervention in the area of residential finance has been designed to reduce cash costs or improve effective demand of selected housing groups without recognizing the tendency of people to have the same idealized preferences as their contemporaries regardless of income.

Lecture #10 (8)
Urban Land Economics 550

Real Estate Finance - The Mortgage

I. The mortgage is one of the more amazing forms of ~~the~~ financial documents as it succeeds in bringing together a lender and borrower whose motivations in theory are virtually incompatible.

A. The investment objectives of ~~an~~ mortgage lender are safety of principal, reliable yield, and planned recapture of the initial investment.

B. Investment objectives of a mortgage borrower however, reflect a number of concepts:

1. The cost of mortgage money is cheaper than the yield on investment real estate.
2. Real estate is so risky, one wants an early payback of equity to reduce losses.
3. Leverage permits increase in the span of control while increasing the risk of default.

C. Mortgage lender is looking at a preferential position on productivity of the property while the equity investor is seeking control of real estate cash outlays and it is this essential difference in viewpoint which permits each one to think he made a good deal.

D. Strategic dimensions of a mortgage loan

1. The pleasure, pain, and bailout theory of the lender - moti ation versus collateral.
2. The managerial control or discretion of ownership versus the oblique pressure of the creditor.
3. Constant dollars versus inflation dollars
4. Present hard dollars versus speculative future dollars - real estate can be a media for money market futures because of its long term character.
5. Yield versus safety through planned recapture

E. Mortgage literally means death pledge in that the motivation to repay was the alternative of a death pledge by jousting or simple forfeiture of ones life. Eventually the landed poor who are about to lose their property were provided a postponement by the king's chancellor, a process which evolved into a split concept of legal title and equitable title. Foreclosure originally meant final elimination of your equitable rights rather than transfer of title. Since the Magna Carta borrowers and lenders have been seeking techniques to give one or the other the upper hand in the event of non-payment.

II. There are two elements to a mortgage loan transaction, a note recognizing the debt and a pledge of collateral real estate which is referenced into the note, thus making it a real estate mortgage.

A. The lender can sue for specific performance on the note as a simple contract or for damages for breach of contract without taking the real estate.

B. The pledge of the real estate is a third of the alternative remedy for the lender. There is no reason to foreclose as long as the property is worth more than the mortgage and is operating above its default point or the borrower has other assets.

C. Breach of contract occurs whenever the borrower has failed to perform any of the covenants in the note which are not limited to only payment on time. Covenants may include:

1. Payment of real estate taxes
2. Payment of insurance of adequate amounts
3. Use and maintenance of the property to prevent waste
4. Prohibition of Removal or destruction of improvement

D. While the note with the covenants might be operational, the mortgage would have some supplementary clauses to make it easier to administer:

1. Acceleration clause
2. A real estate insurance and escrow clause
3. Restrictions against other encumbrances or liens
4. No assignment or sale subject to the mortgage
5. Esculpatory clauses

III. The vocabulary of mortgage finance and cash flow.

A. Loan ratios - ratio of mortgage balance to market value or ppurchase price.

B. The contract rate on a mortgage differs from the actual yield to the investor for 3 reasons:

1. Debt servicing charges of collection agency
2. Actual dollars of outlay by the lender will differ depending on loan fees and discount points - one point = 1/8% yield on a 20 year note.
3. Repayment proceeds may differ in amount due to penalties and rate due to premature repayment.
4. Yield is therefore actual dollars received over net dollars outlay over time and is measured in terms of 100 points = 1%.

C. Methods of repayment may differ

1. A straight or flat loan is interest only with principal on maturity
2. A balloon loan is interest and principal reduction which matures before principal has been fully repaid.
3. A constant term loan is one in which payments are calculated to repay loan in a fixed period of time, say 20 years or 25 years.
4. A constant payment loan is one in which payments are held constant relative to original balance and as interest is adjusted the length of the mortgage fluctuates until it is fully repaid.
5. Participation loans are those in which in addition to a contract rate of interest and repayment the lender receives a supplementary payment tied to gross rent, net income, cash throw-off or resale pricel

6. A closed loan is one which does not permit repayment for a certain period of time.
7. A prepayment penalty is a charge for when the borrower prepays the loan, like a call position on a bond.

D. The proper name for a mortgage can be very deceptive depending on the real estate interest pledged because one can assign the right to possession through a lease, the right to operate through a management contract or even the right to the reversion as a real estate interest pledged to secure a note. Thus on one property in which the land is owned by one party and leased to another to build a building to be operated by a third party:

1. First mortgage on the leased fee
2. First mortgage on a leasehold right to use the fee
3. First right on the operating lease to possess the building built on the leased fee

IV. You can build whatever you can finance, whether it's a space ship to the moon or a pyramid in Egypt or a football stadium.

A. Downpayment required determines demand as the higher the downpayment the smaller the number of buyers who qualify, whether it is a house, a farm, or an office building.

1. We have already seen that a smaller downpayment may accelerate your rate of payback and therefore reduce your risk.
2. Since yield is very sensitive to a small downpayment of ownership cash the desirability as well as the availability of real estate depends on the downpayment.
3. The downpayment depends on the loan ratio required by the lender or your ability to combine your financing in tiers. Of course tiers may lead to many tears as a consequence.
4. For example, the Hilton Hotel in Madison has sold the lands to a real estate trust and leased back the site, then it raised additional amounts of money on a leasehold mortgage to which the real estate trust is subordinate. Then they sold the tax shelter to limited partners for the third tier of financing and will lease equipment and furnishings for a fourth tier of financing leaving the general partner without a downpayment - as a matter of fact, with a net profit.

B. Leverage has many dimensions in real estate - it may have to do with span of control, the cost of money, or soft dollar profits from tax savings.

1. Strictly defined leverage means that the interest cost of money is less than the investment yield on that money. If you can borrow at 8% and invest at 10% you are enjoying a 2% return on somebody elses dollar.
2. Generally one hs to repay some principal as well as some interest so one is looking at the cash throw-off rather than the difference between net income and interest payments. Many investments are made for the spread between the rent constant and the loan constant. For example, an industrial building where the net income is 12% of cost and the loan constant is 9 1/2% means that with no investment of cash the developer takes in $12,000 on a $100,000 investment,

pay out $9500 on interest and principal, have $2500 for income taxes and spending and an 18 or 20 years own the building outright as a reversion interest.

3. Obviously it is much easier to play this game when interest rates are low and lenders are generous than under the current situation.
4. Tax leverage we will discuss another day.

C. The push to mortgage out, that is to eliminate equity money, is limited to the loan ratios by the lender and the desire to control risk by holding debt obligations within some cash breakeven or default point. (motel default point versus low income rentals)

D. There are a variety of other financing strategies which we will look at later, such as:

1. Creating a refinancing surplus
2. Converting income to capital gain by providing financing in the sales price, etc.

V. The relationship of leverage to value can be stated as follows:

A. Net income/OAR = value
OAR = Y - mc + or -%change in resale price $(1/s_{\overline{1}})$
M = mortgage ratio and y = pretax yield to equity
C = Y - f + P$(1/s_{\overline{1}})$
F = 12 x the monthly debt service while P = the proportion of principal paid off during the projection period and $1/s_{\overline{1}}$= the sinking fund factor at the equity rate for the projection period

B. 1. If the mortgage ratio is smaller then OAR is larger and value will be less. 2. If F is smaller then C is larger which reduces the gap between y and mc so that OAR will be smaller and values will be higher.
3. We can adjust the overall rate to anticipate an increase or decline in the resale price or reversion from the property by converting the reversion value to an annuity by the use of the sinking fund equivalent.

C. To understand the variety of financing devices, it is necessary to look at the revolutionary forms which have been taking place among financial institutions which is the subject of the next lecture.

REAL ESTATE 550/705
Outline--Lecture #11

THE MORTGAGE

The mortgage is one of the more amazing forms of financial documents as it succeeds in bringing together a lender and borrower whose motivations in theory are virtually incompatible.

A. The objectives of the mortgage lender:
   1. Safety of principal.
   2. Reliable yield.
   3. Planned recapture of initial investment.

B. The objectives of the mortgage borrower:
   1. Cost of money is cheaper than yield on investment "Leverage".
   2. Real estate is so risky the investor seeks an <u>early payback</u> of equity to reduce risk of loss.
   3. Leverage permits increase in the span of control while increasing the risk of default.

C. Important ratios for measurement of objectives:
   1. Default Ratio--Measures financial risk from lendors view point.
   2. Payback Ratio--Measures equity exposure of investor.

D. Positioning of participants:
   1. Lendor = looking at a preferential position on project productivity. Lendor gets his before owner gets his.
   2. Borrower = "Equity Investor" is seeking control of real estate cash outlays.

   Note that within the construct of the mortgage each can feel as though a good deal has been made.

E. Strategic Dimensions of Mortgage Lending (5):
   1. The pleasure, pain, and bailout theory.
   2. Direct managerial control versus oblique pressure of creditor.
   3. Constant dollars versus inflation dollars.
   4. Present hard dollars versus speculative future dollars--the quick and dependable nickel versus the slow quarter.
   5. Yield versus safety through planned recapture.

II. The Mortgage

Mortgage literally means death pledge in that the original motivation to repay was the alternative of a death pledge by jousting or simple forfeiture of ones life.

<u>Foreclosure</u> originally meant final elimination of your equitable rights rather than transfer of title. Since the Magna Carta borrowers and lendors have been seeking techniques to give one or the other the upper hand in the event of non-payment.

A. A <u>mortgage</u> is the creation of an interest in property as security for the payment of a debt or the fulfillment of an obligation. Consists of two basic documents:
   1. Note or contract of debt.
   2. Pledge of real estate as collaterial.

B. Essentials of the mortgage elements of a contract:
   1. Competent parties.
   2. Offer and acceptance.
   3. Consideration.
   4. Legality of object.
   5. Because it is real property and subject to the Statute of Frauds, it must be in writing and signed.
C. The parties to the mortgage:
   1. The mortgagor--the party pledging the property and borrowing the money.
   2. The mortgagee--the party to whom the pledge of property is made and the lendor or the money.
D. General clauses of the mortgage:
   1. Covenant to Pay Indebtedness.
   2. Covenant to Insurance.
   3. Covenant Against Removal.
   4. Covenant to Pay Taxes.
   5. Covenant to Maintenance to prevent waste.
E. Supplementary conditions to basic mortgage:
   1. Acceleration clause.
   2. Real estate tax, insurance, and escrow clause.
   3. Restrictions against other encumbrances or liens.
   4. Esculpatory clause.
F. Recourse on Default:
   1. Sue for specific performance.
   2. Sue for damages for breach of contract without taking item.
   3. Foreclose and take property.

III. Mortgage Lending is Risk Management

A. Collateral
   1. Title
   2. Survey
   3. Property insurance
   4. Mortgage insurance
B. Income of borrower
   1. Job history
   2. Insurance
   3. Economic base
C. Interest
   1. ARM vs. FRM
   2. Portfolio management
   3. Hedging
D. Purchasing power of capital
   1. SAMS
   2. Participation mortgages
   3. Convertible mortgages

INSTITUTIONAL STRUCTURE OF MORTGAGE LENDING

I. Introduction: An historical perspective.
   A. Pre-depression mortgage lending
      1. Mortgage features

      2. Market features

   B. Collapse of the mortgage market

   C. Post-1929 reconstruction of the mortgage market
      1. Mortgage features

      2. Market features

II. Sources of Mortgage Funds
   A. Savings and Loan Associations
      1. FSLIC

      2. FHLBB

   B. Commercial Banks

   C. Mutual Savings Banks

   D. Life Insurance Companies

   E. Pension and Endowment Funds

III. Supply and Demand for Loanable Funds
   A. Some factors influencing supply
      1. Federal Reserve buys/sells bonds

      2. Changes in the discount rate

      3. Changes in reserve requirements

      4. Changes in short-term treasury bill rates

III. Supply and Demand for Loanable Funds

B. Some factors influencing supply

1. Anticipated inflation

2. Institutional restraints: i.e. usury laws

3. Employment and income levels

IV. Primary and Secondary Mortgage Markets

A. Primary Market characteristics

1. Local

2. Supply and demand disequilibrium

3. Parties: Primary lender and borrower

B. Secondary market characteristics

1. National

2. Third-party investors

3. Standardized mortgage packages

C. Institutions in the secondary market:

1. Fannie Mae (FNMA)

2. Ginnie Mae (GNMA)

3. Freddie Mac (FHLMC)

Business 550

New Institutional Sources of Real Estate Capital

I. National Policy Responses to Capital Shortage

A. Modification of the propensity to save - Economic Recovery Act.
B. Modification of institutional specialization--monetary Institution's Reform Act of 1980.
C. Channeled Capital Distribution
    1. Tax incentives
    2. Yield incentives
    3. Subsidy of special groups
        a. Housing
        b. Industrial
        c. Infra-structure and urban redevelopment

II. Real estate in general must compete with all other capital needs without subsidy of its cost of funds.

A. Since real estate does not provide enough income on capital invested situation will require:
    1. Raising rents or
    2. Shifting cost and risk to tenant just as borrower must pay cost of inflation and economic risk
    3. Less leverage--more equity to protect break-even point or default point.
    4. More indirect profits from operations, estate planning, value creation.
    5. Exploitation of tax benefits for new capital investment

III. New Institutional Forms of Equity Capital

A. Pension funds
B. Syndications - Balfour - Consolidated Capital
C. Public corporations - Wisconsin Housing Finance Authority
D. Co-ops--Creatwood
E. Condominiums
F. Public/private consortium (Capital Centre, Jackson Clinic)

IV. New Sources of Regulation

A. Group investment brings in SEC and state securities regulation
B. Pension fund brings in ERISA (employee retirement insurance + security act) and creates fiduciary status real estate managers

Annual Compound Interest Table

Effective Rate = 8%   Base = 1.08

Years	1 Amount of 1 at compound interest $S^n = (1+i)^n$	2 Accumulation of 1 per period $S_{\overline{n\|}} = \frac{S^n - 1}{i}$	3 Sinking fund factor $1/S_{\overline{n\|}} = \frac{i}{S^n - 1}$	4 Present Value reversion of 1 $V^n = \frac{1}{S^n}$	5 Present Value Ord. Annuity 1 per period $a_{\overline{n\|}} = \frac{1 - V^n}{i}$	6 Instalment to amortize 1 $1/a_{\overline{n\|}} = \frac{i}{1 - V^n}$
1	1.080000	1.000000	1.000000	.925926	.925926	1.080000
2	1.166400	2.080000	.480769	.857339	1.783265	.560769
3	1.259712	3.246400	.308034	.793832	2.577097	.388034
20	4.660957	45.761964	.021852	.214548	9.818147	.101852

Assumptions

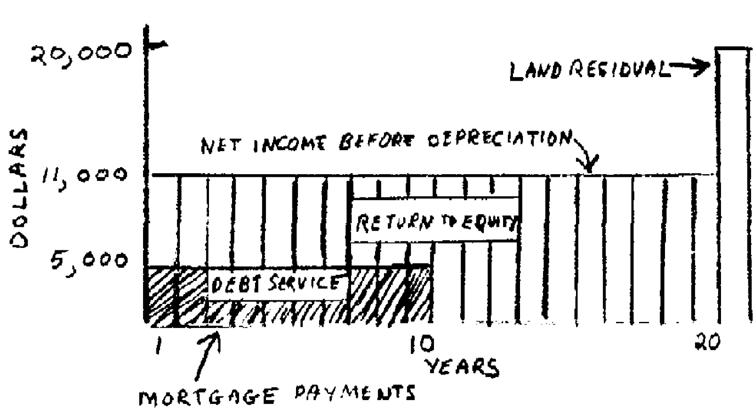
Annual net income before depreciation	$11,000
Economic life	20 years
Land value in 20 years (reversion)	$20,000
Cash throwoff to equity required by the investor	10%
Mortgage debt at 5% interest amortized in 10 years	$38,610
Annual payment on interest and principal	5,000

Present value of equity return

First 10 years		
Cash throwoff to equity after debt service, $11,000 less $5,000	$6,000	$2.000
Present value factor (10%)	6,145	
	$36,870	12,290
Last 10 years		
Return to equity	$11,000	
Present value factor (10%)	6,145	
Value 10 years removed	$67,595	
Present value, $67,595 x factor 0.3855	$26,058	
Present value of land residual (20 years removed), $20,000 x factor 0.1486	$2,972	

Total present value of equity

Value of equity return		
First 10 years	$36,870	12,290
Second 10 years	26,058	26,058
Value of land residual	2,972	2,972
Total equity	$65,900	41,320
Mortgage loan	38,610	69,498
Total investment value	$104,510	110,818



Lecture Outline #11
Institutional Structure of Mortgage Lending

I. The High Cost of Real Estate Investment requires heavy debt financing or few people could afford the total capital required since over 2/3 of the nation's wealth consists of building and land in private ownership, and 50% of this wealth is mortgage, it follows that real estate requires access to a very large pool of capital.

   A. A capital pool requires savings and therefore real estate depends on large part, on intermediary institutional devices which can pool the savings of many small investors into amounts of money large enough and willing to commit to mortgages.

   B. Insurance companies, banks, and savings and loan associations are generally the intermediaries associated with mortgage finance but more recently the country has been undergoing significant reforms of its institutional structure in order to expand the availability of savings for a mortgage investor and reduce the cost of mortgage money for housing.

   C. The analysis of intermediary institutions requires a little historical background and then a systematic comparison of institutional differences at 5 basic sub-system levels:

      1. A marketing system to compete for savings

      2. A marketing to compete for loans

      3. The transaction preference system of the policy makers

      4. The liquidity system

      5. The safety system

   D. In our last lecture we took a look at the mortgage. In this lecture we want to relate to the mortgage to the history of financing in this country and the institutional reforms taking place currently in each of these 5 subsystems.

II. Historically the mortgage has been the villain in every play about family or farm finance, skullduggery by the railroads or panic in the financial market. Even in the Monopoly it generally marks the beginning of the end for the owner of boardwalk.

   A. Since the beginning of the country, national government policy encouraged land ownership by a policy of cheap land and cheap short-term credit. However, there was no federal real estate credit policy except for the negative view that mortgage loans should never be made by banks. (Jackson vs Nicholas Biddle in the First Bank of the United States)

   B. Mortgage finance became a local business, often supported by investment money in the east which wish to speculate in land in the west. Mortgage companies would make the loans and sell them to individuals with money to invest. Some companies would issue ten year bonds in small denominations to finance farm improvements. From time to time local real estate markets suffered terrible reverses, particularly on farms and urban lots, when speculative land prices would collapse. Even today vacant land is tainted as reliable mortgage collateral.

C. However, the urbanizing of the United States brought about steadily rising urban land values and stable mortgage results during the first 25 years of this century. A mortgage banking industry grew up in each town.

1. Loans were made and serviced by the banker and then sold to many small investors including bank trusts, estates, and many personal savers and insurance companies.

2. To reach the individual saver, there were many forms of participation plans which allowed the individual to share in a mortgage, portfolio, or a bond issue secured by a mortgage for as little as $10.

D. However, there was a serious flaw in these developments. Most mortgages were balloon mortgages - that is, the borrower paid interest every six months or year but paid nothing on the principal.

1. These mortgages were short-term, one year, five year, then ten years at most. The borrower expected to refinance rather than repay.

2. Mortgages in general anticipated only the real estate as collateral and therefore were often legally limited to 50% of value with two consequences:

3. There were many second mortgages at very high cost to the borrower which undermined his capacity to repay or his desire to repay should property resale values fall.

4. Since the size of the loan depended on the appraisal, competition among mortgage bankers lead to many appraisal abuses so that loan ratios rose well above 50% of value.

E. The depression hit a house of cards. Real estate values fell which meant appraisals fell which meant borrowers could not refinance a maturing mortgage or did not wish to because total debt exceeded market value.

1. As lenders acquired property through foreclosure they became unwilling to refinance any kind of mortgage.

2. Institutional lenders such as mortgage bankers and savings and loans were unable to meet demands of their investors or to repay short-term bank loans with which they warehoused mortgages before they sold them.

F. Since mortgage loans were not available, there was no effective demand for the purchase of property. At the same time the number of properties for sale increased repidly and the result was an orderly market for real estate disappeared.

1. Liquid investors bought sound properties for pennies on a dollar like old Joseph Kennedy in the Furniture Mart.

2. Since savings and loans were unable to meet withdrawals, pass books were selling with sharp discounts, sometimes 25¢ on a dollar. At the same time the S & L wanted to dispose of properties so it would accept a passbook at par value applied to property valued at 50¢ for every dollar of value only 2 years before. A $2,000 investment in a $5,000 pass book could purchase a property worth $10-12,000 the year before.

3.. Many people had income but were unable to refinance their short-term mortgages when they came due so the properties went into foreclosure even though the loan valances were relatively small.

III. In a very remarkable period of federal action in responce to a crisis, the federal government introduced a multiple program of reform which drastically altered all of the subsystems of mortgage intermediaries.

A. For immediate assistance to home owners about to lose their home, it created the Homeowners Loan Corporation which introduced high ratio loans (75%!) with terms tailored to fit the income of the homeowner. The Reconstruction Finance Corporation was also created to buy loan portfolios from lending institutions which needed cash.

B. To protect the saver and permit mortgage lenders to compete with the savings, the government created FDIC and the FSLIC to provide individual savings guarantees and liquidity. More improtantly, deposit insurance required a constant review and audit of individual and institutional mortgage lending practices. These agencies still determine the protfolio distribution of members and the lending appraisal techniques which permit loans to be permissable assets.

C. For the borrower the government introduced long term loans, amortized by monthly payments which included interest, principal, insurance, and taxes. These loans were expected to eliminate the need for secondary financing or the need to refinance during economic recession. Moreover, the amortized loan reduced the loan balance as property depreciated and provided planned liquidity for the lender.

D. To bribe the lender into testing such a radical loan approach, the government created the federal housing administration and the mortgage insurance fund to guarantee the lender that he had nothing to lose by trying government sponsored techniques.

E. The FHA took on the responsibility of appraisal and credit analysis and in the hands like Babcock, Ratcliff and Fisher it began to reform appraisal procedure and credit analysis. FHA succeeded in standardizing the mortgage instrument and the lending process but it did so by performing these functions themself and thus usurping the traditional powers of the mortgage lender.

F. To provide regional liquidity and a device by which the federal government could inject treasurey money into mortgages it created the Federal National Mortgage Association (FNMA). Using funds advanced by the U.S. Treasury or bonds sold in the bond market for Quasi federal bonds, and later selling stock to its customers, Fanny May was able to buy and sell FHA insured mortgages around the country. This enabled the government to support the mortgage market, to provide mobility of mortgage money and liquidity for individual lenders wishing to liquidate some of their portfolio.

G. Because insurance companies had relatively few problems during the 30's there was no federal attention to that segment aside from interest rates. Banks were limited in mortgage loans to the amount of their net worth and loan ratios were a conservative 2/3 and maturities were relatively short. Savings and loans were largely confined to single family residences.

1. The savings and loans were giving a small advantage in competing for savings but were restricted in investment outlets to single family loan.

2. To provide the S & L's with more liquidity the government created the Home Loan Bank to make loans available.

3. The Home Loan Bank could also borrow in the bond market and lend to savings and loans.

H. The Depression taught the federal government that it could manipulate the total supply of money for mortgages by means of monetary policy, fiscal programs, and modification of the various reservations of FHA, FSLIC, FDIC, FNMA or the annual national budget itself.

I. The Depression and World War II which followed also taught the government it could channel real estate demand by its credit policy. It relied on special financing privileges to encourage:

1. Housing for veterans
2. Housing for college students
3. Housing for the elderly
4. Housing for low income groups
5. Housing for those displaced by urban renewal

J. In the process of serving the needs of special groups the federal government learned that it could manipulate housing quality by the standards it required of builders and lenders, that it could be responsible for urban sprawl or land conservation, social fragmentation (urban renewal) or social integration, proliferation of the automobile or land use favoring public transportation, inflation of labor costs or labor saving innovative construction methods. In short manipulation of real estate credit was one of its most powerful tools for social change or the implementation of national priorities. Of course now we have the question of what are the national priorities particularly priorities of land use and social change?

IV. Real Estate Finance 551 is concerned with the details of an individual mortgage transaction, the operating characteristics of each of the intermediary institutions and the flow of capital from the money markets into real estate. Obviously it is not possible to detail all of the technical innovations since 1960 which make real estate the most rapidly evolving area of finance we have both in this country and on the international scene. The following just suggests the institutional innovations which have appeared since about 1960 to drastically change real estate finance.

Lecture #11 Outline
Institutional Structure of Mortgage Lending

I. High cost of real estate requires heavy debt financing. Real estate capital represents 2/3 of the nation's wealth and almost 50% of this is mortgage.

  A. A capital pool for loans requires assembly of small savings through intermediary financial institutions.

  B. Dominant institutions have been insurance companies, banks, and savings & loan associations but in the last decade several new institutional intermediaries have been created.

  C. Differences between instiutional intermediaries can be shown by comparison of five basic subsystems:

    1. A marketing system to compete for savings.
    2. A marketing to compete for loans
    3. The transaction preference system of the policy makers
    4. The liquidity system
    5. The safety system

  D. This lecture will relate historical development and reform affecting subsystems above.

II. Mortgage always associated with financial panic and brutality of capitalistic system.

  A. Absence of federal real estate credit policy until after World War I. Cheap land was incentive for national development.

  B. Mortgage business very local, provincial, and cyclical and subject to abuse by promoter.

  C. Mortgage banking industry grew up after World War I to bring capital surpluses into contact with real estate development needs.

    1. Prosperity made mortgages the blue chip investment for the middle class.
    2. Savings pools were created by cooperative action (S & L's)

  D. Flaws on mortgage instrument and lending procedures contributed to depression.

    1. Short term 1-5 year notes, interest only
    2. 50% loan ratios led to second and third mortgages to reduce down-payment.
    3. Decline in prices made borrower unable to refinance or unwilling to pay.
    4. Amount of loan depnded upon appraisal so competition took advantage of distorted appraisal.

  E. Depression made it impossible to finance which accelerated foreclosures which meant intermediaries were iliquid.

    1. Investors lost confidence in the mortgage form.
    2. Savers lost confidence in intermediary

F. Collapse of orderly market gave liquid investors tremendous buying power.

III. 1930's were a remarkable period of successful federal reforms of the individual mortgage transaction and mortgage lending intermediary.

A. Immediate termporary relief through HOLC Home Owners Loan Corporation and Reconstruction Finance Corporation.

B. Protection of the saver through FDIC and FSLIC.

C. For the borrower - long term, monthly amortized loan including interest, principle, insurance and taxes at high ratios to eliminate need for large downpayments or second mortgages.

D. Protection for the lender by insuring the loan against default by the Federal Housing Administration.

E. Federal takeover of appraisal and credit analysis functions.

F. Regional mobility and liquidity through Federal National Mortgage Association (FNMA). Injection of federal funds into mortgage money supply through Fannie May.

G. Modification of lenders ability to compete for funds to favor savings & loans as a residential mortgage intermediary.

H. Depression taught federal government it could manipulate total supply of mortgage money available.

I. Control of money supply led to special credit for special housing problems.

1. Housing for veterans
2. Housing for college students
3. Housing for the elderly
4. Housing for low income groups
5. Housing for those displaced by urban renewal

J. While protecting special groups it learned it could manipulate housing quality or relate to other social issues or cause problems in:

1. Urban sprawl or land conservation
2. Social fragmentation or integration
3. Proliferation of the auto or public transportation
4. Inflation of labor costs or labor saving innovation

BUSINESS 550/705
REAL ESTATE RISK MANAGEMENT
LECTURE #11

I. As you begin to struggle with cash flow forecasting it should be very apparent that as an investor all you buy is a set of financial assumptions about the future - about the interaction of the project with users, the infrastructure, and management. Stocks and bonds are risky, too, in both a general market system and individually, but real estate does not depend primarily on random walk methods of risk management through diversification as do stocks and bonds investments. Real estate management is the control of risk.

   A. Risk is the variance between assumptions and realization, between pro forma budgets and actual P&L statements.

   B. Risk management is the control of variance, a reduction of financial upset and insolvency in terms of frequency and severity as the result of surprise or unpredictable obligation.

   C. A real estate enterprise faces a great variety of risk types, but they can be basically divided as follows:

      1. Static risks - external, sudden, and generally destructive events such as fire, death, earthquake, etc., and which can only cause a loss of resources by surprise or upset a plan.
      2. Dynamic risks - partially controllable, internal occurrences over time which can produce a profit or a loss depending on management finesse and forcasting ability.

   D. Most static risks can be controlled by insurance while many dynamic risks can be minimized through management. Dynamic risks facing the real estate investor would include:

      1. Non-systematic business risks (those inherent in the management and marketing of the property).
      2. Systematic business risks (those inherent in the level of general economic activity).
      3. Financial risk (adequacy of cash available for debt service on time each period and in the aggregate in the event of foreclosure).
      4. Interest rate risk (the possibility that interest rates will rise relative to contract mortgage rate, transferring value from lender to borrower as a result).
      5. Liquidity risk (the rise in interest rates will depress the resale price of the mortgage so that if the lender needs cash, he must sell mortgage investment at a loss).
      6. Inflation risks (loss of purchasing power of dollars which remain invested in the outstanding balance).
      7. Creditor risks (redefinition of remedies in the event of non-payment by statutory or judicial actions or innovative legal gambits).

   E. Risk management has two objectives:

      1. First priority - conservation of existing enterprise assets despite surprise events.
      2. Second priority - realization of budgeted expectations of income despite surprise events.

3. It is both a philosophy of inquiry in terms of validating assumptions and a management process of attempting to answer systematically the "What if..." questions.

F. The alternative methods for controlling variance (avoiding loss) which everyone subconsciously uses include:

1. Improving forecasts (reduce exposure to surprise).
2. Eliminating the risk exposure.
3. Reducing the frequency and/or severity of the loss (e.g., fire proof construction, sprinklers, lower LVRs).
4. Combine risk exposure to improve predictability (e.g., increase scale of operations, diversification).
5. Shift risk by two-party contract (e.g., subcontracting, escalator clauses, variable rate mortgages).
6. Shift the risk by insurance contract.
7. Limit liability for losses through form of ownership (e.g., use a corporate shell, limited partnership, exculpatory clause).
8. Hedging (e.g., use options, contingent sales, sale and leaseback, change in conditions clause).

II. A real estate project becomes a complex web of contractual arrangements which adjust and allocate the risk among all the parties of interest more or less in proportion to their vested interests and the benefits. Different parties are making different assumptions about the future and, therefore, approach their risk management plans differently.

A. A land lease tied to the cost of capital for a savings and loan.

B. Consider a mortgage closing:

1. Title
2. Survey
3. Construction contract
4. Mechanic's liens
5. Property and liability insurance
6. Mortgage guaranty insurance

C. Control of dynamic risks with positive, negative, and bailout incentives (pleasure, pain, and bailout principle).

D. The percentage lease - base rent to protect the landlord, overage rent to reduce the tenants' financial risks.

E. Shared appreciation mortgage - protect the borrower against high interest rates and a high default point - protect the lender against devaluation due to continued inflationary pressure on interest rates.

F. Physical design for flexibilty of future use; capacity for the 100 year storm.

G. Public regulation is intended to eliminate the worst of land layout, construction technique, or other variance from the public land use plan with sanctions to control small levels of variance.

III. Cash flow forecasting is not important in itself but as a base for developing risk measures, including:

1. Default ratio, payback ratios, debt cover ratios, etc.
2. Sensitivity analysis as to the capacity for errors in the basic assumptions.
3. Identification of revenue and cost elements to be controlled and defined by contract.

4. Deve pment of risk/yield payoff matrices for t. decision-maker.

F. It is important on the approach to a shopping center that the shopper be able to identify the major tenants from the shape of the building and the signing. Parking lot routes must be clear, lights on the lots played down, and changes of grade avoided. Access to a shopping center at two different levels forces the developer to use highly restrictive leases which alternate the mix of goods displayed on each level as well as an access and grading plan which will distribute customers arriving equally on all levels. (The Cannery)

G. This brings us to a major element in site transportation, specifically vertical transportation by means of ramps, stairs, escalators and elevators.

1. Station loads to reflect occupancy and use
2. Organization of space uses to hold high concentration at ground level such as lecture halls with direct exits to the outside
3. Escalators move people in bulk but very slowly. Elevators move people quickly but in small number and each elevator consumes usable space on each floor that it passes through.
4. Therefore there is a trade-off between an increase in the cost of site, an increase in the cost of structure, and a change in the cost of the vertical transportation. (The horizontal system includes corridors, plazas, foyers, etc.)
5. Sites which are too small or too large create inefficiencies which inversely affect value.

H. The correct balance between usuable space and space required for vertical and horizontal circulation creates plottage value for lands to be acquired to create more efficient sites or for access (the Anchor building in Madison and the Hopkins St. filling station)

I. Safety attitudes, habits and linkages are also well illustrated by Gateway Center in Chicago and a proposed building for the IC tracks, Illinois Central Railway, for the latter "Indians" rode the IC while "Chiefs" rode automobiles . Both groups would not change their attitude in regard to tansporation. Proposed office building had no parking for the men who would make the decision to sign the lease. INdians peeferred Randolph St. station site where they could find an empty seat at rush hour. The visible advantages of the subject site and premise of accessibility by proximity were negated by values and behavior patterns of those who would occupy the building.

J. Psychological barriers to entry despite proximity are illustrated by the closed mall shopping center. The barrier of a glass front door and the mental effort of intruding past that door are removed for the shopper by stage front store fronts which rise into the ceiling eliminating a sense of exclusion; raised ceilings in the mall with skylighting and vertical motives overcome accumulating claustrophobia of the small shop and generate a sense of excitement thereby reducing a sense of frustration which reduces the tendency to buy.

AFTER-TAX DISCOUNTED CASH FLOW ANALYSIS

Project Information

Building: i) Size: 100-unit apartment building
800 net sq. ft. per apt.
.85 building efficiency factor

ii) Cost: construction cost of $35 per gross sq. ft.
soft (indirect) costs: 18% of constr'n budget

Furnishings: $300,000 worth

Land: i) Size: zoning code limits density to 12 units per acre

ii) Cost: $30,000 per acre

Apartment rent: $400 per month; assume 6% simple annual growth

Vacancy: 5%

Real estate taxes: assume market value will equal the total project cost initially; equalization rate = .92; mill rate = $.024; and also assume that real estate taxes will grow at 6% simple annual rate

Operating expenses: $2.20 per gross sq. ft. annually; assume 8% simple annual growth

Depreciation: i) Building: 175% DB over a 15-year useful life; 15% salvage value when using S-L

ii) Furnishings: S-L over a 5-year useful life; 10% salvage value

Mortgage loan: loan-to-cost ratio = .70; interest rate = 9%; term = 25 years; monthly payments

Working capital loan: interest rate = 11% (simple interest)

Investor info: requires 15% after-tax equity yield; plans to hold property 4 years and then sell; tax bracket is 50%

Market value: assume equal to total cost initially; 6% simple annual growth rate

Supporting Calculations

Total cost of project:

i) Building cost: 100 units x 800 net sq. ft. / unit ÷ .85
= 68,000 gross sq. ft.

construction cost: 68,000 x $35	=	$2,380,000
soft costs: 18% x $2,380,000	=	428,400
Building cost	=	$2,808,400

ii) Furnishings cost: 300,000

Continued...

Total cost of project (cont'd):

i) Building cost:	\$2,808,400
ii) Furnishings cost:	300,000
iii) Land cost: 100 units ÷ 12 units/acre = $8\frac{1}{3}$ acres 8.33 acres x \$30,000 / acre =	250,000
Total project cost =	\$3,358,400

Gross income: Year 1 -- 100 apts. x \$400/mth. x 12 mths/yr. = \$480,000; simple growth at 6% annually

Real estate taxes: Yr. 1 -- \$3,358,400 x .92 x \$.024 = \$74,153; simple growth at 6% annually

Operating expenses: Yr. 1 -- 68,000 gross sq.ft. x \$2.20 /gross sq.ft. = \$149,600; simple growth at 8% annually

Depreciation:

i) Building: w/ 175% DB --

Yr. 1: 1.75 x 1/15 x \$2,808,400 = \$327,647
" 2: " x " x 2,480,753 = 289,421
" 3: " x " x 2,191,332 = 255,655
" 4: " x " x 1,935,677 = 225,829

Accumulated depreciation = \$1,098,552

Remaining depreciable basis @ end of yr. 4 = \$1,709,848

w/ S-L: Annual dep. = 1/15 x (\$2,808,400 x .85) = \$159,143
Accumulated dep. = 4 yrs. x \$159,143 = \$636,571

ii) Furnishings:

w/ S-L: Annual dep. = 1/5 x (\$300,000 x .90) = \$54,000
Accumulated dep. = 4 yrs. x \$54,000 = \$216,000
Remaining dep. basis = \$84,000

Adjusted (taxable) basis @ end of yr. 4
= Σ Remaining dep. basis$_{i}$ + Land cost
= \$1,709,848 + \$84,000 + \$250,000 = \$2,043,848

Loan Info:

Original loan amount: .70 x \$3,358,400 = \$2,350,880
Monthly debt service: \$2,350,880 (A/P, .75%, 300mths) = \$19,728.50
.008392
Annual debt service: 12 mths. x \$19,728.50 = \$236,742

	Yr. 1	Yr. 2	Yr. 3	Yr. 4
Beg. Yr. Bal.	\$2,350,880	\$2,324,653	\$2,295,965	\$2,264,587
- End Yr. Bal.	2,324,653	2,295,965	2,264,587	2,230,265
Prin. Rep'd	\$ 26,227	\$ 28,688	\$ 31,378	\$ 34,322
A.D.S.	\$236,742	\$237,742	\$236,742	\$236,742
- Prin. Rep'd	26,227	28,688	31,378	34,322
Int. Paid	\$210,515	\$208,054	\$205,364	\$202,420

Market value:

Yr. 4 (end of) = \$3,358,400 x [1 + 4(.06)] = \$4,164,416

Business 550/705
THE REAL ESTATE PROCESS
Problem Set #5

Name SAMPLE Disc. Sec. ____

	Yr. 1	Yr. 2	Yr. 3	Yr. 4
GROSS INCOME	$480,000	$508,800	$537,600	$566,400
LESS VACANCY ALLOWANCE	24,000	25,440	26,880	28,320
EFFECTIVE GROSS INCOME	$456,000	$483,360	$510,720	$538,080
LESS REAL ESTATE TAXES	74,153	78,602	83,051	87,500
LESS EXPENSES	149,600	161,568	173,536	185,504
NET OPERATING INCOME	$232,247	$243,190	$254,133	$265,076
LESS DEPRECIATION	381,647	343,421	309,655	279,829
LESS INTEREST	210,515	208,548	205,364	202,420
TAXABLE INCOME	($359,915)	($308,779)	($260,886)	($217,173)
PLUS DEPRECIATION	381,647	343,421	309,655	279,829
LESS PRINCIPAL PAYMENTS	26,227	28,688	31,378	34,322
CASH THROW-OFF	($4,495)	$5,954	$17,391	$28,334
LESS TAXES	0	0	0	0
CASH FROM OPERATIONS	($4,495)	$5,954	$17,391	$28,334
WORKING CAPITAL LOAN	4,495	(4,495)	0	0
DISTRIBUTABLE CASH AFTER TAXES	$ 0	$1,459	$17,391	$28,334
TAX SAVINGS ON OTHER INCOME	179,958	154,390	130,443	108,587
SPENDABLE CASH AFTER TAXES	$179,958	$155,849	$147,834	$136,921
PRESENT VALUE FACTOR AT 15 %	.86957	.75614	.65752	.57175
P. V. OF SCAT	$156,486	$117,844	$97,204	$78,285
WORKING CAPITAL LOAN (CUM BAL)	$4,495	$ 0	$ 0	$ 0

× .11

addit'l yr.2 interest = $494

TAXES DUE AT TIME OF SALE

HOLDING PERIOD	4 years
TAXABLE BASIS	$2,043,848
SELLING PRICE	4,164,416
DEPRECIATION TAKEN ON IMPROV.	1,314,552
DEPRECIATION IF STRAIGHT-LINE	852,571
TAXPAYER'S INCOME TAX RATE	50%

DETERMINATION OF TAXES DUE

TOTAL GAIN SUBJECT TO TAX	$2,120,568
CAPITAL GAIN:	
INCREASE IN PROPERTY VALUE	$806,016
DEPRECIATION IF STRAIGHT-LINE	852,571
TOTAL GAIN TAXED AT CAPITAL GAIN RATE	$1,658,587
ORDINARY INCOME (RECAPTURED):	
EXCESS DEPRECIATION	$461,981

TAXES DUE COMPUTATION:

CAPITAL GAIN TAX = $1,658,587 x .20 = $331,717

ORDINARY INCOME TAX = 461,981 x .50 = $230,991

TOTAL INVESTMENT VALUE

TOTAL P. V. OF SCAT			$449,819
TOTAL SALES PRICE	$4,164,446		
LESS TAXES ON SALE OF PROPERTY:			
CAPITAL GAIN TAX $331,717			
ORDINARY INCOME TAX 230,991			
TOTAL TAXES DUE	562,708		
LESS MORTGAGE BALANCE	2,230,265		
CASH RECEIVED AT TIME OF SALE		$1,371,443	
PRESENT VALUE FACTOR AT 15 %		.57175	
PRESENT VALUE OF REVERSION			784,123
TOTAL PRESENT VALUE OF EQUITY INVESTMENT			$1,233,942
ORIGINAL MORTGAGE BALANCE			2,350,880
TOTAL PROJECT VALUE			$3,584,822

Business 550/705 Lecture Outline
Real Estate Investment and Federal Income Taxes

I. For the past 25 years the American investing public has been fascinated with tax shelters by investing in exotics such as cattle, movie making, oil exploration, and real estate. Since 1981 Congress has responded to pressure by the IRS to eliminate tax shelters and to reestablish a neutral, equitable tax.

A. Congressional tax law strategy always involves shifting the weight placed on the following objectives:

1. Collecting adequate revenues to finance government operations
2. Encouraging investment in productive assets as opposed to current consumption to close the savings-investment gap and to stimulate employment while generating a larger taxable income in the future.
3. To channel investment and consumption toward national priorities
4. To redistribute wealth and break up extra large family furtunes

B. To channel investment and encourage high priority objectives for eocnomic investment traditional tax laws gave the taxpayer certain ploys to postpone or reduce federal income taxes. These ploys were a combination of:

1. Reducing that portion of net receipts which is recognized as taxable income.
2. Reducing the marginal tax rate applicable to the taxable receipts.
3. Postponing the payment of taxes due to recognize the opportunity costs of present value money.
4. Avoiding one or more federal taxes through a change of involuntary shift in status of property ownership or condition.

C. Real estate investment had the same tax treatment as any other investment except real estate provided a higher depreciable asset ratio to total capital, a greater opportunity to leverage finances, more flexibility in postponing income, and more visibility.

1. A building is a single machine for making money as compared to other businesses using many small machines which can be bought and sold individually at a smaller scale of entry.
2. The impact of rising prices on business equipment is difficult to trace to product prices while the impact of construction costs, real estate taxes, etc. can have an almost immediate impact on rent which in turn is a major factor in household budgets.
3. The popular literature of financial planning touted the romance of real estate to support real estate brokers, new construction, and all manner of financial management services, not to mention investment banking.

D. Ironically the single biggest loss of tax dollars to federal revenues can be attributed to tax benefits to the single family home, according to the Brookings Institute, because of special privileges.

1. Deductibility of interest and real estate taxes for resident owners
2. No capital gain tax on sale if you buy a home of equal or greater value in two years.
3. A once in a lifetime exemption of $125,000 in capital gains if the owner resident sells after the age of 55.

E. Objectives of federal income tax review in this course, plus some reference to the estate tax, is only interested in illustrating tax incentives and disincentives as a factor in city building and real estate ownership. Hopefully you will recongize:

1. The sensitibity of investment to tax matters
2. The use of tax law as a federal device for providing land use priorities
3. Some of the tax strategy in general with a few examples
4. The income tax law as a subsidy to make real estate competitive for capital

II. To encourage specific types of real estate development, capital investment in real estate, or national priorities such as landmark preservation, renovation of old buildings, energy conservation, or new housing or low income family, Congress continues to create features and rules for five basic ploys.

A. <u>Reducing taxable income, particularly income subject to a progressive tax rate, to postpone income tax:</u>

1. Accelerated depreciation understates taxable income in the early years but overstates taxable income in later years. Straight line depreciation is 100% depreciable asset value minus salvage value divided by useful life. Tax law might permit multiples of straignt line or ficticious lives, such as 15 years.
2. Investment tax credits which apply directly to taxes due; for example, buildings more than 50 years old and classified as landmarks enable the developer to take an investment tax credit for 20% of all remodeling expense with long carryback to refund taxes paid in previous years, non-landmark buildings 10%.
3. Taxpayer option to expense certain capital expenditures such as development costs of a vinyard, irrigated farming, or holding costs on vacant land awaiting development. Tax reform has severely reduced those but still favors such election for subsidized housing.
4. In the old days depreciation could be applied against earned income so professional people bought syndication shares. Under the new law all income is classified into three categories:

    1. Income from passive activities
    2. Income from portfolio securities
    3. Income from earnings

    Rental real estate is passive income and is available for shelter of only passive revenue: there can be unlimited carryover but no protection from earned income.

B. <u>Converting taxable income to capital gain to reduce the applicable tax rate</u>

1. Purchasing a home with a very large mortgage loan on which interest payments are deductible converts net income to a future capital gain if the home appreciates in value each year more than the after tax interest cost. This ploy is more feasible when interest rates are 7% rather than 17%.

2. Accelerated depreciation before recapture laws permitted investors to understate taxable income and then sell the property at an overstated capital gain, thus converting income to capital gain and its lower marginal rate. (Capital gain = net sale price - book value).
3. Purchase at a low price and then increasing income through good management and marketing and then selling the property for the present value of the future income converts the rewards of your services and expertise from taxable income to capital gain.

C. The new tax law places a full tax rate on capital gains so that the investor can no longer create new income, sell it for a capital gain and pay only half the taxes. Capital gains taxes are equal to income taxes so this will discourage reinvesting and improving property.

D. It is possible to postpone the payment of capital gains taxes.

1. The owner-resident of a single family home can sell his property and postpone a capital gains tax by reinvesting in another home of equal or greater value within 24 months.
2. Involuntary conversion of a property to cash as a result of a natural disaster, casualty loss, or eminent domain permits investor to rebuild or relocate within a specified time without paying a capital gains tax.
3. The trade or exchange of like kinds of investment property is not taxed. Instead each party takes his old basis with him which is then adjusted for the net change is his debt position or the amount of "boot" he received. Boot is non-like property such as cash.

E. Complete avoidance of all or part of the capital gains tax would result when:

1. The owner of a single family home is entitled to a one time exemption of $125,000 profit or capital gain if he sells his home after age 55. The theory is a home is his major savings program and the cash is needed for retirement income.
2. When investment property is held until the owner dies the estate receives a stepped-up basis equal to market value on the date the owner dies. No capital gains tax is paid if the property is then sold but market value is included in computing the taxable estate value.

F. Real estate lends itself to reducing estate taxes in the transfer of wealth from generation to another.

1. Real estate in farm and small businesses will be included in the estate of the owner at their use value rather than their market value to reduce estate taxes and the need for cash if the heirs continue to operate the business or farm for at least 10 years following the death of the original owner, thus achieving a partial avoidance of capital gains and estate taxes up to a maximum of $500,000.

III. Achieving the various tax ploys is complicated because federal policy provides incentives and penalties for different priorities of property development, tax purposes of ownership, and the form of the ownership entity.

A. There are three basic questions which need careful definition and structuring of answers for each investment.

1. What type of rezl estate is it for depreciation and other tax ploys available?
2. What is the tax purpose of the real estate ownership position?
3. Is the ownership entity a single tax or double tax situation, a tax conduit to the individual or a corporate organization?

B. First a property must be classified both on the physical facts and the actual or implied intent of the owner as one of the following:

1. The personal residence
2. Farm or extraction properties
3. Investment residential
   a. First user, or second user
   b. Residential rehab
   c. Conventional financing or federally funded and subsidized
   d. Date acquired
4. All other properties (limited depreciation and full recapture)

C. Tax rules differ depending on the presumed purpose of the investment imputed to the taxpayer in any given property. There are three alternatives defined by the IRS:

1. For use (users have more liberal ordinary income - ordinary loss elections)
2. For investment income and long term appreciation (for which capital gain treatment is available with some elections to expense or capitalize holding costs)
3. For trade or inventory (dealers status for which capital gain is almost never available)

D. Because investors in real estate want some of the short term tax shelter benefits at the same time that they can participate in large group investments, real estate is very sensitive to whether ownership entity of a group investment is a single tax conduit or double tax corporate entity:

1. Single tax entities would include:

   a. Single proprietorship
   b. General partnership
   c. Sub-Chapter S Corporation
   d. Limited partnerships
   e. Other non-corporate associations

2. Double tax entities would include:

   a. Corporations not exempt above
   b. Associations for profit with three or more of the following characteristics.

3. In addition two or more people associated for profit is corporate if it has three or more of the following attributes:

    a. Limited liability or investors
    b. Centralized management
    c. Unlimited continuity
    d. Marketable interests

IV. There remains a general suspicion that real estate investment tax policy is a privileged domain of the rich. This may be because marginal rates are highest for the rich and tax savings to other income is highest to those with the highest marginal rate while interest cost has the lowest marginal cost to the same rich folks since we're soaking them pretty good. Then there is the fetish of the rich to spend $1.50 to save $1 in taxes which leads real estate promoters to produce the best tax shelters rather than the best people shelters.

A. Critics who oppose tax shelters argue that:

1. Present tax laws lead to excess building and misallocation of national resources and priority.
2. The cost in lost tax revenues of 2-3 Billion a year would be much more effectively used if collected and redistributes as a consumer subsidy for the low income family.
3. The capital attracted to real estate is siphoned off by developers and brokers up front since most of the property has almost 100% financed anyway.
4. The economic logic is faulty when it argues that to provide decent shelter for millions of Americans, the system must first produce several hundred thousand tax millionaires.

B. Such tax advantages that there are are justified according to some because:

1. Long term ownership is so risky, investors would not invest if payback was not accelerated by tax saving.
2. Unlike automobiles real estate depends on thousands of small investors for capital and could not compete for money unless there was an additional return in the form of tax benefits.
3. By attracting new capital to real estate housing construction is stimulated, but rents can be lower since the investor receives part of his return in the form of tax savings.
4. As a producer subsidy stimulates employmemt and maintenance of a competitive supply of space to reduce monopoly advantage of existing buildings.

Urban Land 550

Local Government Regulations of Real Estate - Lecture #12

I. Real Estate has already become the most regulated industry, with the possible exception of the railroads, which having been destroyed by government and mismanagement are now largely subsidized by government.

A. The mythology of private property gives the citizen a greater sense of independent action than he really has.

1. Private rights of claim and access
2. Public rights of claim and access
3.. Common rignts of claim and access

B. Claim rights - the rights to benefit

C. Access rights - the rights to control decisions about use

D. The constitution gives government:

1. First claim on productivity (the real estate tax)
2. First prerogative of decision making (the police power)
3. Priority to recover private rights (eminent domain)for cash

E. The concept of private property is therefore defined by what is not public or common and it is therefore shrinking. The semantics remain middle English common law but the substance of private property varies inversely with the growth of social interdependence.

F. The regulation of land and buildings can be studied from a spectrum ranging fron the particular site, the neighborhood association, the locak municipality, the region, the state, and the federal government.

II. Controls on the individual site can take many forms, including:

A. The contract and common law relationships between buyer and seller, multiple owners, landlord and tenant.

B. Covenants running with the land

C. Easements transferring limited possession rights from a subservient property to a dominant property, such as a driveway easement.

D. A license - a revocable possessary interest

B. A condominium agreement

F. A property owners association

G. A merchants association

III. Traditionally public regulation of land use and affecting real estate have been regarded as very personal and local and until recently the states have left these matters to the local government.

A. Citizen can have direct administrative contact in situations like:

1. Zoning variances and rezoning
2. Appeal of tax assessment
3. City services via intercession of the alder person

B. Indirect regulation of land use occurs through municipals policies for:

1. Public works
2. Building code enforcement and revision
3. Traffic control and parking
4. General property and assessment
5. Viewpoints of the Board of Estimates and tax rates

C. Public administrator policies and attitudes have long term gradual effect on land use patterns:

1. Influence of assessment policies over investment
2. Attitudes toward annexation
3. Public works planning and the five year capital budget
4. Zoning policies to promote master plan
5. Impact of government project
6. Action of local government toward:
   a. Pollution control
   b. Efficiency of transit
   c. Housing supplies
   d. Desire for new industry

D. In any micro situation all of these inputs appears democratic but when viewed in light of political fragmentation and duplication the result may be anything but public control of land use, particularly land uses which reflect regional or national priorities.

1. Competition for advantageous land uses
2. Self interest in avoiding less desirable responsibilities of government
3. Justified local fear of state or federal controls
4. Progress requires means to break stalemate of local partisan politics

IV. Dane County is a good example of political fragmentation and the patterns of government control of land use.

A. (one) county

1. Board of supervisors
2. Executive administrator
3. Regional planning commission
4. Various boards appointed by executive administrator or by supervisor

B. (three) cities (Madison, Monona, and Middleton)

1. Wards and alderman
2. Mayor (full time or part-time)
3. Department heads
4. Commissions

C. (20) villages

1. Village board
2. Village president
3. Sub-committees of the board

D. (25) townships

1. Three elected supervisors
2. Chairman of the board selected by the board

E. (approx. 80) special districts and city authorities with real estate tax powers

1. School, drainage, fire, water control, insect control, etc. (downtown renovation districts)
2. Educational board elected but most are court appointed

F. The Madison metropolitan area has 129 different units of government, the Chicago metropolitan area has about 800 and the New York metropolitan area has 1300 various little political worlds.

1. The Port Authority of New York
2. The Chicago Housing Authority
3. Only a few big cities have tried to bring metropolitan areas under one government, such as Montreal and Miami and Indianapolis
4. Milwaukee once considered voting itself out of existence so that all urban functions would be provided by the county

V. To complicate local government, super-imposed problems of representation and apportionment, political parties, community power structure, and the urban-suburban clash.

A. Significant breakthrough of reapportionment

B. Geographic and party splits

1. Economic segregation
2. Fragmentation and abandonment of the city

C. Community power structure

1. Local government not influenced by big corporate business
2. Power structure represents associations of local interests
   a. Chamber of Commerce
   b. League of Women Voters
   c. Board of Realtors or Home Builders Association
   d. Neighborhood Associations
   e. Variety of citizen pressure groups

D. Communications management

E. Public officials in a position to spend tax money or grant favors

F. Short-term politics with won-lost fascination of power structure

G. Regional planning commissions dilute political power of any one vested interest
1. Bad example - the Commodore Building--township of Madison
2. Good examples--SEWRPC--1969 San Francisco Bay Development Commission

H. Dane County Regional Planning Commission recently proposed five alternative strategies for land use planning--value judgements which could be converted to objectives and specific criteria and regulation. The five alternatives:
   1. Existing trends--corrected for worst mistakes
   2. Modified trends--cluster planning and less sprawl
   3. New directions to preserve prime agricultural or environmental lands
   4. Reduced population growth by control of economic base
   5. Sharp reduction on land area acceptable for development to force higher densities in existing urban areas

I. All strategies have violent resistance and emotional supporters. Thus, some compromise is being sought between exclusively local land use policies highly vulnerable to local political convenience and national land use control which would be too general and insensitive to special local needs and values.

J. On Monday we will look at state control pushed by federal subsidies and penalties.

Lecture # 12

REAL ESTATE TAX, LAND USE & PUBLIC INFRASTRUCTURE SOLVENCY

I. As a major cost of real estate ownership, the real estate tax has a significant impact on land use decisions, an impact which may advance community planning or be counter productive and cause those types of land use decisions which are against the public interest.

A. You have discussed factors which could reduce or increase the total revenue which would need to be collected from the taxes. Today we will discuss how the tax base can be manipulated to change the mill rate.

B. We will briefly discuss methods for defining assessable (ratable) property methods for land planning to encourage high assessment value, and the uses of public investment to stimulate new assessable private investment.

II. Which property should be assessed and how much?

A. Government owned property is exempt from the real estate tax. It represents 40% of land in Madison and receives the benefit of fire, police, and other city services.

1. State office buildings pay 15¢ a sq. ft. toward city services, public housing pays 10% of effective rents in lieu of taxes, and Eagle Heights pays so much a child toward school but these are negotiated and don't change often by inflation. Other government uses pay nothing.

2. What happens to a township when a sizable portion of its land is taken by the federal government for a military base or a wild river reservation. Who benefits and who pays for the shift in tax burden?

3. Should government installations be considered economic base items which support other real estate values in town or should it be taxed like everyone else. If so, what is market value of Bascom Hall?

4. FAilure to put a real estate tax on government land means it is under-utilized. The University can hold land at Charmany Farms on Whitney and Mineral Point Road indefinitely, speculating on future appreciation but causing unnecessary urban sprawl and duplication of urban services.

B. Churces, hospitals, and private schools are also exempt so long as the property is contiguous to its operating centers or actually used for charitable purposes. The argument is that the social good is well served by these organizations and that real estate taxes would just increase the cost of services or reduce their quality and scope. But when is there too much real estate so classified with no correspondent social benefit?

C. Recently Wisconsin voters voted to provide a partial exemption to farmers and conservation lands by constitutional referendum. In short, these lands could be taxed on the value of their actual use rather than market value. The Legislature has enacted a program which requires counties or townships to file a master land plan which defines prime agricultural or conservation areas. Property owners can then elect short and long term use value status subject to certain conditions.

The farmer near a growing area could continue to farm even though his land was now suitable for subdivision. Because his values are understated other taxpayers in his district pay a higher mill rate. The Legislature has decided to replace lost revenue from state funds (as they do with forest land). There will be a 75% rollback of real estate tax reductions charged against profits when a farmer sells his land.

D. If we abandon market value as the benchmark for everybody, do we then exempt the elderly pensioner who owns his own home, the low income family, or other political favorites such as farmers and veterans?

E. Some people propose exemptions for buildings and improvements, taxing only the land. The value of the land would reflect the assessors best guess as to its best use. In that way a high intensity site value would force the owner to build or improve his property to that use in order to pay the taxes. Site value taxation is being used in New Zealand, Australia, Pakistan, and Jamaica to force land owners to develop their property rather than sit on it to speculate. This fosters economic development and the breakup of large land holders in areas ready for development, agricultural or urban. It assumes the land planner and the assessor know what they are doing.

1. A variation is the graded tax, with a higher mill rate on land than on buildings.
2. Which mechanism is more trustworthy, the marketplace or the government technocrat?

III. A desire of a community to discourage low value land uses or high service cost occupancies leads to what is termed fiscal zoning.

A. Mobile homes provide a low real estate tax base but often provide many children for the schools and clients for the welfare program. Communities can make the specifications for the mobile home parks virtually impossible to meet.

B. Large lot zoning typically mean expensive homes, high tax base, and low densities which require little public infrstructure in terms of roads, utilities, and schools. Can be ruled out as illegal.

C. Under the urban renewal program, low income housing was replaced by luxury housing to increase real estate tax revenues with which to finance the city's share of renewal and at the same time force relocation of high service costs families and uses to other communities.

D. Cities may underassess new industry to encourage their construction in town while at the same time real estate tax costs may gradually force certain industries to leave town to remain competitive.

E. The cities wage the war for tax base with many tools, including city water, annexation, fire department services, and negotiated pre-annexation agreements with developers.

IV. Public land use decisions and capital expenditures must always be considered in terms of the net effect on city tax base and tax revenues.

A. The city auditorium issue included the issue of locating the facility so as to stimulate private investment. The Law Park site was toally surrounded by publicly owned land and buildings so that it could not stimulate appreciation in private land value.

The State Street site stabilizes and may increase values in a declining area.

B. A current issue is the relationship of an MATC campus to the viability of downtown Madison, particularly retailing and restaurants on the Square and on State Street.

1. Some downtown sites would have meant the loss of several blocks of taxpaying real estate and the present value of that income stream would represent a tremendous loss to the city although it receives no compensation.

2. On the other hand some would argue that locating the MATC site at the airport would undermine residential values and contribute to a more subtle and slow rate of downtwon decline. A $25,000,000 facility may have significant impact on the city tax base.

C. The McCormick parking ramp might have been located down hill to the north of its present location. Some smaller older buildings would have been lost to the tax roll but a higher value, more intensely developed building might have been built on East Mifflin where the parking lot now stands.

D. Government support of new towns can occur when the government chooses to build new government installations at the new town site. The Irvine Company astutely realized that it would increase its own value by giving 1000 acres free to the U. of California. That may also be true of the small developer who gives up 10 acres to the school board to capture a needed new elementary school.

E. Early in the course ownership equity was defined " as the degree to which one can divert cash flow to their benefit." Since local government and the school board receives 16-20% of all rental income in real estate taxes, local government owns 16-20% of all tax paying rental properties in town. Conceivably government could make money by providing bonuses for certain types of development:

1. For example, if apartment sites cost $3,000 for each one-bedroom apartment and these apartments have a market value of $22,000 each, then new construction migth provide $25,000 of tax base, paying $700 a year towards government. If the City receives 30% of that, the result would be $210 a year on $3,000 investment or 7%. If the City could keep all the tax revenue, it would have its money back with interest in five or six years.

2. Official recognition of this opportunity to stimulate private tax base with public investment is found in the new technique of tax incremental financing (TIF). This technique could keep nearly all the $700 above for the City, cutting out the school board, the County, etc.

3. TIF defines a specific district and its tax base in which all governments participate. Then the City can issue bonds to finance certain improvements within the district and pledge tax revenues from increased private property investment and values to pay off the bond. Bond holders require specific private investment already committed contingent only on the public improvement.

4. On Williamson Street the bond issue was used to reduce the cost of land for the Mollenhoff's so they could build a condominium on the Fauerbach site. The Carley proposal for Pinckney Street is to build two condominiums and redevelop the Emporium if the City will use TIF funds to build a parking ramp and restore the historical character of Mansion Hill. Others have proposed putting housing units above parking ramps so that the tax base can reduce the cost of the ramps meter fees required to finance the ramp.

V. Building projects to house public offices or public housing can be regarded as cash flow investments. Because these may not have any revenue power, they should be analyzed with <u>life cycle costing</u>, i.e., the investment objective is to achieve the lowest present value of outlays over the life of the project to accomplish a given purpose.

A. Since a state office building or city hall pays no real estate taxes and can borrow money at only 6% interest, the annual cash cost for operating expenses, debt service and maintenance should be less than that charged by the private sector. Nevertheless state office buildings like JEF-1 cost the state more out-of-pocket per sq. ft. of usable area than any comparable private office building. Why not lease space which can pay real estate taxes? Why the extra cost?

1. Architects have convinced government patrons that all public buildings must be monumental in size and material to impress people with government.
2. If there is no cash measure of efficiency, designer arrogance is in control. The City-County Building has over 440,000 sq. ft. of space but only 290,000 is usable because of wide corridors, extra lobbies, etc.
3. On the other hand the school board have been more sensitive to first cost with the result that the newer buildings had little insulation, cheaper one story construction, etc. so that they have excessive heating and maintenance cost. The result is the present value of outlays over the life of the building is greater than more expensive construction at the outset.
3. Recently the City bought the Post Office Building which will require intensive remodeling for housing some city services. The County found ways to expand the City-County Building at lower cost and in doing so, left the City to find tenants for the balance of the remodeled Post Office Building. Some of those Alderpersons who endorsed the purchase, did so to prevent the State from buying it for the State Supreme Court. Now the State must acquire more land from the city tax base for another state office building. What is the true cost of the city office space? What would happen if the city gave away the land to someone who would build a quadrangle of apartments on that block? The City would gain some tax base, more residents downtown, and perhaps avoid creating a government office ghetto. The city planners are incapable of carrying off such a project because they lack the discipline of the numbers.

B. Public servants who understand the power of cash flow when Legislators do not can be as dangerous as private developers who ignore public solvency in terms of who pays and who benefits. A developer, a planner, or a designer should read the biography of Robert Moses, <u>The Power Broker</u>, to appreciate every nuance in control of cash flows as the secret to control of land use and development.

VI. Federal policies may be very unfair to local residents even though the objective of government policies is good. Consider the question of who pays for the Federal wild river program.

A. Professor Barrows of Agricultural Economics studied the impact of wild river acquisitions of the National Park Service on the town of Springbrook in Washburn County, where it is protecting the Namekagon River. The goal is approximately 3200 acres of privately owned land which will be purchased and removed from the tax role even though the families thereon may be permitted to stay for up to 20 years as tenants. The town still must provide services including education, nevertheless.

B. NPS makes no payment to local government. In contrast the Town of Springbrook receives 50¢ per acre on 43 acres preserved by the State DNR and 20¢ per acre on 7500 acres of county forest plus a share of timber sale revenues.

C. NPS had acquired in 1974 approximately 600 acres of its goal which was valued at $260,000 or 10% of the total tax base in the township. The first impression is that if the tax base drops 10%, the mill rate must increase by the same amount to make up the loss. However the issues are more complex.

D. The $260,000 tax base loss in the Town of Springbrook is only 0.2% of the tax base of Washburn County and 0.3% of the school district tax base. The School tax accounts for 70% of the total property tax so the loss of tax base would hurt if it were not neutralized through the state formula for share income tax. As a result the net change in taxes looks like this:

Change in school tax rate	- .2¢ per $1,000 property value
Change in county tax rate	-1.0¢ per $1,000 property value
Change in town tax rate	- .5¢ per $1,000 property value
Change in state shared taxes	+ .4¢ per $1,000 property value
Change in property tax relief	+ .2¢ per $1,000 property value
TOTAL TAX RATE IMPACT	-1.1¢ per $1,000 property value

E. As a result state taxpayers are paying the consequences of a federal land use reservation program while federal income taxes are being used to pay acquisition.

VII. The greatest sensitivity to real estate tax policy and land use decision is at the local metropolitan level where fragmented local government compete for land uses which produce the highest tax base value and the lowest service cost, or to avoid land uses such as low income housing which may have high service cost and little additional tax income. This war takes the form of fiscal zoning, annexation fights, tax abatement or investment stimulation.

A. Fiscal zoning establishes land plan to encourage certain land uses and discourage others. For example large lot zoning, trailer park standards, conditional use of zoning, or reservation of large land areas for "conservation" are all examples of fiscal zoning.
   1. Kohl's shopping center on University Avenue
   2. Commodor Apartments, Town of Madison
   3. Madison Mobile Home Park rurals

B. Annexation (voting acres and residents)
   1. Seybold Road and West Town Shopping Center
   2. Municipal control of utilities vs. efficiency of metropolitan systems
   3. Pre-annexation contracts

VIII. Almost everybody wants to favor some particular land use policies by means of tax abatement. The most common sort of objectives are conservation of open space, rehabilitation of dilapidated structures, construction of new industries, or the preservation of landmarks.

A. Two years ago Wisconsin voters unknowingly removed the constitutional requirement that all real estate be taxed on market value to permit swamps and farmlands to be taxed on current use value if the legislature wished to do so.
   1. Conservationists want farm owners to accept tax relief in exchange for future development.
   2. Farmers want tax relief now and profits from development later.
   3. Politicians suggest temporary relief now and a rollback tax if the land is sold for a price higher than the land value of farmland.
   4. Townships want the State to replace the lost real estate taxes.

B. Some people believe that repair and improvement of the whole property will increase real estate taxes more than income so that there is no incentive to modernize.
   1. A direct tax abatement is not legal in Wisconsin (Milwaukee Bank case).
   2. One alternative is to make grants for repair and then raise the real estate tax which ultimately refunds the grant.
   3. Of course many communities ignore the proper valuation approach and deliberately under assess remodeling or new industry. Competition among communities by favoring new industries was one of the reasons that State took over the assessment of all manufacturing facilities but of course State has an interest in competing with other states.

C. Landmark buildings often represent underutilization of a valuable site, costing the owner and local government significant tax base.
   Madison City Hall Project
   Boston Old City Hall Project

Business 550/705
The Real Estate Tax - Outline #11

I. The cash cycle for public infrastructure begins with the real estate tax, user fees, and federal grants, but the real estate tax provides almost 80% of revenues to support local government.

   A. There is only one federal income tax to understand, 50 state tax systems, but more than 14,000 real estate tax jurisdictions.

      1. Lack of standardization and skill of application leads to monumental misunderstanding.
      2. Unlike income tax, tax payer does not participate in calculation
      3. Administrative costs are not properly funded
      4. 90% of taxpayers believe if they are underassessed they have beat the system and resist restoring equity.

   B. Historial origins of real estate tax are in socage rents and colonial taxes on agricultural productivity.

   C. With development of cities, tax pay shifted to market values of improvements of land - an <u>ad valorem</u> tax.

II. Current city systems are based on a process developed at the turn of the century in Minneapolis, Cleveland, and Milwaukee by a municipal engineer named Somers.

   A. Somers tried to reduce political interference and arbitrary valuation by introducing the following concepts:

      1. Separation of assessment from municipal budgeting functions
      2. Definition of a mechanical procedure to assess each property consistently and reduce judgment calls to the minimum, permitting assessors to arrive at the same value conclusion on any specific property.
      3. Simplification in order to teach the public as well as field men low cost in administration and to facilitate a legal defense in the event of appeal.
      4. Recongition of assessment was to produce an aggregate base number for proportion distribution of municipal revenue needs among all property owners; consistency of relative differences was more important than accuracy in predicting sales price; distinctions had to be equitable and explainable.

   B. The assessor is charged with mappihng and describing each property and estimating an assessed value. All property values in the aggregate equal the community tax base.

   C. At the same time each community budgeting unit would establish how many dollars they would require and the proportion to be generated from the real estate taxes as opposed to other revenue sources.

   D. Each fiscal unit divides the required budget by the aggregate real estate tax base in its defined district to determine the tax rate.

      1. The tax rate is called the mill rate - the fraction of a penny of tax per dollar of assessed value.
      2. The technical mill rate may also be stated in common usage as dollars per $1,000 of assessed value. In Madison in 1978 the total mill rate was 28.28 less a state credit of 4.127 mills.

Office of the Mayor

City of Madison

F. Joseph Sensenbrenner, Jr., Mayor

City-County Building
210 Martin Luther King, Jr. Boulevard
Madison, Wisconsin 53710
608 266 4611
608 266 4443 (TDD/Device for Deaf)

December, 1987

Dear Madison resident:

Your property tax bill for this year is enclosed. Your payment will provide 1988 operating funds for the Madison Metropolitan School District, Dane County, the Madison Area Technical College and the State Forestry Program, as well as the City of Madison. Your total bill is actually a sum of the tax levies set independently by the public bodies overseeing each of these areas of government activity.

Improving service quality and customer response will be the highest priority for all city agencies in 1988. Specific quality improvement goals will be a critical component of the overall 1988 departmental goals and objectives. We are also implementing a new "customer response program" that will evaluate agency responsiveness to requests for service, questions or complaints by directly contacting the citizens who make those requests and asking them to report their level of satisfaction to me personally.

The City's 1988 capital budget contains a set of initiatives which provide a blueprint for Madison's future. Several of these projects have been assisted in the TIF process by the County, MATC and the Madison School District. Their help is appreciated.

Just over 30¢ of your property tax dollar will go to support all city services, including the Madison Public Library. City spending for next year, as approved November 24 by the Council, will total $92.8 million. This is an increase of 3.7% over the 1987 budget. City spending increases for the five budgets under my administration, 1984-88, have averaged slightly over 2% per year.

This year messages are again enclosed from the School District, Dane County and MATC, and I hope you will read them, too. As always, I welcome any questions you may have about the city budget, as well as your comments and suggestions about city government policies, programs and services.

Best wishes for a safe and happy holiday season.

Sincerely,

Joe Sensenbrenner

F. Joseph Sensenbrenner, Jr.
Mayor

DANE COUNTY

Jonathan B. Barry
County Executive

December 3, 1987

Dear Dane County Taxpayer:

I appreciate the opportunity to provide information regarding the 1988 County Budget and to express my appreciation for your financial support of county government.

In 1988 less than 13% of your property tax dollars will go to Dane County government. While Dane County does not consume a large portion of your property tax payment, we have tried to be responsive to the need for services and the demands to hold down property taxes.

The 1988 County Budget, as adopted by the County Board, contains a 4.83% increase in the total county tax levy. The tax rate increase – which most accurately measures the impact on individual property owners – went up 2.34%. The owner of a home assessed at $75,000 will pay $7.50 more in 1988 than they did in 1987 for county government.

For the additional $7.50, that "average" homeowner will receive:

* Over $1.5 million in new highway construction and repair
* Creation of the 911 emergency response system
* New human service initiatives, including shelter funds for homeless women and children, additional day care funding, early intervention programs and further progress in moving individuals off dependency programs and into productive employment.
* Implementation of a 15-year park improvement plan
* Significant new improvements for the Henry Vilas Zoo
* New initiatives in conservation and clean-up programs for Madison's lakes
* A commitment to study and purchase a new county landfill site

These major new initiatives to preserve and enhance the county physical infrastructure as well as the renewed commitment to human needs will have a significant positive impact on the quality of life in Dane County. While County government continues to pick up municipal services and state mandated programs, we have managed to stay lean and accountable to taxpayers who generously provide their support. Dane County will continue this dedication to efficient use of tax dollars and responsiveness to the taxpayers.

Please contact me if I can provide any further information regarding your investment in Dane County.

Sincerely,

Jonathan Barry
Dane County Executive

AREA VOCATIONAL, TECHNICAL and ADULT EDUCATION/DISTRICT No. 4

3550 Anderson Street, Madison, Wisconsin 53704-2599 • (608) 246-6100 • (608) 246-MATC

NORMAN P. MITBY, District Director

December 3, 1987

Dear Madison Resident:

The majority of the educational offerings of Area Vocational, Technical and Adult Education District No. 4 are provided by the Madison Area Technical College which has three major locations in Madison and four satellite campuses in Fort Atkinson, Portage, Reedsburg, and Watertown. The District encompasses all of five counties - Columbia, Dane, Jefferson, Marquette, and Sauk, and portions of seven others. The City of Madison is the largest of the 221 municipalities in the District.

Support of the District accounts for 4.85% of your 1987 property tax bill.

The building of the Truax facility has been completed, and the Downtown Education Center at 211 North Carroll Street will be opened for the second semester of the 1987-88 school year. The Apprentice Center at 2125 Commercial Avenue is in the process of being remodeled, and the new fire training facility located at 1750 Pearson Street which will meet the needs of the City of Madison, 85 volunteer fire departments throughout the District as well as the needs of the airport and the Air National Guard will be completed by June 1988. The value of all of these facilities located throughout the District amounts to $90 million, and the good news at the property tax level is that the District will be out of debt in the year 1988.

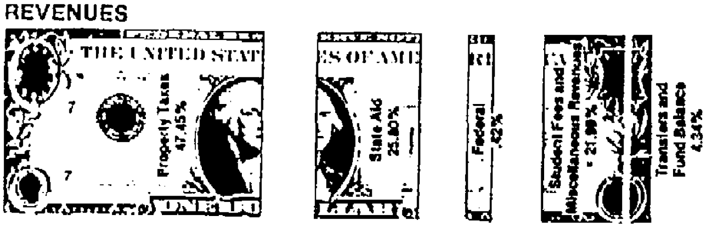
Over 85 full-time vocational-technical and liberal arts programs are offered plus an extensive adult education program. Head count enrollment for the District amounted to 52,062 this last fiscal year of which 18,158 were citizens of the City of Madison. Technological advances have put great demands on the Board to provide modern equipment, as well as the need for new high-tech programs. At the same time we continue to offer adult basic education.

1987-88	Mill Rate	Tax Levy	Madison's Share
Operations	1.27821	$18,157,394	$6,293,554
Debt Service	.29679	4,216,000	1,461,312
Total	1.57500	$22,373,394	$7,754,866
Valuation		$14,205,329,523	34.66%

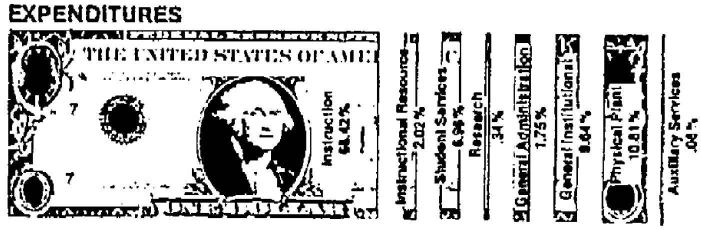
This District has had the lowest operational mill rate of any of the sixteen districts in the state and one of the lowest operational costs per FTE.

Budget

REVENUES



EXPENDITURES



We appreciate your continued support.

Sincerely,

James B. Hasler

James B. Hasler
Chairperson of the Board

Norman P. Mitby

Norman P. Mitby
District Director

Madison Metropolitan School District

E. James Travis, Superintendent

545 West Dayton Street
Madison, Wisconsin 53703-1967

December 1987

Dear Madison Residents:

In 1987-88 the Madison Metropolitan School District is providing quality education experiences for 21,866 students. An ongoing challenge is to control expenses without disrupting the programs of an excellent school system.

Salaries for staff represent more than 80% of the total budget and are determined through a negotiation process established by state law. Any increase in salaries has a major impact on the budget.

The remainder of the budget is expended for classroom supplies and equipment, building expenses, utilities, bus transportation, and School-Community Recreation activities. Throughout the budget development process, reductions were made in transportation costs, curriculum and staff development costs, and energy costs. Furthermore, in 1987-88 the Board of Education eliminated 2.5 administrative positions.

The portion of the budget related to non-salary items actually decreased for 1987-88. As a result, expenditure increases were limited to 4.46%. The resulting increase in your tax rate is 3.3% or $35.00 on an average home valued at $67,000.

These figures reflect the lowest increase in the property tax levy since 1979, and school property taxes are a smaller portion of your total property tax bill this year than last. We have been able to honor our commitment to contain the costs of public education.

While we continue to work hard to control costs, the needs of our students are becoming more diverse. Quality experiences for all students can be accomplished only if we continue to modify and improve instruction. Your 1987 tax monies will provide needed support for public school programs.

We are proud of our efforts to offer all children and youth of the District opportunities for learning and growth. We believe we can maintain our reputation for excellence by using limited resources wisely. We appreciate the strong support this community has consistently shown for public education.

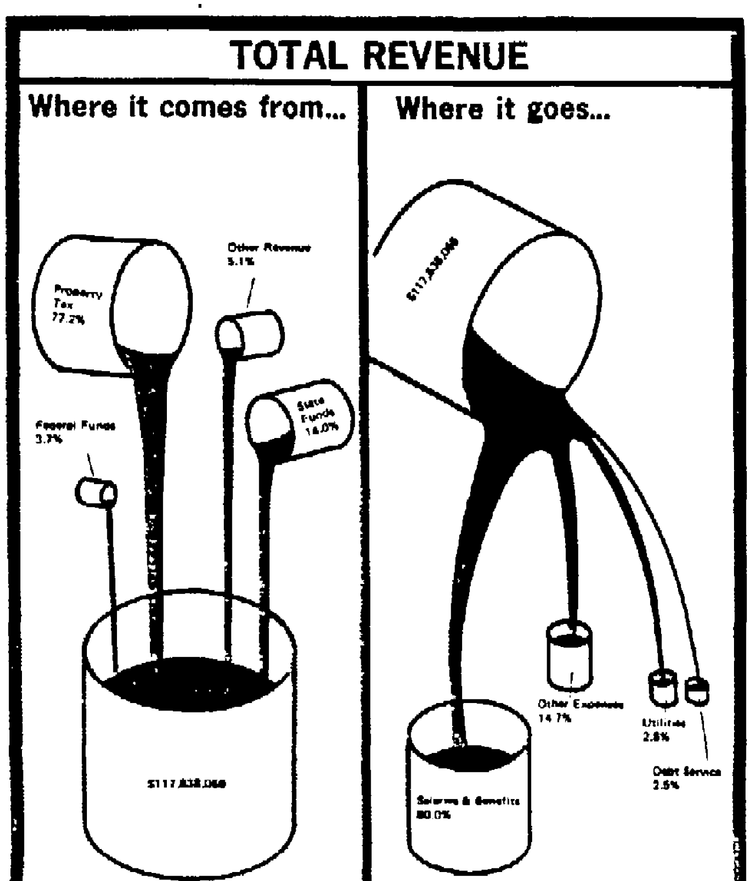
Sincerely,

Barbara B. Arnold

Barbara B. Arnold, President
Madison Board of Education

James Travis

E. James Travis
Superintendent of Schools



E. The total mill rate is a combination of tax districts which may assess real estate taxes, including:

State - 21¢ per $1,000
County - $2.38 per $1,000
Metropolitan sewer - 0
Library - 77¢ per $1,000
School -$15.6998 per $1,000
Vocational school - $1.27 per $1,000
General city - $7.96 per $1,000
Total tax - $28.28

F. Since each district combines different taxing areas and assessor, it is necessary to adjust between districts for the reliability of the ratio of assessed value to market value. This ratio is called the equalization rate, and the closer to 100% the better the assessment practice may be in that community. These rates are computed by a State district office of the State Department of Revenue.

G. Therefore the basic elements of the real estate tax process represent a formula something like this:

$$\frac{\text{Public enterprise budget x \% from real estate tax}}{\text{Market values x equalization rate}} = \text{mill rate} \quad \text{mill rate or rate/1000}$$

Market value of parcel x equalization rate x mill rate = $ tax per parcel

H. A special assessment is a charge for public capital improvements such as sidewalks, streets, the State Street mall which benefit a specific group of properties as well as the community. The capital budget may be shared 50-50 with the community and then prorated on a formula that is appropriate, such as front foot, square foot of lot size, assessed value of land, etc. The tax payer is given 3-10 years at a favorable interest rate to repay this special assessment. These special assessments can be pledged by the city to secure bonded debt for the cost of improvements.

III. The Wisconsin Real Estate Tax assessment provess is typical of many states throughout the country but considerably behind the best like California, New York, or Nebraska.

A. There are 1100 or more assessment districts, no more than 50 of which have professional appraisers for their assessor. Most assessors are still elected at the township level.

1. Wisconsin has been unable to pass legislation consolidating assessment at the county level because of rural distrust of professionals in this sensitive area.
2. Wisconsin law does permit consolidation at the county level by referendum with the state then subsidizing most of the budget. For example, Kenosha County.
3. The state provides an assessment manual which attempts to standardize procedures which assessors must follow.
4. Responsibility for complex industrial appraisal has been taken over by the state.

B. Statutes established seven general classes of property. Under special conditions agricultural and conservation may be taxed on use value; all others at market value:

1. Agricultural
2. Industrial
3. Commercial
4. Residential
5. Retail
6. Mining
7. Conservation

C. Assessor required to develop a tax map which shows every parcel in scale as to size, shape, streets, and pyblic services.

1. The tax parcel is identified by a number which in Madison is a code, identifying a property as to its specific location:

07	09	-	14	3	-	02	07	-	4	-
Town	Range		Sect	1/4 sect		Blk	Lot		Check Digit	

2. Tax parcel maps must be brought up to date as of May 1 each year, accounting for new streets, new subdivisions, changes of ownership, etc.
3. For each tax parcel the assessor must then prepare a tax card which details the nature of the property within the tax parcel lines as of May 1, including percentage of completion of improvements of construction. Tax cards are public information in most states but in Wisconsin they are privileged information and can be viewed by the property owner or his agent.
4. In practice tax cards are updated by inspection

D. Each parcel must then be valued at the highest price it would sell to another user in the normal course of business, i.e., market value. The courts have determined the preferred way to measure market value is by comparison to actual sales of similar property, then by capitalized income, and only after those have been tried by the cost to replace method since appraisal is a difficult, inexact and expensive process, if done correctly assessors:

1. First divide unique properties from class properties such as single family home, filling stations, small rental properties, etc., and the majority are class buildings.
2. Class buildings are then appriased by a methodology which defined the value of the land and the building separately; the building is estimated by determining the value new (cost to replace) and then deducting for depreciation. Strangely similar to a cost approach.
3. Only recently after statistical techniques been applied to valuation of class properties such as single family homes by inference from actual market sales of similar property.

IV. The manual approach to land and building would be as follows:

A. To value land the assessor usually establishes a unit foot or front foot base. In downtown Madison, this would be 1 ft. wide and 132 ft. deep and would be determined for the mid-block area. These provide a common denominator of value and they allow standard modifications to be made for parcel differences in size, topography, location, etc. For example:

1. A unit foot in a retail area would be modified by a depth factor which would state that 50% of the value might be found in the front 1/3 of the lot, and 80% of the value in the first 2/3's of the lot so a shallower lot than the standard dimension would not be reduced simply in proportion to its depth.
2. Corner lots in a retail area might be given an increase in value of 1.5 for each unit ft. while in a residential area corner lots might be rates at only 90% of front foot value for an inside lot.

3. All these adjustments are standardized by tables in the assessor's manual so that each situation is processed the same way. The assessor can then defend his work simply by showing that he has properly classified the property of the appellant and then rigidly applied the adjustment process and made no mistakes in his arithmetic. The answer doesn't have to be right - only consistent with how everyone else was treated.

B. To estimate the cost to replace of the building there are an endless variety of classification for improvements:

1. Construction types might fall into such basic categories as:
   a. Wood frame
   b. Masonry
   c. Reinforced concrete frame
   d. Steel frame

2. For each use and construction type a standard building will be described and then cubic foot or sq. ft. values which somehow reflect both cost and market are provided.
3. Differences between the property to be assessed and the standard are then itemized and specific charges or deductions are made. For example, the standard may have one bath but the subject property may have an additional 1/2 bath so an additional $300 charge is made. Each class has a long list of adjustments for factual features such as porches, fireplaces, built-in cupboards, etc.
4. A deduction is made to reflect the age and condition of the building. The manual may assume all improvements are 80% depreciated in 40 years. An average building would straightline at 2% but if the building were well maintained the effective age might be set at 10 or 12 years instead of 20 and if it was in poor condition the effective age might be set at 30 years.

C. The sum of the site value and the value of the improvements net of depreciation equals the market value as of May 1. Market value is then reduced by the equalization rate to become the assessed value of record, divided between land and building. Those figures are available to the public for each property as a kind of self policing control on assessments.

1. The taxpayer may appeal his assessment
2. A tax appeal board of seven citizens will accept the arguments of the taxpayer and the tax assessor and may amend the assessed value where it feels it is not derivative of market value. Due to public disclosure the appeal board can no longer meet in private with the assessor to reach its conclusions.

V. The ability of government to divert cash flows of the home owner, farm owner, or building owner through its tax policy therefore make it an equitable owner of all the taxable property in the community.

A. In this course and for those who tie the real estate tax to market value, we see the real estate tax as a form of profit sharing, a distribution of earnings and benefits on a pay-as-you-go basis.

B. Those who prefer the cost approach to value see the real estate tax as a method of collecting a debt, not unlike a continuous mortgage in payment of services rendered and public capital improvements in place.

C. As a result the real estate tax system currently faces significant land use issues head-on:

1. In Wisconsin the courts have said that the market value of a property for tax purposes is the highest price at which it would sell to another user. For some properties, such as residential properties, there are sufficient sales to permit market comparison appraisal. Most properties, however, are rather unique and the tax process that we just described is more like a cost approach to value.
2. The result is a confusion as to whether the tax in Wisconsin is on cost or market. The courts have said that a low cost mursing home should be assessed at its resale value and that a high cost insurance company home office should be reduced to what it would sell for, even if sale was at only half of the purchase price.
3. In New York state, the Seagram's case stated that the cost to build did indicate market value because a sophisticated corporation would not spend more on the building than it was worth in benefits and these benefits might take the form of public image and advertising or personnel efficiency as well as rental value.

D. The assessor prefers to use the manual or cost approach so that he can defend his answer on the grounds on equitable consistency while the taxpayer prefers to use the market approach when it is to his advantage to do so.

E. The assessors methods are too time consuming on the residential properties and too inaccurate for lack of good information on the larger one-of-kind properties.

1. The market has been rapidly shifting and appreciating so that assessed values can be out of date in a year. Since the assessor does not have time to reassess everything each year assessments rapidly fall out of date.
2. Inequity between assessments of owners of new property assessed on the basis of a recent transaction and older properties where assessments are out of date.
3. Inequity between the residential class where sales data is plentiful and commercial or industrial classes where the absence of data permits all kinds of subjective assumption on sale to another user and thus lower assessment.
4. Rapid obsolescence of land valuation, particularly in growth areas or in built up areas where there are no vacant land sales available.

F. The real estate tax can also be counter-productive to land planning objectives. The sale of one farm for subdivision purposes might indicate a market value of $1500 an acre. If all the other farms are taxed accordingly they cannot afford to continue farming and as a result prime agricultural land is prematurely or unnecessarily converted to urban use. A way must be found to make the real estate tax burden consistent with society's hopes for proper land use.

F. A number of staes including Wisconsin are attempting to remove the administrative problems of the real estate tax with some reforms as:

1. Consolidation of tax assessment districts into county offices.
2. Creation of a state agency which audits, trains, and prescribes standards for the county offices.
3. Automation of market comparison projects for residential property by means of computerized market or cost approach appraisal.
4. Statutory changes in defining acceptable appraisal methods.
5. Statutory changes in required reporting of gross rents, etc., by owners or by pooling information with Internal Revenue Service.
6. Increasing budgets from .2 - .5% to .7 - 1.0% of collections to finance staff and modern techniques.

VI. The real estate tax was originally intended to finance collective services like police, fire, streets, and similar housekeeping functions. It is argued that the inequity of errors in the denominator are unnecessarily multiplied by including budget items in the numerator that should be collected things like the income tax and the sales tax which may be a more progressive tax.

A. A major burdern on the real estate tax is the wefare program where the large cities carry the load and the suburbs escape what is a larger metropolitan responsibility.

B. In California the courts determine on August 30, 1971 in the Serrano case that it was unfair to children to support education on a local real estate tax because different communities had drastically different capabilities to raise money for education. In Baldwin Park there was only $2700 of tax base per child while in Beverly Hills there was over $50,000 per child. Baldwin Hill residents spent over $577 per pupil while Beverly Hills was spending over $1200 per pupil, even though the taxpayer in Beverly Hills enjoyed a mill rate less than half as much as the home owner in Baldwin Hills. Unequal resources made the use of the real estate tax unconstitutional for supporting education and violates the 14th amendment providing equal protection under the law.

C. In Wisconsin the Serrano case led to new formulas for redistributing the state income tax to school districts which now provides more than 25% of school budgets.

D. Tax exempt property, such as a church, hospital, school, university campus, or federal installation are subsidized by taxpayers. Over 40% of the land in Madison is tax exempt. Public housing projects pay 10% of rent in lieu of taxes and state office buildings pay 10¢/sq. ft. and communities can bill for riot police. Some argue that exempt property provides services and export industry which serve the taxpaying properties; others argue that it is impossible to appraise buildings which have no money. As we shall see tax exemption can lead to misuse of the land and counterproductive conservation.

W I S C O N S I N
REALTOR® UPDATE
Special Edition February 1, 1988

Special Update Edition

Property Tax Relief in Wisconsin

About eighteen months ago, the Wisconsin REALTORS® Association became a founding member of the Coalition for Property Tax Reform. The purpose of the coalition was to educate the citizens of Wisconsin of the state's excessive level of property taxation and to study the proposed methods for bringing about meaningful and sustainable property tax relief.

The Coalition for Property Tax Reform helped place the property tax issue at the center of the Gubernatorial and Legislative Campaigns of 1986. As a result, upon his election, Governor Thompson appointed a blue ribbon commission to study methods of reforming the property tax system in Wisconsin. That commission, headed by then Dane County Executive Jonathan Barry, produced a report that generated substantial comment in the halls of the Capitol. Although he would substantially modify it, the report provided a skeleton on which Governor Thompson could develop a plan that would bring about real estate tax relief.

This week, the property tax issue came to a head. In his state of the state address on January 26, Governor Thompson proposed a property tax relief initiative. While this step is, like those of the past eighteen months, still a predecessor of many more to come, we, the Wisconsin REALTORS® Association, have come to a critical point of a process that could ultimately lead to the greatest property tax reduction in Wisconsin's history. We are therefore publishing this special edition of the Wisconsin REALTOR® Update to inform, you, the members of the Wisconsin REALTORS® Association, of the contents of the Governor's plan, including its benefits and liabilities to our industry, and to let you know how you can help shape the property tax relief process.

From the beginning, we would like to make it clear that while we are excited at how far the property tax reform process has come, we are very concerned that the Governor has contemplated using revenue from a 5 percent sales tax on commercial leases as a method for reducing property taxes. The leadership of the WRA met with Governor Thompson immediately after his January 26 address, and made it clear to him that, as representatives of all members of the real estate industry, we could not accept this targeting of an important segment of our industry as a revenue source.

We have set forth a series of questions we think you might like to ask, and we present the answers of the leadership of the WRA.

Terry L. Hilgenberg

Terry Hilgenberg, GRI
WRA President

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(608) 241-2047 in Madison (800) 362-7368 Statewide

What is the position of the WRA toward the Governor's plan?

The WRA leadership supports the broad outlines of the plan: it especially approves the 16 to 20 percent cut in property taxes statewide, and across all classes of property, and the implementation of stringent cost controls. However, the leadership is concerned about one of the sources of funding for the plan: the implementation of sales taxation of commercial leases.

What form will property tax reform take?

Under a new school-aids formula, the State will increase its share of school funding from 46 to 57 percent in FY 1989-1990. As a result, the portion of school funding deriving from property taxes will decline from 45 to 36 percent, which represents a twenty percent reduction. The total cost of the package over two years would be $809 million.

How does a property tax cut benefit the real estate industry?

In essentially two ways. First, by reducing the monthly principal interest and tax cost of owner occupied housing, more people will be able to afford to buy their first house, and those who are buying houses will qualify for more expensive housing. Second, by increasing the after-tax rate of return of housing, a property tax reduction will promote higher property values.

How will the school aids formula be changed?

A new five-tiered equalization formula would be put info place by FY 1989-1990. The new formula will provide a higher percentage of aid to districts with limited property tax capacity and contain clear incentives to control spending. For a district with average property tax capacity, the 1989-90 state aid rates are expected to be:

Per Pupil Cost As Percent of State Ave.	State Share of Costs
Less than 70%	75%
70% - 100%	40%
100% - 110%	0%
110% - 125%	-25%
More than 125%	-100%

To illustrate what this means, let us assume the average school district spends $4000. Now let us look at a district that has an average property tax capacity and spends $3900 per pupil. The state looks first at 70% of the state average (in our example $2800 {70%*4000}) and then picks up 75% of that total, or $2100 (75%*2800). Because our hypothetical district spends less than the state average, the state picks up 40% of the difference between $2800 and the amount the school district spends. In our example, that means on top of the $2100, the state gives the school district 40%*1100 or $440, meaning total school aids to the district total $2540. Thus the school district that has an average tax capacity and spends a little less than the statewide average receives about 65 percent of its school funding from the state.

As a result of the formula, the highest level of school aids going to a school district with average property tax capacity would be $2580. Moreover,

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as the level of school funding rises above 110 percent of the statewide average, the district would begin to lose its share of school aids; as spending rises above 125 percent of the statewide average, the district would lose one dollar of aid for every extra dollar it spends.

Nonetheless, the funding scheme would also contain a foundation payment, guaranteeing that the minimum amount of state aid provided to each pupil would be $250. This assures that even school districts that currently receive no aid would benefit from the program.

How would property tax reduction be sustained?

The Governor has proposed a series of cost controls for both state and local governments. By controlling spending, property taxes can be kept in check. The controls in the plan would:

- Freeze state and local expenditures and levies in FY 1989-90. Compensation increases (within the overall freeze) would be limited to growth in the consumer price index. Excepted from the limits would be compensation increases already in place in existing labor agreements.
- From 1989 to 1992, prevent expenditures, levies, and compensation from growing faster than the CPI.
- After 1992-1993, prevent expenditures, levies, and compensation from growing faster than the growth rate of Wisconsin per capita personal income.
- Prohibit unfunded state mandates to local governments.
- Authorize only by local referendum spending that exceeds the above limits.
- Permit arbitration for municipal employee salaries only if the employer's offer was less than the above listed limits.
- The exceptions: these limits do not apply to capital budgets (i.e. bonding), gifts and grants, enterprise operations and fiduciary expenditures. School districts spending less than 80 percent of the statewide average per pupil expenditure are exempt from the limits.

How would the increase in school aids be funded?

Funding sources are essentially six, and include:

- The normal increase in General Purpose Revenues resulting from economic growth.
- The new state lottery.
- Expansion of the sales tax to non-residential and non-agricultural leases.
- Expansion of the sales tax to winter heating and utility charges.
- Expansion of the sales tax to sewerage charges.
- Adjustment of the two earner income tax credit.

Why does WRA leadership oppose employing a sales tax on commercial leases as a source of funding for property tax reduction?

Two reasons. First, a tax on commercial leases will disproportionately hit small businesses. Small businesses are more likely to lease their place of business than larger businesses, and tend to use more space per employee than larger firms. As a result, small businesses would pay a substantial share of the cost of property tax reduction. In light of how important small businesses are in creating jobs (several studies have shown that businesses with fewer than 100 employees have created substantially more jobs this decade than Fortune 500 companies), any additional tax burden on these businesses would hinder economic development.

Second, because of federal tax reform, commercial real estate has seen its share of the overall tax burden increase substantially, indeed punitively, over the past few years. To tax this sector again is unfair.

What happens next, and what can I do to help mold the process?

The next few weeks are critical. Legislators (either the ways and means committee or the joint finance committee) will hold hearings in Madison and around the state over the next eight weeks to determine whether they wish to report the Governors' proposal, or some variant of it, to the floor of the legislature. It is almost certain that some kind of package will be put into place by the end of March. You can make a difference by getting in touch with your state Senator and Representative to let him or her know that you believe property taxes are a serious problem in Wisconsin, and that something needs to be done to reduce them. If you need to find out who your Senator or Representative is, call the WRA at (800)-362-7368.

Also, please remind your clients about the importance of the property tax issue, and ask them to act. If constituents do not tell legislators that this is a key issue, they will have no incentive to get something done. This is particularly true now, when Chrysler's devastating pullout from Kenosha will surely preoccupy legislators. It is also especially important that you attend REALTOR® and Government Day in Madison on March 9, when you can personally tell your legislators how important the property tax issue is to you.

Point out to your legislator that Wisconsin's property taxes are among the highest in the country, and they must be reduced to make the state economically competitive. Indicate that some sort of controls on spending (Wisconsin is the only state in the midwest without them) are important to you. And make it clear that a sales tax on commercial leases is the only impediment from making the plan a clear winner for the state of Wisconsin.

We cannot understate how important this issue is to every member of our Association. The ideas being put forth are creative and complex. It is especially important that our best interests not be undermined by miscommunication of any sort. Therefore, if you are still confused by any part of the Governor's proposal, please get in touch with the leadership of the Wisconsin REALTORS® Association, or association staff members William Malkasian, Michael Theo or Richard Green. They can be reached at (800) 362-7368.

Together, we, the association and its members, can bring meaningful property tax relief to Wisconsin. Thanks for your support.

Wisconsin REALTORS ® Association
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Madison, Wisconsin 53704
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BUSINESS 550

REAL ESTATE TAX & LAND USE DECISIONS

I. Because the real estate tax is a significant burden on the revenues of private property and the major source of revenue for a government districts, it has a significant impact on capital budget decisions in the short run, whicy may have counter productive results in the long run. By the same token there is a temptation among planters to manipulate real estate tax assessment, legally or by administrative arrogance, in order to achieve short term land use subjectives.

A. Ultimately the question is who benefits and who pays?
   1. Those who pay own property in a specific geographic district, but...
   2. Those who benefit may or may not be found to live in that local district so that there could be significant loss of equity or inadvertant shifts of income between those who pay and those who benefit.
   3. Community has conflict of interest since it has equity interest in each tax paying property and therefore a long-term interest in maximizing value while politicians have short-term interest in appeasing special interest.

B. For example, in California the courts determined on August 30, 1971 in the Serrano case that it was unfair to children to support education on a local real estate tax because different communities had drastically different capabilities to raise money for education. In Baldwin Park there was only $2700 of tax base per child while in Beverly Hills there was over $50,000 per child. Baldwin Hill residents spent over $577 per pupil while Beverly Hills was spending over $1200 per pupil, even though the taxpayer in Beverly Hills enjoyed a mill rate less than half as much as the home owner in Baldwin Hills. Unequal resources made the use of the real amendment providing equal protection under the law.

C. In Wisconsin the Serrano case lead to new formulas for redistributing the state income tax which favor the poorer counties or communities and a new formula for school aids.
   1. Wealthy communities like Madison with declining school population will have an increasing surplus of assessed value per child (assessed value in excess of $70) would pay a part of school taxes into a state pool to help those communities with growing school populations and lower assess base.
   2. This negative school tax may encourage urban sprawl and poses a direct tax on one district for the benefit of another.
   3. The real estate tax is perceived as highly local and therefore taxpayers are incensed far more by this redistribution than by redistribution via the income tax. Governor Lucy has succeeded in shifting about 25% of local school cost to the state income tax; however any local change in the components of the distribution formula means sudden changes in state aid for local schools.
   4. So Madison finds itself with declining enrollments, some decline in state aids, and therefore magnified increases in the mill rate. Rise in mill rate cause families to move to Sun Prairie and Fitchberg perpetuating future declines in Madison enrollment and under utilization of public capital resources in Madison.

D. Another major burden on the real estate tax in urban areas is the welfare program required of large cities which is not required of rich suburbs.
   1. To the degree that welfare is financed by local taxes and is fragmented in terms of administration, it encourages the rural poor to move to the cities, either within the county or across state line.
   2. Rise in mill rates then drives those with a more expensive homes and

industries with jobs out of the central city.

3. Tax base declines while welfare costs increase, gradually accelerating the spiral of pressures bringing about relocation of taxpayers establishments who perceive no benefit from the burden of payment.

E. Another major problem is the tax exempt property such as the church, hospital, university, or federal force products land or state office building. Over 40% of the land in Madison is tax exempt and does not contribute directly to the benefits of fire protection, street names, police security, libraries, etc.
   1. Some pay fees in lieu of taxes. State office buildings pay 15¢ per square foot and public housing pays 10% of gross rents collected. The city can charge state agencies for overtime work by police for things like strikes and riot control. Most properties would pay nothing, however.
   2. You could argue that these land uses are export industries creating jobs, and the income which supports assessed value in the community.
   3. On the other hand, if government pays taxes to another government district these would be paid by the taxpayers in another form. However changing the base from a geographic area to all state or federal taxpayers spreads the cost more accurately among those who benefit.
   4. Others argue that government property are exempt because it would be impossible to appraise the building in terms of market value in order to introduce them on the tax roles.

II. Federal policies may be very unfair to local residents even though the objective of government policies is good. Consider the question of who pays for the Fderal wild river program.

A. Professor Barrows of Agricultural Economics studied the impact of wild river acquisitions of the National Park Service on the town of Springbrook in Washburn county, where it is protecting the Namekagon River. The goal is approximately 3200 acres of privately owned land which will be purchased and removed from the tax role even though the families thereon may be permitted to stay for up to 20 years as tenants. The town still must provide services including education, nevertheless.

B. NPS makes no payment to local government. In contrast the town of Springbrook receives 50¢ per acre on 43 acres preserved by the State DNR and 20¢ per acre on 7500 acres of county forest plus a share of timber sale revenues.

C. NPS had acquired in 1974 approximately 600 acres of its goal which was valued at $260,000 or 10% of the total tax base in the township. The first impression is that if the tax base drops 10%, the mill rate must increase by the same amount to make up the loss. However the issues are more complex.

D. The $260,000 tax base loss in the town of Springbrook is only 0.2% of the tax base of Washburn County and 0.3% of the school district tax base. The School tax accounts for 70% of the total property tax so the loss of tax base would hurt if it were not neutralized through the state formula for share income tax. As a result the net change in taxes looks like this:

Change in school tax rate	- .2¢ per $1,000 property value
change in county tax rate	-1.0¢ per $1,000 property value
change in town tax rate	- .5¢ per $1,000 property value
change in state shared taxes	+ .4¢ per $1,000 property value
change in property tax relief	+ .2¢ per $1,000 property value
TOTAL TAX RATE IMPACT	-1.1¢ per $1,000 property value

E. As a result state taxpayers are paying the consequences of a federal land use reservation program while federal income taxes are being used to pay acquisition.

III. The greatest sensitivity to real estate tax policy and land use decision is at the local metropolitan level where fragmented local government compete for land uses which produce the highest tax base value and the lowest service cost, or to avoid land uses such as low income housing whicy may have high service cost and little additional tax income. This war takes the form of fiscal zoning, annexation fights, tax abatement or investment stimulation.

A. Fiscal zoning establishes land plan to encourage certain land uses and discourage others. For example large lot zoning, trailer park standards, conditional use of zoning, or reservation of large land areas for "conservation" are all examples of fiscal zoning.
1. Kohl's shopping center on University Avenue
2. Commodor Apartments - town of Madison
3. Madison Mobile Home Park rurals

B. Annexation (voting acres and residents)
1. Seybold Road and West Town Shopping Center
2. Municipal control of utilities vs. efficienty of metropolitan systems
3. Pre-annexation contracts

IV. Almost everybody wants to favor some particular land use policies by means of tax abatement. The most common sort of objectives are conservation of open space, rehabilitation of dilabidated structures, construction of new industries, or the preservation of landmarks.

A. Two years ago Wisconsin voters unknowingly removed the constitutional requirement that all real estate be taxed on market value to permit swamps and farmlands to be taxed on current use value if the legislature wished to do so.
1. Conservationists want far owners to accept tax relief in exchange for future development.
2. Farmers want tax relief now and profits from development later.
3. Politicians suggest temporary relief now and a rollback tax if the land is sold for a price higher than the land value of farmland.
4. Townships want the State to replace the lost real estate taxes.

B. Some people believe that repair and improvement of the whole property will increase real estate taxes more than income so that there is no incentive to modernize.
1. A direct tax abatement is not legal in Wisconsin (Milwaukee Bank case).
2. One alternative is to make grants for repair and then raise the real estate tax which ultimately refunds the grant.
3. Of course many communities ignore the proper valuation approach and deliberately under assess remodeling or new industry. Competition among communities by favoring new industries was one of the reasons that State took over the assessment of all manufacturing facilities but of course State has an interest in competing with other state.

C. Landmark buildings often represent underutilization of a valuable site, costing

the owner and local government significant tax base.
Madison City Hall Project
Boston Old City Hall Project

D. The location of public facilities may contribute positive or negative stimulation to the surrounding tax base.
   1. The Madison Center for performing arts - Lake Monona vs. State Street
   2. MATC loss of tax base vs. loss of retail sales vs. present value of transportation cost compared to land cost.
   3. Redevelopment could be stimulated by having a city give away vacant sites to developers which agree to build a certain amount of tax base. For example, apartment land in Madison might cost $2,000 a unit to buy and clear. Even a small apartment will generate a $20,000 tax base or $250 a year in taxes. The city would have the money and interest back in less than ten years; it would enjoy a 10% return on its money less cost of services. A one-bedroom apartment will have no school children so the school district will enjoy $350 gain; perhaps it should be paid to developed home sites for households without children.

REAL ESTATE TAX, LAND USE
& PUBLIC INFRASTRUCTURE SOLVENCY

I. As a major cost of real estate ownership, the real estate tax has a significant impact on land use decisions, an impact which may advance community planning or be counter productive and cause those types of land use decisions which are against the public interest.

A. You have discussed factors which could reduce or increase the total revenue which would need to be collected from the taxes. Today we will discuss how the tax base can be manipulated to change the mill rate.

B. We will briefly discuss methods for defining assessable (ratable) property methods for land planning to encourage high assessment value, and the uses of public investment to stimulate new assessable private investment.

II. Which property should be assessed and how much?

A. Government owned property is exempt from the real estate tax. It represents 40% of land in Madison and receives the benefit of fire, police, and other city services.

1. State office buildings pay 15¢ a sq. ft. toward city services, public housing pays 10% of effective rents in liwu of taxes, and Eagle Heights pays so much a child toward school but these are negotiated and don't change often by inflation. Other government uses pay nothing.

2. What happens to a township when a sizable portion of its land is taken by the federal government for a military base or a wild river reservation. Who benefits and who pays for the shift in tax burden?

3. Should government installations be considered economic base items which support other real estate values in town or should it be taxed like everyone else. If so, what is market value of Bascom Hall?

4. FAilure to put a real estate tax on government land means it is under-utilized. The University can hold land at Charmany Farms on Whitney and Mineral Point Road indefinitely, speculating on future appreciation but causing unnecessary urban sprawl and duplication of urban services.

B. Churces, hospitals, and private schools are also exempt so long as the property is contiguous to its operating centers or actually used for charitable purposes. The argument is that the social good is well served by these organizations and that real estate taxes would just increase the cost of services or reduce their quality and scope. But when is there too much real estate so classified with no correspondent social benefit?

C. Recently Wisconsin voters voted to provide a partial exemption to farmers and conservation lands by constitutional referendum. In short, these lands could be taxed on the value of their actual use rather than market value. The Legislature has enacted a program which requires counties or townships to file a master land plan which defines prime agricultural or conservation areas. Property owners can then elect short and long term use value status subject to certain conditions.

The farmer near a growing area could continue to farm even though his land was now suitable for subdivision. Because his values are understated other taxpayers in his district pay a higher mill rate. The Legislature has decided to replace lost revenue from state funds (as they do with forest land). There will be a 75% rollback of real estate tax reductions charged against profits when a farmer sells his land.

D. If we abandon market value as the benchmark for everybody, do we then exempt the elderly pensioner who owns his own home, the low income family, or other political favorites such as farmers and veterans?

E. Some people propose exemptions from buildings and improvements, taxing only the land. The value of the land would reflect the assessors best guess as to its best use. In that way a high intensity site value would force the owner to build or improve his property to that use in order to pay the taxes. Site value taxation is being used in New Zealand, Australia, Pakistan, and Jamaica to force land owners to develop their property rather sit on it to speculate. This fosters economic development and the breakup of large land holders in areas ready for development, agricultural or urban. It assumes the land planner and the assessor know what they are doing.

1. A variation is the graded tax, with a higher mill rate on land than on buildings.
2. Which mechanism is more trustworthy, the marketplace or the government technocrat?

III. A desire of a community to discourage low value land uses or high service cost occupancies leads to what is termed fiscal zoning.

A. Mobile homes provide a low real estate tax base but often provide many children for the schools and clients for the welfare program. Communities can make the specifications for the mobile home parks virtually impossible to meet.

B. Large lot zoning typically mean expensive homes, high tax base, and low densities which require little public infrstructure in terms of roads, utilities, and schools. Can be ruled out as illegal.

C. The urban renewal program, low income housing was replaced by luxury housing to increase real estate tax revenues with which to finance the city's share of renewal and at the same time force relocation of high service costs families and uses to other communities.

D. Cities may underassess new industry to encourage their construction in town while at the same time real estate tax costs may gradually force certain industries to leave town to remain competitive.

E. The cities wage the war for tax base with many tools, including city water, annexation, fire department services, and negotiated pre-annexation agreements with developers.

IV. Public land use decisions and capital expenditures must always be considered in terms of the net effect on city tax base and tax revenues.

A. The city auditorium issue included the issue of locating the facility so as to stimulate private investment. The Law Park site was toally surrounded by publicly owned land and buildings so that it could not stimulate appreciation in private land value.

The State Street site stabilizes and may increase values in a declining area.

B. A current issue is the relationship of an MATC campus to the viability of downtown Madison, particularly retailing and restaurants on the Square and on State Street.

1. Some downtown sites would have meant the loss of several blocks of taxpaying real estate and the present value of that income stream would represent a tremendous loss to the city although it receives no compensation.

2. On the other hand some would argue that locating the MATC site at the airport would undermine residential values and contribute to a more subtle and slow rate of downtwon decline. A $25,000,000 facility may have significant impact on the city tax base.

C. The McCormick parking ramp might have been located down hill to the north of its present location. Some smaller older buildings would have been lost to the tax roll but a higher value, more intensely developed building might have been built on East Mifflin where the parking lot now stands.

D. Government support of new towns can occur when the government chooses to build new government installations at the new town site. The Irvine Company astutely realized that it would increase its own value by giving 1000 acres free to the U. of California. That may also be true of the small developer who gives up 10 acres to the school board to capture a needed new elementary school.

E. Early in the course ownership equity was defined " as the degree to which one can divert cash flow to their benefit." Since local government and the school board receives 16-20% of all rental income in real estate taxes, local government ownes 16-20% of all tax paying rental properties in town. Conceivably government could make money by providing bonuses for certain types of development:

1. For example, if apartment sites cost $3,000 for each one-bedroom apartment and these apartments have a market value of $22,000 each, then new construction migth provide $25,000 of tax base, paying $700 a year towards government. If the City receives 30% of that, the result would be $210 a year on $3,000 investment or 7%. If the City could keep all the tax revenue, it would have its money back with interest in five or six years.

2. Official recognition of this opportunity to stimulate private tax base with public investment is found in the new technique of tax increment financing. (TIF) This technique could keep nearly all the $700 above for the City, cutting out the school board, the County, etc.

3. TIF defines a specific district and its tax base in which all governments participate. Then the City can issue bonds to finance certain improvements within the district and pledge tax revenues from increased private property investment and values to pay off the bond. Bond holders require specific private investment already committed contingent only on the public improvement.

4. On Williamson Street the bond issue was used to reduce the cost of land for the Mollenhoff's so they could build a condominium on the Fauerbach site. The Carley proposal for Pinckney Street is to build two condominiums and redevelop the Emporium if the City will use TIF funds to build a parking ramp and restore the historical character of Mansion Hill. Others have proposed putting housing units above parking ramps so that the tax base can reduce the cost of the ramps meter fees required to finance the ramp.

V. Building projects to house public offices or public housing can be regarded as cash flow investments. Because these may not have any revenue power, they should be analyzed with <u>life cycle costing</u>, i.e., the investment objective is to achieve the lowest present value of outlays over the life of the project to accomplish a given purpose.

A. Since a state office building or city hall pays no real estate taxes and can borrow money at only 6% interest, the annual cash cost for operating expenses, debt service and maintenance should be less than that charged by the private sector. Nevertheless state office buildings like JEF-1 cost the state more out-of-pocket per sq. ft. of usable area than any comparable private office building. Why not lease space which can pay real estate taxes? Why the extra cost?

1. Architects have convinced government patrons that all public buildings must be monumental in size and material to impress people with government.
2. If there is no cash measure of efficiency, designer arrogance is in control. The City-County Building has over 440,000 sq. ft. of space but only 290,000 is usable bacause of wide corridors, extra lobbies, etc.
3. On the other hand the school board have been more sensitive to first cost with the result that the newer buildings had little insulation, cheaper one story construction, etc. so that they have excessive heating and maintenance cost. The result is the present value of outlays over the life of the building is greater than more expensive construction at the outset.
3. Recently the City bought the Post Office Building which will require intensive remodeling for housing some city services. The County found ways to expand the City-County Building at lower cost and in doing so, left the City to find tenants for the balance of the remodeled Post Office Building. Some of those Alderpersons who endorsed the purchase, did so to prevent the State from buying it for the State Supreme Court. Now the State must acquire more land from the city tax base for another state office building. What is the true cost of the city office space? What would happen if the city gave away the land to someone who would build a quadrangle of apartments on that block? The City would gain some tax base, more residents downtown, and perhaps avoid creating a government office ghetto. The city planners are incapable of carrying off such a project because they lack the discipline of the numbers.

B. Public servants who understand the power of cash flow when Legislators do not can be as dangerous as private developers who ignore public solvency in terms of who pays and who benefits. A developer, a planner, or a designer should read the biography of Robert Moses, <u>The Power Broker</u>, to appreciate every nuance in control of cash flows as the secret to control of land use and development.

VI. Federal policies may be very unfair to local residents even though the objective of government policies is good. Consider the question of who pays for the Federal wild river program.

A. Professor Barrows of Agricultural Economics studied the impact of wild river acquisitions of the National Park Service on the town of Springbrook in Washburn County, where it is protecting the Namekagon River. The goal is approximately 3200 acres of privately owned land which will be purchased and removed from the tax role even though the families thereon may be permitted to stay for up to 20 years as tenants. The town still must provide services including education, nevertheless.

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B. Annexation (voting acres and residents)
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   2. Municipal control of utilities vs. efficiency of metropolitan systems
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VIII. Almost everybody wants to favor some particular land use policies by means of tax abatement. The most common sort of objectives are conservation of open space, rehabilitation of dilapidated structures, construction of new industries, or the preservation of landmarks.

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Madison City Hall Project
Boston Old City Hall Project

Business 550/705
The Real Estate Tax - Outline

I. The cash cycle for public infrastructure begins with the real estate tax, user fees, and federal grants, but the real estate tax provides almost 80% of revenues to support local government.

   A. There is only one federal income tax to understand, 50 state tax systems, but more than 14,000 real estate tax jurisdictions.

      1. Lack of standardization and skill of application leads to monumental misunderstanding.
      2. Unlike income tax, tax payer does not participate in calculation
      3. Administrative costs are not properly funded
      4. 90% of taxpayers believe if they are underassessed they have beat the system and resist restoring equity.

   B. Historial origins of real estate tax are in socage rents and colonial taxes on agricultural productivity.

   C. With development of cities, tax pay shifted to market values of improvements of land - an ad valorem tax.

II. Current city systems are based on a process developed at the turn of the century in Minneapolis, Cleveland, and Milwaukee by a municipal engineer named Somers.

   A. Somers tried to reduce political interference and arbitrary valuation by introducing the following concepts:

      1. Separation of assessment from municipal budgeting functions
      2. Definition of a mechanical procedure to assess each property consistently and reduce judgment calls to the minimum, permitting assessors to arrive at the same value conclusion on any specific property.
      3. Simplification in order to teach the public as well as field men low cost in administration and to facilitate a legal defense in the event of appeal.
      4. Recongition of assessment was to produce an aggregate base number for proportion distribution of municipal revenue needs among all property owners; consistency of relative differences was more important than accuracy in predicting sales price; distinctions had to be equitable and explainable.

   B. The assessor is charged with mappihng and describing each property and estimating an assessed value. All property values in the aggregate equal the community tax base.

   C. At the same time each community budgeting unit would establish how many dollars they would require and the proportion to be generated from the real estate taxes as opposed to other revenue sources.

   D. Each fiscal unit divides the required budget by the aggregate real estate tax base in its defined district to determine the tax rate.

      1. The tax rate is called the mill rate - the fraction of a penny of tax per dollar of assessed value.
      2. The technical mill rate may also be stated in common usage as dollars per $1,000 of assessed value. In Madison in 1978 the total mill rate was 28.28 less a state credit of 4.127 mills.

E. The total mill rate is a combination of tax districts which may assess real estate taxes, including:

State - 21¢ per $1,000
County - $2.38 per $1,000
Metropolitan sewer - 0
Library - 77¢ per $1,000
School -$15.6998 per $1,000
Vocational school - $1.27 per $1,000
General city - $7.96 per $1,000
Total tax - $28.28

F. Since each district combines different taxing areas and assessor, it is necessary to adjust between districts for the reliability of the ratio of assessed value to market value. This ratio is called the equalization rate, and the closer to 100% the better the assessment practice may be in that community. These rates are computed by a State district office of the State Department of Revenue.

G. Therefore the basic elements of the real estate tax process represent a formula something like this:

$$\frac{\text{Public enterprise budget x \% from real estate tax}}{\text{Market values x equalization rate}} = \text{mill rate}$$

mill rate or rate/1000

Market value of parcel x equalization rate x mill rate = $ tax per parcel

H. A special assessment is a charge for public capital improvements such as sidewalks, streets, the State Street mall which benefit a specific group of properties as well as the community. The capital budget may be shared 50-50 with the community and then prorated on a formula that is appropriate, such as front foot, square foot of lot size, assessed value of land, etc. The tax payer is given 3-10 years at a favorable interest rate to repay this special assessment. These special assessments can be pledged by the city to secure bonded debt for the cost of improvements.

III. The Wisconsin Real Estate Tax assessment provess is typical of many states throughout the country but considerably behind the best like California, New York, or Nebraska.

A. There are 1100 or more assessment districts, no more than 50 of which have professional appraisers for their assessor. Most assessors are still elected at the township level.

1. Wisconsin has been unable to pass legislation consolidating assessment at the county level because of rural distrust of professionals in this sensitive area.
2. Wisconsin law does permit consolidation at the county level by referendum with the state then subsidizing most of the budget. For example, Kenosha County.
3. The state provides an assessment manual which attempts to standardize procedures which assessors must follow.
4. Responsibility for complex industrial appraisal has been taken over by the state.

B. Statutes established seven general classes of property. Under special conditions agricultural and conservation may be taxed on use value; all others at market value:

1. Agricultural
2. Industrial
3. Commercial
4. Residential
5. Retail
6. Mining
7. Conservation

The Real Estate Process - 550

The Real Estate Tax - Outline

I. The public infrastructure enterprises depend primarily on the real estate tax levy for the revenues in its cash cycle. The real estate tax provides more than 80% of all locally collected revenues which support local government enterprises. The amount of money collected through the real estate tax is only less than total federal income taxes and the total social security tax collected in both amount and numbers of taxpayers.

   A. There is only one federal income tax process to understand, perhaps 50 state taxes, but over 14,000 real estate tax jurisdictions, each administering the tax in their own way.

      1. The different systems lead to monumental misunderstanding.
      2. Unlike income taxes, the taxpayer makes none of the calculations; thus he receives a bill but plays little part in the process.
      3. Despite the accounting burden placed on the local tax assessor and treasurer, local governments do not provide an adequate budget for collection so the cost of administering the tax per dollar of collections is less than any other tax. The consequences are inadequate or incompetent administration.
      4. Ironically 90% of the taxpayers believe they are underassessed and are therefore less interested in restoring equity by improving the system than they are in maintaining an inequity they perceive as favorable to themselves.

   B. The historical origins of the real estate tax were in the Socage rents paid by yeoman and knights and lords to the king in exchange for tenure on their farms or castles. These rents could be paid by military service or labor on public project like road maintenance or in crops.

      1. Original colonial settlers acquired their tenure to the land through the trading companies which charged a socage rent in terms of the export surpluses of the colonies.
      2. Rents to the trading companies replaced by service to the local township in terms of road maintenance, etc.
      3. In the more sophisticated developed areas it became possible to make a cash payment in lieu of service.
      4. Once feudal tenure had been broken by the American revolution the socage traditions were converted to a real estate tax.
      5. Since the rural areas were agricultural, the tax was levied on productivity of the land, expected bushels of grain capacity to support a certain number of livestock per acre.

   C. As the country became more urban the base for the real estate tax gradually shifted to the value of the improvements (cost to replace), rather than the land - an ad valorem tax.

II. The basic elements of the urban tax system generally found today were developed about the turn of the century in Minneapolis, Cleveland, and other cities by a municipal engineer named Somers.

A. To reduce political or discretionary valuation the system requires:

1. Separation of assessment administration from the municipal budgeting function.
2. A mechanical procedure to assess each property to reduce judgment calls to the minimum and permit different assessors to arrive at the same conclusion.
3. Since assessment was a device for proportionate distribution of municipal revenue needs among all property owners, it was not necessary that absolute values be correct; only that relative differences be consistent, equitable, and explainable.
4. The process had to be simple to teach, low cost in administration, and simple to appeal or defend.

B. First each property must be mapped and given an assessed value. All of the values in the aggregate are then added to total the tax base.

C. At the same time the community budgeting process would establish how many dollars must be generated for the next fiscal year from the real estate tax as opposed to user fees, federal grants, and other miscellaneous revenue.

D. Each fiscal unit divides the required budget by its real estate tax base to determine the tax rate.

1. The tax rate is called the mill rate - the fraction of a penny of tax per dollar of assessed value.
2. The mill rate may also be stated in the vernacular in dollars per $1000 of assessed value. In Madison last year the total mill rate was 51.90 but there was a state aid credit of 7.47 mills which reduced the net mill rate to 44.43.

E. However, this total mill rate represented a combination of tax entities who may assess real estate taxes, including:

State	32¢ per 1000
County	$4.73 per 1000
Met. Sewer	0
Library	12.8¢ per 1000
School	$29.44 per 1000
Voc. School	$1.88 per 1000
Gen. City	$14.25 per 1000

F. Since each of these fiscal districts may include different geographic areas, the assessed values used as a base for the same tax may be done by different assessors. It is necessary to adjust between assessment districts for the reliability of the relationship of assessed value to market value. This function is performed by the state which establishes the historical relationship of assessed values to actual sales values in each district - a ratio called the equalization rate. In Madison in 1975 homes were assessed at 65% of expected sales price and commercial properties at 59%.

G. Therefore the basic elements of the real estate tax process represent a formula something like this:

$$\frac{\text{Public enterprise budget} \times \%\text{ from real estate tax}}{\text{Market values} \times \text{equalization rate}} = \text{mill rate}$$

mill rate or rate per 1000

Market value of parcel x equalization rate x mill rate = $ tax per parcel

H. A community may also charge properties receiving special benefits from public improvements such as sidewalks, streets, public malls, etc. a special assessment which prorates a portion of a municipal improvement to a selected group of properties. The taxpayer may be permitted to pay this special assessment over a period of 3 to 10 years and these special assessments may be pledged by the city to secure bonded debt for the cost of improvements.

III. The Wisconsin real estate tax assessment procedure is typical of the general approach throughout the country, although some states are more sophisticated than Wisconsin.

A. The Wisconsin statutes permit any unit of government, including the townships to have its own assessor so that there are over 1100 assessment districts, no more than 50 of which have professionally trained appraisers for their assessor. Most of them still elect their assessor.

1. Wisconsin has been unable to pass legislation consolidating assessment at the county level because of rural distrust of professionals in this sensitive area.
2. Wisconsin law does permit consolidation at the county level by referendum with the state then subsidizing most of the budget. For example, Kenosha County.
3. The state provides an assessment manual which attempts to standardize procedures which assessors must follow.
4. Responsibility for complex industrial appraisal has been taken over by the state.

B. The Wisconsin statutes establish seven general classifications of property and each of these may be given further sub-classification by the local assessor, most of whom follow suggested classes in Wisconsin Tax Assessors Manual.

1. Agricultural
2. Industrial
3. Commercial
4. Residential
5. Retail
6. Mining
7. Conservation

C. To classify each parcel of property the assessor must first develop a tax map which shows every parcel in true relation to its size, shape, location, and general improvement.

Urban Land 550
Lecture #13

Government Regulation of Real Estate at the Local Level

1. Traditionally public regulation of land use and affecting real estate have been regarded as very personal and local and until recently the states have left these matters to the local government.

   A. Citizen can have direct administrative contact in situations like:

      1. Zoning variances and rezoning
      2. Appeal of tax assessment
      3. City services via intercession of the alderperson

   B. Indirect regulation of land use occurs through municipals policies for:

      1. Public works
      2. Building code enforcement and revision
      3. Traffic control and parking
      4. General property and assessment
      5. Viewpoints of the Board of Estimates and tax rates

   C. Public administrator policies and attitudes have long term gradual effect on land use patterns:

      1. Influence of assessment policies over investment
      2. Attitudes toward annexation
      3. Public works planning and the five year capital budget
      4. Zoning policies to promote master plan
      5. Impact of government project
      6. Action of local government toward:
         a. Pollution control
         b. Efficiency of transit
         c. Housing supplies
         d. Desire for new industry

   D. In any micro situation all of these inputs appear democratic but when viewed in light of political fragmentation and duplication the result may be anything but public control of land use, particularly land uses which reflect regional or national priorities.

      1. Competition for advantageous land uses
      2. Self interest in avoiding less desirable responsibilities of government
      3. Justified local fear of state or federal controls
      4. Progress requires means to break stalemate of local partisan politics

11. Dane County is a good example of political fragmentation and the patterns of government control of land use.

   A. (one) county

      1. Board of supervisors
      2. Executive administrator
      3. Regional planning commission
      4. Various boards appointed by executive administrator or by supervisor

B. (three) cities (Madison, Monona, and Middleton)

1. Wards and aldermen
2. Mayor (full-time or part-time)
3. Department heads
4. Commissions

C. (20) villages

1. Village board
2. Village president
3. Sub-committees of the board

D. (25) townships

1. Three elected supervisors
2. Chairman of the Board selected by the board

E. (approx. 80) special districts and city authorities with real estate tax powers

1. School, drainage, fire, water control, insect control, etc. (downtown renovation districts)
2. Educational board elected but most are court appointed

F. The Madison metropolitan area has 129 different units of government, the Chicago metropolitan area has about 800 and the New York metropolitan area has 1300 various little political worlds.

1. The Port Authority of New York
2. The Chicago Housing Authority
3. Only a few big cities have tried to bring metropolitan areas under one government, such as Montreal and Miami and Indianapolis
4. Milwaukee once considered voting itself out of existence so that all urban functions would be provided by the county

111. To complicate local government, super-imposed problems of representation and apportionment, political parties, community power structure, and the urban-suburban clash.

A. Significant breakthrough of reapportionment

B. Geographic and party splits

1. Economic segregation
2. Fragmentation and abandonment of the city

C. Community power structure

1. Local government not influenced by big corporate business
2. Power structure represents associations of local interests
   a. Chamber of Commerce
   b. League of Women Voters
   c. Board of Realtors or Home Builders Association
   d. Neighborhood Associations
   e. Variety of citizen pressure groups

D. Communications management

E. Public officials in a position to spend tax money or grant favors

F. Short-term politics with won-lost fascination of power structure

G. Regional planning commissions dilute political power of any one vested interest

1. Bad example - the Commodore Building, Township of Madison
2. Good example - SEWRPC, 1969 San Francisco Bay Development Commission

H. Dane County Regional Planning Commission recently proposed five alternative strategies for land use planning - value judgments which could be converted to objectives and specific criteria and regulation. The five alternatives:

1. Existing trends - corrected for worst mistakes
2. Modified trends - cluster planning and less sprawl
3. New directions to preserve prime agricultural or environmental lands
4. Reduced population growth by control of economic base
5. Sharp reduction on land area acceptable for development to force higher densities in existing urban areas

I. All strategies have violent resistance and emotional supporters. Thus, some compromise is being sought between exclusively local land use policies highly vulnerable to local political convenience and national land use control which would be too general and insensitive to special local needs and values.

J. Next we will look at federal controls and state controls pushed by federal subsidies and penalties.

URBAN LAND 550
LECTURE OUTLINE
Federal Regulation of Real Estate

I. Federal control of land use can be direct or indirect, can relate to public or private land and might be subdivided amoung three areas.
   A. Natural resources including public land holdings, coastlines, and off-shore bottoms and navigable rivers.
   B. Rural hinterland - especially prime agricultural land
   C. Urban land development
   D. National policy has been to foster development and exploitation of agricultural land as land was considered an unlimited commodity
   E. National recognition of land as a depletable resource has made land a pivotal issue:
      1. In environmental awaremess
      2. Pressure for reform of governmental structure
      3. Adjustment negotiation power among producer, consumer, and public
      4. Legal view of property rights (Justice Hallows quote from Just vs. Marinette Co. - 1972 - 56 Wis 2d 7)

II. Federal government owns 1/3 ofU.S. - about 755 million acres. Legislative battles have begun to establish national priorities and centralized federal control since currently each government agency has its own land use program and land use policy.
   A. Some agencies controlling huge numbers of acreas are National Park Service, Dept. of Interior, Dept. of Defense, and GSA
   B. Other agencies control infinite number of small parcels, including many surplus.
      1 U.S. Post Office
      2. FHA Inventory of Foreclosed Properties
      3. HUD particularly its Division of Urban Renewal
   C. Current Congressional proposals include bills attributable to Senator Jackson and Congressman Aspinall.
   D. Jackson approach to subsidize states which master plan land uses if state will
      1. Develop up-to-date inventory of resource data
      2. Establish single authority to administer land use policy
      3. Develop technical and professional expertise
      4. Identify priority areas subject to land use planning
   E. Federal subsidy of coastal land planning on oceans, rivers and lakes
   F. Aspinall proposal not only includes provisions for private land control as in Jacksonville but proposes bringing all federal lands under a single explicit land use policy.
      1. Present fragmentation permits frustration of single agency plan
      2. Conservationists violently oppose to Aspinall proposal as it would theoretically reduce segregation of protected uses such as parks and wild life and permit potential exploitation of federal lands by logging, mineral, and cattle interests.
   G. At the federal level rational policies are difficult to sustain under the vocal and articulate lobbying of extremists on all sides.
   H. Some rational techniques do exist which might establish rational land policies.

III. A regional land use model can reduce facts to basic alternatives and provide standards for selection but value choices will remain political decisions.

A. Aerial surveylance and computer data processing permits development of a suitability matrix to fit activities to the land.
B. Consider proposal of Gruen and Gruen for a control system relative to the coastline of California.
C. Physical factors already available included such static attributes as:
   1. Physiographic
   2. Pedologic
   3. Geologic
   4. Hydrologic
   5. Climatic
   6. Biotic
   7. Unique site of situation of high scenic value
D. Dynamic site attributes available from existing information included factors:
   1. Population
   2. Historic-archeologic site
   3. Transportation
   4. Utilities
   5. Public recognition
E. Competitive uses would be examined for compatibility with alternative sites and priority in terms of economic dependency on specific location.
F. Economic dependency would be measured in terms of the opportunity costs of locating the establishment elsewhere for the private investor.
G. The general decision process might follow the outline attached.
H. Impact is not only a question of ecological or fiscal concern for eventually the choice means somebody gets hurt to benefit somebody else. Issues of impact can be reduced to:
   1. Who benefits by how much?
   2. Who pays by how much?
   3. When does a change in land use take place?
I. Cost benefit must also deal the transfer cost of lost opportunities which are the price of doing nothing with a scarce resource which will be the inheritance of the next century.
J. Value judgements are eventually political decisions. For example, what of the issue of jobs now vs. the future landscape? Who decides? and if the work ~~wakk~~ week must be shortened who tells the public to choose recreation which does not waste energy ~~as~~ or contribute to pollution?

IV. Although federal government still lacks a total set of national priorityes, one consensus already apparant in federal programs is that the flow of rural poor to the city should be stopped or reversed.
A. Programs for rural area development
B. The Farm Home Administration
C. The Small Business Administration and
   The Rural Assistance Administration
D. Federal loans for construction of newtowns
E. Federal programs for rural poverty pockets such as Northern Wis. and Mich. or Appalachia

V. Land use decisions in the private sector can be manipulated obliquely by the federal government through a wide variety of governmental agencies.
A. For example, IRS has shaped its depreciation policy to encourage or discourage investment decisions.
   1. Certain kinds of industries are permitted a 5 year write-off of new plants and equipment which are dispersed into rural areas.
   2. Renovation of old apartment units is encouraged by permitting a 5 year write-off of all remodeling expense if it exceeds $3500 per dwelling unit.

3. Investment in subsidized low income housing is given more rapid relief from the tax on excess depreciation and if the building is eventually sold to its tenants the investor pays no capital gains tax if he reinvests in housing for low iNcome families.
4. Investment in farms by non-farmers has been discouraged by disallowing some of the interest and expenses as deductions to determine taxable income.

B. FDIC and FSLIC can encourage or discourage certain kinds of land use by standards they establish for acceptable collaterol on:
1. Mobile home parks
2. Vacation homes
3. Inner core renewal loans
4. Subdivision design requirements

C. The federal government presently has no coordinated national land use policy. Sometime this year it will establish a program to subsidize states in their battle to reestablish control over local municipalities relative to land use.

Page 4 is missing

3. The externality criteria much go beyond the limited cost benefit question of whether the cost is positive or negative to the broader issue of who loses and who gains now and in the future. The paper mill may offer a high ecological cost but provide the only immediate employment opportunities to otherwise unskilled families. A value judgement must be made between preservation of the environment for the future and opportunities which are fair to those here now.

4. The question of who wins and who loses and when is involved in a basic social weighting of issues of equity and posterity. Each developmental decision now reduces the amount of choice which future populations will have.

I. Systems thinking is just beginning to operate on quantitative approached to "Cost Effectiveness" and capital investment efficiency test. These are the tools of logical argument. What are the transfer costs of lost opportunities which are the price of doing nothing with a scarce resource to be the inheritance of the next century?

J. What will regional planning of land uses do to the values of parcels determined to be appropriate for a certain use or to be refused permits for specific uses?

K. Eventually these value judgements will have to be political. For example, an application to build a gravel pit and processing plant for making cement with a dependency on a specific site is clear and the fiscal benefits and costs are negative. However, the plant will provide 100 jobs in an area of high unemployment while creating some visual intrusion for 10,000 employed persons. Jobs now vs. the future landscape. Who decides?

IV. Federal government is still searching for a total set of national priorities but there is one element on which Congress has already agreed - namely that the flow of rural poor to the city should be stopped or reversed in order to reduce the pressure of the poor on big city budgets.

A. Even Nixon pledged to give the rural hinterland economic assistance to create jobs in homes of a quality competitive with urban alternatives. As a result a number of rural area programs have recently developed.

B. The Farm-Home Administration (the other FHA) made possible no down payment and even subsidized loans to families in rural areas. While technically, a township is rural rather than urban if it has less than 25 residents, the FHA could make loans in communities of up to 50,000 people and it was creating new housing in areas where the majority of substandard housing in this country exist - in the rural areas. Most of its programs for low income families were frozen by Nixon in January of 1973.

C. Both the rural assistance administration and the small business administration have made special loans available to develop recreational industry and other employment opportunities in the hinterland and a wide array of government projects are given additional priority when they are located in high unemployment rural areas.

D. Special federal loan programs for new towns are in part intended to divert population migration away from existing metropolitan centers.
E. In addition, federal government funds have subsidized the formation of agencies such as the Great Lakes Regional Planning Commission to see how land use affects use of our inland lakes systems and how pollution can be averted or reduced.

V. Land use decisions can also be affected obliquely by a wide variety of governmental agencies.
   A. For example, the internal revenue service has shaped its depreciation policies to encourage certain types of investment decisions.
      1. Certain kinds of industries are permitted a 5 year write-off of new plants and equipment which are dispersed into rural areas.
      2. Renovation of old apartment units is encouraged by permitting a 5 year write-off of all remodeling expense if its exceeds $3500 per dwelling unit.
      3. Investment in subsidized low income housing is given more rapid relief from the tax on excess depreciation and if the building is eventually sold to its tenants the investor pays no capital gains tax if he reinvests in housing for low imcome families.

   B. The FDIC and the FSLIC and the FHA all encourage certain kinds of land use by the standards they establish for acceptable collaterol for mortgage loans on:
      1. Mobile home parks
      2. Vacation homes
      3. Inner core renewal loans
      4. Subdivision design and requirements

   C. At the moment there is no coordinated national or regional land use policy. It is apparant that the federal government begins simply to establish some broad goals but leaves responsibility for its implementation to the states. Tomorrow we'll talk about the present war between the states and their own municipalities.

   D. The Office of Interstsate Land Sales regulates any residential development with sales of more than 50 lots which is marketed on an interstate basis, and while it soes not directly regulate land use, it does require that the developer provide full disclosure in publicly filed reports which must be given each prospect before he buys. The assumption is that if the developer tells the truth about his soils, the availability of septic and building permits, the probability of flooding, the damage to the ecology, etc. that the consumer will not buy or invest in land which is not suitable for development.

   E. Recently the Securities Exchange Commission has ruled that the sale of partial interest in real estate for investment purposes, including condominiums, syndications, and tenancies in common, are all securities under the meaning of the law and therefore must be registered and sold subject to state and blue sky laws. This regulation only indirectly affects land use to the degree that it increases cost to the developer for registration and thus changes the scale of the project, either forcing it to be small to avoid registration or forcing it to be bigger than planned to spread the cost over a broader number of units.

   Since the law exempts projects under 50 lots, many existing projects are off the market while pondering the cost to register.

URBAN LAND 550
Government Regulation of Real Estate - Part II

I. Land use decisions have historically involved local participation by the citizen.
   A. Citizen has direct give and take in:
      1. Zoning varianced and reaoning
      2. Tax assessment appeal
      3. Correction of defects in city services
   B. Citizen has indirect impact through citizen commissions on:
      1. Public works
      2. Building code enforcement and revision
      3. Traffic control and public transportation
   C. Attitudes of public administrators have long term effects which are obscured from but sensitive to public opinion.
   D. Fragmentation of metropolitan government makes long term priorities for regions impossible to sustain.
      1. Federal efforts to bribe regional planning lack legal clout
      2. Confusion of land use with balanced budgets makes local control parochial, partisan, and short term

II. Dane County is an example of fragmentation.
   A. Three cities
   B. 20 villages
   C. 25 townships
   D. County Board of Supervisors
   E. 80 special districts and city authorities
   F. Expertise at each positionvaries greatly
   G. Special districts and city authorities can be nearly autonomous in the short run or long run when membership is appointed by the courts. Their long range decisions may be internally logical but undesirable from metopolitan point of view.
   H. While Madison has 129 different units of government, Chicago has 800 and New York has 1500 little political empires.

III. In addition to formal governments there are problems of equal representation and apportionment, political parties, community power structure and urban-suburban clash.
   A. Apportionment problems have been temporarily resolved.
   B. Political split is between the lethargic majority and the poor and the rich who are most injured by present urban conditions.
   C. Community power structure is a pyramid concept which is rearranged over each issue.
      1. Big business is not a significant factor
      2. Regretably, big business lacks a proprietary interest in community.
   D. Urban political power is by association of special interest groups such as Chamber of Commerce, League of Women Voters, or neighborhood associations.
   E. Communication media represent a local power.
   F. Economic power of public officials with tax money to spend or favors to grant.
   G. Politicians or citizen groups have short term viewpoints and a fasination with manipulation of the power structure per se.
      1. Each problem is delt with as a separate crisis
      2. A comprehensive approach is frustrated unless there is a tremendous educational effort for each minor reform and consensus
   H. Regional planning commission has had a little success in dilution of power of any one community but often its choices go against large groups of vested interest.

1. San Francisco Bay development commission
2. Dane County Regional Planning Commission discussions of 5 master planning alternatives
3. Most people not immediately effected are lethargic while vested interests are strongly represented.

I. The search for a compromise between local land use control and federal control is focusing on state administered land use planning and control.

IV. There are several approaches to state control ranging from total land use control to stand-by or floating control which allows the state to intervene locally in matters of special concern or appeal.
   A. Hawaii, first state to designate all land use as of 1961
      1. 4 designated uses for conservation, agriculture, rural and urban
      2. Has proven more politically stable than Island County politics
      3. Suitable land uses do not match existing population distribution or job distribution
      4. State must now work to develop jobs and voluntarily relocate people from Oahua to other islands. How do you match land use suitability to people's location preferences?
   B. Vermont in 1970 set in motion a state master land plan. It is controlling speculative development but needs amendment so that tax assessment values are compatible with permissible uses.
   C. In 1970 Maine enacted a Site Location Law for all developments in excess of 20 acres. It has controlled residential recreational land and costs them rejuvenation of their industrial base.
   D. Florida land and management acts permits states to intervene in areas up to 500 acres in size.
   E. 20 states have some restrictive land use program
   F. Fierce local resistance to removal of local zoning perogatives as zoning has basic power to determine social mix, tax base, and burden of taxation.
   G. A federal land use act of 1973 may strengthen state pwers but answers will still be compromises.

V. Land use control not only concerned with what goes where but also with the <u>when</u> of development
   A. No growth of slow growth policies due to court denial of exclusionary suburban land use zoning
   B. The significance of the Ramapo ordinance in New York
   C. In past zoning ordered land use spacially or regulated bulk and height of improvement.
      1. Since 1920 platting was only conditional on certain elements being present in the plan. No need to prove a market or favorable impact on community.
      2. Unique in Ramapo is that permit to subdivide is tied directly to schedule of capital improvements being built by the township for roads, sewage, etc. In short, township could expand at a rate that was fiscally prudent.
      3. Land acquires points as 5 basic facilities become available or were scheduled to be available according to an 18 year capital budget program.
      4. Developer can buy points from a contiguous site which he does not wish to develop.
   D. Maryland is considering a state ordinance giving all land owners a certain number of points based on sq. footage or acreage. Developers with land suitable for development would have to buy points from landowners not wishing or unable to develop in order to have enough points to have economic density. The result would be to share land development profits from monopoly characteristics of developable land. <u>Land use control is value control and income redistribution.</u>

URBAN LAND 550
State and Federal Regulation of Land Use
Lecture Outline

I. Regulation of land use and real estate decisions by the state and federal governments can take a variety of forms and can be further subdivided by several broad areas of policies affecting land use so that state and federal governments have a pervasive and growing role in land use decisions, big and small.

   A. Several broad decision areas include
      1. Natural resources including timber, mineral, shoreline, and off-shore ocean bottoms.
      2. The rural hinterland, particularly agricultural land
      3. Urban land and the urbanization process

   B. Direct control used by government include:
      1. Outright ownership
      2. Regulation of the property owner ([illegible])
      3. Regulation of financing institutions

   C. Some indirect controls would include:
      1. Creation of enabling legislation for political subdivision control of the property owner
      2. Subsidy of particular land uses
      3. Economic penalties on certain land uses

   D. Political fragmentation at the local level has led to pressure for regional and state recovery of regulation rights and the federal government hopes to encourage state action by subsidy of the staffing requirement. Even more immediate is what the federal government will do with the lands which it owns.

II. U.S. Government controls 755 million acres of land representing 34% of the 2.3 billion acres which make up the U.S. Almost every government agency has its own land program and land use policy.

   A. Some agencies which control huge acreage are:
      1. Department of the Interior
      2. Department of Defense
      3. National Park Service
      4. Bureau of Indian Affairs
      5. Government Services Administration
      6. BUREAU of LAND MANAGEMENT

   B. Other government agencies do not control large acreages but own an infinite number of small individual parcels, many of which are surplus:
      1. The U.S. Post Office
      2. Federal Housing Administration in its inventory of foreclosed property
      3. HUD-Division of Urban Renewal

   C. Congressional Proposals for establishing a Federal Land Use Policy have passed at least one house;
      1. The Aspinall (defeated in re-election) Proposal to bring all federal government land under a single Federal Land Use Commission to pursue national priority without having one department defeat the objectives of another

2. Such an approach is in direct conflict with long term strategy of conservationists who are attempting to compartmentalize and segregate specific protected uses within government agencies they can control

D. The Senator Jackson approach would be to subsidize state efforts to create masterplans and public regulations for land use. Federal grants would probably require a state to provide and maintain:
1. Inventory of resource data
2. A single authority to administer land use policy
3. Train an in-house capability for technical and professional expertise
4. Identify those land areas subject to the public planning process

E. A similar federal proposal relates only to coastal lands on the oceans and the Great Lakes which would provide $67 million to the state for shoreland regulation as in California or Wisconsin.

F. To achieve a legislative consensus on ground rules and priorities for land use, it is necessary to balance the interests of consumer, producer, and the public when the only articulate groups represent the view of extremists from among those who speak for:
1. The no-growth viewpoint on the basis that we are rapidly exhausting the ability of earth to sustain life.
2. The preservationists who regard it an aesthetic and moral issue to conserve the natural just because it is natural.
3. The business viewpoint that all capacity to solve problems depends on unlimited business expansion.
4. The opportunists who find the issues favorable to a selfish point of view so may want a new airport or powerplant but in somebody elses backyard.

G. It appears that legislative moves to kill the Federal Land Use Act have been successful for this year (as well as in the Wisconsin Legislature) as the lobbyists raise the emotional issue of private property rights.

III. At the state level there has been more success in establishing some degree of land use law to control narrowness of viewpoint of the private land owner and political decision making in fragmented local government.

A. Hawaii--the first in 1961--designated every square inch of its island as suitable for one of four uses
1. Uses were conservation, agricultural, rural, and urban
2. State Land Use Commission also serves as Board of Appeals
3. Unbalanced population distribution due to decline in agriculture has made for housing shortages on island of Oahu.
4. To balance demand and designated supplies it is now necessary to subsidize economic base employment on the other islands

B. 1970--Vermont Environmental Control Law--three stages
1. Inventory
2. Masterplan and zoning for entire state
3. Correction of economic conflicts in terms of recreational development to correct unemployment, changes to market value and therefore tax base, tec.

C. 1970--Maine--Site Location Act requires state approval of major developments in excess of 20 acres.

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   1. The no-growth viewpoint on the basis that we are rapidly exhausting the ability of earth to sustain life
   2. The preservationists who regard it an aesthetic and moral issue to conserve the ~~natural~~ nature just because it is natural
   3. The business viewpoint that all capacity to solve problems depends on unlimited business expansion.
   4. The opportunists who find the issues favorable to a selfish point of view so may want a new airport or powerplant but in somebody elses backyard.

G. It appears that legislative moves to kill the Federal Land Use Act have been successful ~~for this year~~ (as well as in the Wisconsin Legislature) as the lobbyists raise the emotional issue of private property rights.

III. At the state level there has been more success in establishing some degree of land use law to control narrowness of viewpoint of the private land owner and political decision making in fragmented local government.

A. Hawaii--the first in 1961--designated every square inch of its island as suitable for one of four uses
   1. Uses were conservation, agricultural, rural, and urban
   2. State Land Use Commission also serves as Board of Appeals
   3. Unbalanced population distribution due to decline in agriculture has made for housing shortages on island of Oahu.
   4. To balance demand and designated supplies it is now necessary to subsidize economic base employment on the other islands

B. 1970--Vermont Environmental Control Law--three stages
   1. Inventory
   2. Masterplan and zoning for entire state
   3. Correction of economic conflicts in terms of recreational development to correct unemployment, changes to market value and therefore tax base, etc.

C. 1970--Maine--Site Location Act requires state approval of major developments in excess of 20 acres.

D. 1972--Florida Land and Management Act
   1. Give state permission to regulate or prevent development anywhere in Florida designated as an area of critical concern not to exceed 5% of state land area or 500 thousand acres
   2. A fifteen ~~Man~~ Member commission has only two reps from land development industry

E. Twenty states have land use laws restricting development of special areas such as shorelines, scenic areas, or particular regions such as the Adirondack Park Regional Plan Commission.

F. In Wisconsin under present statutes the state may introduce zoning relative to shorelines, streams, subdivisions, and health when counties have no laws which meet state minimums.
   1. Plotting laws may involve a variety of state agencies but control only areas in which five or more lots are less than one and a half acres
   2. Administrative arrogance has a devise to project control beyond specifics of legislative intent.

G. Federal and state level land management has fierce opposition from local officials with a vested interest in zoning. Zoning is the basic power of a community to determine its social mix, its tax ratable base and who pays the tax. It determines land value and the character of the cash cycle. This resistance produces partial answers to broad scale land use control only when there is a consensus relative to wetland or large scale projects with negative consequences as found in Florida.

. States are also becoming major owners of the land within their borders and like the federal government have no clear policy for its best use. Often state land policies are counter productive even though they continue to create more reasons for ownership.

A. Environmentalists are reluctant to see the University sell its remaining farms within the city of Madison "to protect open space" even though this forces greater urban sprawl and extension of the city utilites and streets into the countryside prematurely.

B. Purchase of wilderness areas by the state from private purchasers creates public pressure for access as parks, ~~when~~ before the private owners excluded everybody, thereby reducing encroachment on natural areas.

C. The state of Wisconsin owns vast acreages of woodlands on less desireable lakes and streams and little on deepwater lakes which feel pressure of excess development. Still it would be reluctant to sell the marginal wilderness land to generate funds to purchase land with more development pressure.

D. Thirteen states now have state housing or development agencies which can finance and build low income housing projects. In general, these require such large scale projects to be administratively efficient it requires demolition of the supply of low cost housing or locates in vacant areas without the desired amenities.

E. Some agencies like the New York Port Authority actually undermine the market demand and thus tax ratable base of private properties supplying the same need by creating a surplus. (dormitory housing in a university town for example)

F. Scattered small parcel purchases without corresponding sales of surplus properties leads to a cumulative cost of maintainance, loss of tax base, and distortions of supplies in the private market.

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Business 550/705 Lecture Outline

Real Estate Investment and Federal Income Taxation

I. Nothing Takes the place of productive profitable real estate but federal tax policies on income, capital gains, and estate transfer by gift or inheritance has had a significant impact on shaping real estate investment decisions.

A. Income taxes are oversold by brokers, over-valued by amateurs, and misunderstood by the public.

1. Is it a loophole for the rich or inefficient federal subsidy for construction?
2. Does benefit from strongest political lobby in Washington?
3. Real estate development a major source of employment and assistance to fiscal desperation of municipalities
4. Real estate business reverse of typical business - high fixed asset, low working capital ratio

B. Brooking Institute estimates single family home is the largest tax loophole in terms of tax dollars lost because of special privileges

1. Interest and real estate tax deduction
2. No capital gains tax on sale if you buy another in two years
3. One time exemption of $125,000 capital gain if you sell after the age of 55

C. Objectives of tax review in this course is not to teach you the intricacies of the new tax law but rather:

1. To show the sensitivity of investment to tax matters
2. To show the use of tax law as a federal device for providing land use priorities
3. To teach you some of the tax strategy in general with a few examples
4. Recognition of the income tax law as a subsidy to make real estate competitive for capital

D. Real estate has the same tax treatment as any other business asset but has a higher silhouette as compared to other businesses

1. A building is a single machine for making money as compared to other businesses using many small machines which can be bought and sold individually at a smaller scale of entry.
2. The impact of rising prices on business equipment is difficult to trace to product prices while the imact of construction costs, real estate taxes, etc. can have an almost immediate impact on rent which in turn is a major factor in household budgets

Match to next page

E. For the taxpayer any tax strategy can be classified as a combination of:

1. Reducing that portion of net receipts which is recognized as taxable income.
2. Reducing the marginal tax rate applicable to the taxable receipts.
3. Postponing the payment of taxes due to recognize the opportunity costs of present value money.
4. Avoiding one or more federal taxes through a change of involuntary shift in status of property ownership or condition.

F. Government strategy relative to the income tax involves some combination of:

1. Collecting adequate revenues to finance government operations
2. Encouraging investment in productive assets as opposed to current consumption to close the savings-investment gap and to stimulate employment while generating a larger taxable income in the future.
3. To channel investment and consumption toward national priorities
4. To redistribute wealth and break up extra large family fortunes

II. The Basic Alternative Income Tax Stnategies or Tax Ploys will be identified (underlined) and then a couple of illustrations of each discussed below:

A. <u>Reducing taxable income, particularly income subject to a progressive tax rate, to postpone income tax:</u>

1. Accelerated depreciation understates taxable income in the early years but overstates taxable income in later years. Opportunity costs of money must be higher than increasing marginal tax rates which would apply to recapture of tax shelter or overstated income.

2. Investment tax credits which apply directly to taxes due; for example, buildings more than 40 years old and calssified as landmarks enable the developer to take an investment tax credit for 25% of all remodeling expense with long carryback to refund taxes paid in previous years.

3. Taxpayer option to expense certain capital expenditures such as development costs of a vinyard, irrigated farming, or holding costs on vacant land awaiting development. Tax reform has severely reduced those but still favors such election for subsidized housing.

B. <u>Reducing the marginal income tax rate by shifting property to alternative forms of ownership or timing of proceeds</u>.

1. Shifting ownership from the individual at the 50% marginal tax rate to a small corporation which enjoys a low progressive rate on the first $1000 of taxable income. Income from real estate can be further reduced by payment of salaries to the investor to escape higher tax rates on investment income and by establishing tax deductible contributions to pension funds.
2. Distributing receipts from sale over time through installment sales contracts or avoiding sales profits by leasing vacant sites which have appreciated significantly in value.
3. Shifting income to individuals with low tax brackets by using short term trusts for the children, different classes of stock, or gifts of partnership units may put the income with the lowest marginal rate.

4. Ownership of a home to permit deduction of interest payments and real estate taxes on personal income

C. <u>Converting taxable income to capital gain to reduce the applicable tax rate</u>

1. Purchasing a home with a very large mortgage loan on which interest payments are deductible converts net income to a future capital gain if the home appreciates in value each year more than the after tax

interest cost. This ploy is more feasible when interest rates are 7% rather than 17%.

2. Accelerated depreciation before recapture laws permitted investors to understate taxable income and then sell the property at an overstated capital gain, thus converting income to capital gain and its lower marginal rate. (Capital gain = net sale price - book value).
3. Purchase at a low price and then increasing income through good management and marketing and then selling the property for the present value of the future income converts the rewards of your services and expertise from taxable income to capital gain.

D. <u>Postponing the payment of capital gain taxes</u>

1. The owner-resident of a single family home can sell his property and postpone a capital gains tax by reinvesting in another home of equal or greater value within 24 months.
2. Involuntary conversion of a property to cash as a result of a natural disaster, casualty loss, or eminent domain permits investor to rebuild or relocate within a specified time without paying a capital gains tax.
3. The trade or exchange of like kinds of investment property is not taxed. Instead each party takes his old basis with him which is then adjusted for the net change in his debt position or the amount of "boot" he received. Boot is non-like property such as cash.

E. Complete avoidance of all or part of the capital gains tax would result when:

1. The owner of a single family home is entitled to a one time examption of $100,000 profit or capital gain if he sells his home after age 55. The theory is a home is his major savings program and the cash is needed for retirement income.
2. When investment property is held until the owner dies the estate receives s stepped-up basis equal to market value on the date the owner dies. No capital gains tax is paid if the property is then sold but market value is included in computing the taxable estate value.

F. Real estate lends itself to reducing estate taxes in the transfer of wealth from generation to another.

1. Real estate in farm and small b usinesses will be included in the estate of the owner at their use value rather than their market value to reduce estate taxes and the need for cash if the heirs continue to operate the business or farm for at least 10 yeans following the death of the original owner, thus achieving a partial avoidance of capital gains and estate taxes up to a maximum of $500,000.

III. Achieving the various tax ploys is complicated because federal policy provides incentives and penalties for different priorities of property development, tax purposes of ownership, and the form of the ownership entity.

A. There are three basic questions which need careful definition and structuring of answers for each investment.

1. What type of rezl estate is it for depreciation and other tax ploys available?
2. What is the tax purpose of the real estate ownership position?
3. Is the ownership entity a single tax or double tax situation, a tax conduit to the individual or a corporate organization?

B. First a property must be classified both on the physical facts and the actual or implied intent of the owner as one of the following:

1. The personal residence
2. Farm or extraction properties
3. Investment residential
   a. First user, or second user
   b. Residential rehab
   c. Conventional financing or federally funded and subsidized
   d. Date acquired
4. All other properties (limited depreciation and full recapture)

C. Tax rules differ depending on the presumed purpose of the investment imputed to the taxpayer in any given property. There are three alternatives defined by the IRS:

1. For use (users have more liberal ordinary income - ordinary loss elections)
2. For investment income and long term appreciation (for which capital gain treatment is available with some elections to expense or capitalize holding costs)
3. For trade or inventory (dealers status for which capital gain is almost never available)

D. Because investors in real estate want some of the short term tax shelter benefits at the same time that they can participate in large group investments, real estate is very sensitive to whether ownership entity of a group investment is a single tax conduit or double tax corporate entity:

1. Single tax entities would include:

   a. Single proprietorship
   b. General partnership
   c. Sub-Chapter S Corporation
   d. Limited partnerships
   e. Other non-corporate associations

2. Double tax entities would include:

   a. Corporations not exempt above
   b. Associations for profit with three or more of the following characteristics.

3. In addition two or more people associated for profit is corporate if it has three or more of the following attributes:

   a. Limited liability or investors
   b. Centralized management
   c. Unlimited continuity
   d. Marketable interests

IV. There remains a general suspicion that real estate investment tax policy is a privileged domain of the rich. This may be because marginal rates are highest for the rich and tax savings to other income is highest to those with the highest marginal rate while interest cost has the lowest marginal cost to the same rich folks since we're soaking them pretty good. Then there is the fetish of the rich to spend $1.50 to save $1 in taxes which leads real estate promoters to produce the best tax shelters rather than the best people shelters.

A. Critics who oppose tax shelters argue that:

1. Present tax laws lead to excess building and misallocation of national resources and priority.
2. The cost in lost tax revenues of 2-3 Billion a year would be much more effectively used if collected and redistributes as a consumer subsidy for the low income family.
3. The capital attracted to real estate is siphoned off by developers and brokers up front since most of the property has almost 100% financed anyway.
4. The economic logic is faulty when it argues that to provide decent shelter for millions of Americans, the system must first produce several hundred thousand tax millionaires.

B. Such tax advantages that there are are justified according to some because:

1. Long term ownership is so risky, investors would not invest if payback was not accelerated by tax saving.
2. Unlike automobiles real estate depends on thousands of small investors for capital and could not compete for money unless there was an additional return in the form of tax benefits.
3. By attracting new capital to real estate housing construction is stimulated, but rents can be lower since the investor receipts part of his return ih the form of tax savings.
4. As a producer subsidy stimulates employmemt and maintenance of a competitive supply of space to reduce monopoly advantage of existing buildings.

C. During the past several years gradual modification of taxes relative to real estate have been taking place in regulations, technical aspects of the law and auditing. Lobby interests have helped real estate fare better than the other tax shelter games such as cattle, professional sports, oil, corporate farming and shipping. Such organizations as The National Association of Realtors and the National Association of Apartment Owners have been able to convince Congress that the real estate Industry really consists of hundreds of thousands of small investors who are relatively disorganized and whose real estate gains have cushioned the significance of inflation caused by Congress. As a result real estate investments have escaped to some degree the impact of such reforms as:

1. Preferential income tax of 15% of capital gains and accelerated appreciation, depletion of, etc.
2. Limitation on depreciation to equity "at risk"
3. Limitation on artificial accounting losses by expensing capital development costs
4. The addition of special tax investment credit for renovation of older commercial buildings and elimination of architectural barriers for the handicapped.
5. The addition of five year writeoffs for renovation of residential units and landmark buildings
6. Special deductions for investment and pollution control, energy conservation, or gifts for environmental protection

D. In 25 years federal policy on taxes has shifted from treating real estate like any other capital asset to detailed regulations providing penalties and bonuses for real estate investors that express national priorities relative to land use and urban development. Ironically the federal tax laws represent the most explicit and operational federal land policy we have today.

LECTURE SIX - outline
Introduction to Real Estate Cash Flow

I. The clustering of activities which need certain locational attributes and the economic base and derivitive needs begin to define the opportunity areas for real estate enterprise.

   A. The facility to house any activity is a space-time product and the business of providing that product operates by converting space-time to money-time.

   B. The forecasting of future money returns to a present investment is the ultimate business problem and the dynamics of these problems explains the actions of consumer, producer, and the society.

   C. An investment in a bond can be defined as to when it begins in time, when it is sold, when coupons are collectable and total costs and total receipts under alternative outcomes. Thus, yield is easily computed and risk depends on whether you can rely on the promisor.

   D. Real estate financial forecasting seldom enjoys such a rigid set of financial specifications and therefore seldom enjoys conservative conditions of certainty. An investment in real estate really means somebody "bought" a set of assumptions.
      1. Risk is the potential variance between assumptions and realizations, between proforma prospects and the historical balance sheet and P&L statement.
      2. Degree of professionalism is measured, ultimately, by the care with which assumptions are made and supported by careful research.

   E. Financial analysis presumes rational decisions but later we can introduce the importance of the irrational or the intuitive.

II. Basic cash flow analysis depends on four essential sets of assumptions:
   A. Schedule of cash outlays (capital costs and expenses.)
   B. Schedule of cash receipts (periodic and reversions.)
   C. Net cash flows for each period (negative and positive.)
   D. Devices for comparison of alternatives

   E. However it quickly becomes apparent when accounting for the dollars "in and out" that not all dollars are the same. Some are current expenses while others represent aquisition of assets and many are shared with local and federal government through various tax processes.

   F. If cash solvency or cash profits is the eventual objective of decision making, it is necessary to put all dollars on a common denominator -- after-tax dollars per period.

III. In that light, the basic elements of outlays and receipts can be expanded to include details or assumptions about the following factors:

   A. Definition of desired profit centers.

   B. Definition of a timeline over which events will still take place

   C. Assumptions on the capital budget and sequence of source and application of funds

1. Direct construction or purchase cost
2. Indirect and capitalized carrying cost

D. Assumptions on operating budget and sequence of source and application
   1. Pattern of sales revenues
   2. Pattern of operating expenses

E. Financial plan
   1. Credit amounts and terms
   2. Equity amounts and terms
   3. Holding power

F. Profits classified as to type and tax
   1. Cash from operations
   2. Cash from capital gains
   3. Cash surplus from financing
   4. Cash from tax savings on other income

G. Selected measures of profitability
   1. Definition of investment
   2. Definition of profit
   3. Selected ratios of profit to investment

H. Selected measures of risk
   1. Payback periods
   2. Capacity for variance
   3. Variance controls

IV. For a rental investment property the general format for determining after-tax cash flows for each period or year would generally be as follows:

PART I. ANNUAL (PERIODIC) RETURNS TO INVESTOR

A. Estimate potential gross cash income; Cash income from space sales

B. Deductions from potential gross
   1. Normal vacancy
   2. Seasonal income loss
   3. Collection losses
   4. Franchise fees, deposits returned, etc.

C. Add "other" income from service sales

D. Derive <u>effective gross income</u>

E. Deduct <u>operating expenses</u> (on expected cash outlay without accrual reserves)
   1. Fixed expenses
   2. Variable expenses
   3. Repairs and maintenance
   4. Replacements

F. Derive <u>net operating income</u> (NOI)

G. Deduct <u>annual debt service</u>
   1. Contract interest
   2. Supplementary variable interest
   3. Principal amortization

H. Derive cash throw--off

I. Add back principal payments and replacements

J. Deduct tax depreciation allowance

K. Derive taxable income

L. Determine marginal income tax on real estate income

M. Deduct income tax from cash-throw off (H)

N. Derive after-tax cash flow

O. Add tax savings on other income (if K is negative)

P. Add surplus from refinancing

Q. Derive spendable after-tax cash

PART II. RESALE (REVERSION) RETURNS TO INVESTOR

A. Estimated resale price (end of period)

B. Deduct broker's commission and other transaction costs

C. Derive effective gross proceeds from sale

D. Deduct all credit claims outstanding (end of period)
   1. Short and long term note balances due
   2. Prepayment penalties
   3. Deduct equity shares to non-owner interest

E. Derive pre-tax reversion to equity

F. Deduct tax claims on ownership interest
   1. Deduct capital gains tax
   2. Deduct income tax on disallowed accelerated depreciation
   3. Deduct surtax on taxable preferential income

G. Derive after-tax resale proceeds to investor

V. Some modifications of this basic model
   A. Timeline could be extended to include construction phase and initial rent-up.
   B. Profit centers are assumed to begin with net income line but could be modified to include profits inherent in expense outlays.
      1. Requires definition of single enterprise or degree of consolidated accounting
      2. Requires clear understanding and allocation of profits for use of land, labor, capital, or management inputs.
   C. Definition of tax rate depends on whether investment is viewed alone or as part of larger portfolio.
   D. One set of numbers represents a set of assumptions assuming conditions of certainty. In practice investor would test alternative sets of assumptions and outcomes for the best and the worst and the central tendency of possibility.

The Real Estate Process - Business 550

Windfall or Wipeout - Lecture Outline

I. Assuming firm public control on land use both as to location and sequence, there are a number of undesirable impacts on cash flow:

   A. Public planning creates monopolies and destroys long term income expectations simultaneously, in effect changing the rules throughout the course of the game.

   B. The name of the game is therefore windfall and wipeout.

      1. The consumer may see his home price appredia**te for a windfall gain or see his expectations of buying a home wiped out for lack of development land at a price he can afford.

      2. Existing businesses on long term leases gain a significant advantage since no duplicate facilities may be permitted or may find sites for future expansion devalued to virtually nothing due to greater technical precision in the definition of suitability.

      3. Communities may benefit by receiving the right to have industrial and economic base development or may be banned by regional planners from economic development which would restore employment and vitality. Communities may find they have overbuilt public service capacity in expectation of growth no longer permitted.

   C. Limitation on what is developable may accelerate intensity in certain areas at the expense on landmarks, aesthetics, or public infrastructure capacity or social reform.

      1. Land is a residual value. Total present value less construction cost equals maximum value which can be paid for a site.

      2. Site cost may include demolition of functional buildings if the present value is less than the residual value of vacant site.

II. Since increasing amounts of space will be needed to house even our present population as it matures, public policy must be able to channel the physical development onto those sites which are best suited for it while diverting the wealth created in land residuals to all those owning land, many of whom have been denied development opportunity.

   A. The state has been conducting studies to compare the cost of alternative land use policies in terms of public capital and operating cost necessary to service 1,000 additional dwellings.

      1. Transportation and other utilities cost more in low density areas than in high density areas. Educational, protection, and recreational costs don't differ that much.

      2. The study recognizes all transportation costs as a regional cost system including private vehicles, public transit, etc. Utility costs include substitution of private septic for public system.

3. The study recognized five residential environments:

    a. Urban
    b. Suburban (Middleton, McFarland, etc.)
    c. Exurban (open countryside near Madison)
    d. Outlying Communities (such as Stoughton or Mount Horeb)
    e. Rural

4. The study concluded that rural was cheapest because the level of protection, education, and recreation were a little lower, although on a state-wide basis energy costs were 50% higher. Rural used existing road networks.

5. Urban development was close to rural in cost because density reduced transportation and utility cost per dwelling unit.

6. Suburban and outlying communities cost 25% more than major urban while exurban development might 50% more costly than compact urban development.

7. The conclusion was that if saving money on community infrastructure is important to citizens, an increase in density and a reduction in exurban leap-frogging will save significant sums. The report seems to be suggesting a change in policy to urban containment or compression.

III. That policy would increase land residual values for low intensity use sites in existing urban areas and create economic pressure for development of golf courses.

A. The transferrable development right is thought to be a way to shift the economic pressure by giving the owner of a golf course or a landmark or wet land some of the residual land value created by transferring potential for intense development to another site.

B. A TDR must be a fundable unit of development which is an appropriate measure of development potential. Various units suggested include:

1. Dwelling unit ratio per acre.

2. Floor area ratio (FAR).

3. People per acre.

4. The cubit - one cubic meter or cubic foot including a permissible one-tenth of a unit of impervious surface.

C. Note that each of these is a space-time unit which implies a high degree of correlation with money-time, although that coefficient of correlation may change from place and time.

D. To maintain a space-time, money-time correlation the transferrable development right must be scarce or limited in supply, in constant demand, and easily available without permitting monopoly, undesirable speculation, or significant discrepancy manipulation by public officials. It must relate to major land use problems including taxation, eminent domain, land planning with equity, as well as the nature of real estate enterprise.

E. TDR's first depend on definition of the geographic area within which they are transferrable. The New York plan limits the range to a single square block, the Chicago plan to the Loop, Maryland to the county. The rights always attach to another piece of property or a public TDR bank to prevent speculations by outsiders or non-landowners.

F. Public policy must define the measure of potential for the affected land and then grant increases in that potential to sites which the public would prefer to be developed. The increase is bought from potential development sites on which no development is desired.

1. Note the result is to transfer wealth created in the form of land residuals from one location to another.
2. Note that compensation to private owners under eminent domain might be made in TDR's rather than cash.
3. Note that the cubit system would apply equally to private developers or public projects such as roads, airports, etc.
4. Real estate taxes could be prorated in part on TDR's rather than values, creating a holding cost for tax exempt speculators like churches, private schools, or universities without the necessity of appraising their structures and facilities.

IV. The TDR is now beginning to receive legislative attention in many states including Maryland, New Jersey, and Connecticut. However, the most significant legal recognition of the TDR has occurred in New York City relative to the Penn Central Station landmark.

A. New York City began to evolve a TDR in 1961 with a series of zoning law amendments.

1. The definition of zoning lot was changed to allow the merger of two separate but contiguous zoning lots when they came under common ownership. This permitted the construction of a taller building by "clustering" the unused development potential of both parcels onto one.
2. In order to solve the dilemma presented by a landmark structure which was already surrounded by development on all contiguous lot lines, the city permitted unused development rights to be transferred across the street. This provided another means by which the city could equitably handle the possible negative economic impact of designations under the New York City Landmarks Preservation Law.
3. Adding to the ability of the city to compensate landowners equitably for landmark designation was the 1969 amendment to the Zoning Resolution allowing the transfer of development rights to lots within a chain of common ownership.

B. The first transfer of this type began with an owner-initiated proposal. The owner of Amster Yard, a nineteenth century collection of small residential structures, open spaces, and stores in midtown Manhattan, was allowed to transfer a portion of his development rights to a nearby parcel for use in the construction of an office building. As a condition, the city insisted upon a promise to create a $100,000 trust fund, the income of which would be used for maintenance of the landmark.

BUSINESS 550
Consumer Protection and Land Use

I. The real estate process diagram shows a tension among consumers, producers, and public services. However, there is also a major conflict of interest among individual housing consumers, collective neighborhoods, and future consumers.

A. It can be easily documented that land use and real estate operations are the most regulated enterprises in the American economy.

B. Is the impact of all this regulation a better product or a more expensive one? In the land use game, who gets the monopoly on the good life?

C. Who pays and who benefits?

1. Few of those who are responsible for housing policies and land use regulation understand impacts of what they do on housing price, quantity, and quality.

2. Because the media tend to present complex subjects in a simple entertaining form, the housing consumer cannot identify who and what consumer protection systems are responsible for his not finding adequate housing at a price he can afford.

II. Consumer protection in the real estate area has always responded to disasters that were the result of a collective failure in common sense or collective belief that cash costs for a select few could be reduced by externalizing responsibility on others not a party to the decision.

A. Land use controls reflected a consensus and a feudal tenure design to maximize food production with the resources at hand while placing the consequences of waste on those who did not husband the resource.

1. Water rights and farmland in Mesopotamia.

2. Territories for trapping on the Saint Lawrence Estuary.

B. Building codes for safety derived from disasters like the London fire, innovations such as the cannon, and building collapse due to soils and water.

C. Community infrastructure developed as health hazards were recognized from sewage and water supply as well as need for control of crime and crowds.

D. Zoning was originally designed to exclude land uses which were thought incompatible with residential neighborhoods and retail service areas because of noise, smell, safety, or health.

E. The real estate sales guilds were legitimized as self-regulatory agencies, presumably to protect the consumer from incompetence and to lobby for policies conducive to home ownership in homogeneous neighborhoods. (Of course, licensing and peer group membership also encouraged monopoly pricing for commissions and political action to prevent public housing alternatives).

F. Earlier lectures have shown that consumer savers procted by FSLDIC or FDIC and borrowers under FHA-VA, gave the Federal Government the ability to set housing standards in excess of community requirements and the ability to indirectly hold down rents by encouraging production and sale of single family housing with long-term purchase financing.

G. To protect the individual consumer, the ten commandments which were originally on two small stone tablets have been converted into a million tons of rules and procedures.

1. To control profits of loan closing, the Federal Governement enacted controls on the indirect costs of a real estate transaction (RESPA, Real Estate Settlement Procedures Act, 1970-71).

2. The Office of Interstate Land Sales Registration (OILSR - December 1973). Exemptions are a subdivision of less than fifty units or bulk sales to developers, cemetary lots, or units to be registered as securities.

3. Since 1968, the SEC has regarded any partial interest in real estate which anticipates an investment profit from the management efforst of others to be an investment under either State or Federal blue sky laws. Sales must be by registered security sales people or by employees of the builder.

III. The future consumer and collective consumer is also protected by a variety of laws, rules and regulations to reduce damage to the environment. These regulations come into play where there is governmental involvement relative to approvals or financial assistance, or because of the proposed sites characteristics, or because the project will impact navigatable waters, or discharge any type of pollutant.

A. If federal financial assistance or approvals are required, it will be necessary to examine the project for compliance with the following:

1. The National Environmental Policy Act of 1969
2. The National Historic Preservation Act of 1966
3. The Endangered Species Act of 1973
4. Executive Order 11988 relating to activities in flood plains
5. OMB Circular A-95
6. Section 401 of the Federal Water Pollution Control Act ("FWPCA")
7. Section 307 of the Coastal Zone Management Act ("CZMA")

B. The first four impose review responsibilities on federal agencies while 5, 6, and 7 apply directly to private developers.

C. If state financial assistance or approvals are required, then it is necessary to review a project for compliance, in Wisconsin, with The Wisconsin Environmental Policy Act and the administrative rules thereunder. Documentation may consist of:

1. An acknowledgment on the part of the agency's designated WEPA coordinator as to the actions taken by the agency in fulfillment of its WEPA responsibilities;

2. A copy of the statement of estimated project cost and any EIS submitted by Sears or the property developer in connection with DNR permit application;

3. A copy of any DNR environmental screening sheet, PER or EIS prepared in connection with the project;

4. Where an EIS has been prepared, evidence that all required notices have been given and public hearings held.

D. In the name of environmental protection and consumer protection, the primary approaches to limit residential construction are zoning, direct restrictions on growth through growth management ordinances, and indirect restrictions on growth by using the obstruction potential of environmental legislation to reduce governmental expenditures for utilities, roads and infrastructure.

IV. The reduction in supply of residential lots, multifamily sites, and new land development will have a series of impacts easily forecasted buy typically not considered by those concerned with protection of the consumer, the environment, or their little neighborhood.

A. New construction represents one to three percent of the total stock but these housing units provide the safety valve that prevents demand from increasing the price of existing units or lowering the quality of some parts of the housing stock. Should new construction fall while demand remains constant:

1. Housing quality is polarized because the higher income consumer will see the value of his house continue to increase and therefore feel confident in investing more to improve their home.

2. Consumers in the lower income spectrum will resist rents which permit maintenance of the apartments or strain to buy a basic house with little money left for improvements. Absence of vacancies removes competitive pressure on landlords.

3. Restraining production means higher values for some, lower quality for others and a breakdown in markets providing choice and competitive pricing.

B. From 1962-72, number of households increased by 12 million while 17.7 million new units were constructed. A ratio of 1.5 new units for every additional household meant the quality of the existing housing stock was improving while disposable income rose faster than housing cost.

1. From 1973-1975, U.S. households increased by 4.5 million and only 4.5 million new dwelling units were built. The recution paralleled growth management rules and government managed interest rates.

2. Lower growth rates also meant increased costs to developers but not lower profitability. Developers could sell whatever they could build and pass costs through plus monopoly profit. In several areas, houses were sold on lottery and that tells the developer he is charging less than the market will bear.

C. Shifts from laissez-faire to severe restrictions often typify government actions to solve one social evil by substituting another. The question is why a more balanced land use system is so difficult to achieve?

D. The reasons there is so little balance between residential, commercial, agricultural, recreational, and open space land uses are:

1. The future consumer is never represented at the baragining table when land use legislative compromise is necessary. Politicians speak for constituents who already own a home and live in their ward, not those who would like to move into the jurisdiction.

2. Labor and material suppliers speak for those consumers who can afford new housing because that means construction jobs, material sales, and new developments.

3. Taxpayers want to avoid infrastructure growth which must be funded from increased assessments or housholds who may require more in municipal services than they may provide in tax revenue.

4. Households who already have what they want and will benefit from price increases of monopoly say they are preserving environment. Confronted with a dramatic increase in housing costs, they can salve conscience by advocating subsidized structures for the elderly.

5. The housing consumer is difficult to represent because he is not a single entity in his values, like the Sierra Club, but represents many micro-markets.

6. Those repsponsible for housing plans and regulations feel confident that they know what is best for the housing consumer or feel compelled to organize superficial surveys to support existing plans with favorable consumer input.

7. Individuals responsible for housing principles and land use regulations don't understand the feedback and adjustment systems inherent in the real estate process.

V. Land use policies for collective consumers which harm individual consumers can be reduced to some degree if the technology of impact models were considered more carefully and voters were allowed to choose between alternatives as they were not permitted to do in the MATC case.

A. However, many agencies will do what they wish to do because rationality in all group behavior is distorted by other motives.

B. In a reasonbly free society, one is permitted to be a damn fool or selfish. The Supreme Court makes it possible for suburban jurisdictions to exclude the poor by zoning (Arlington Heights), restrict growth (Petluma and Ramapo), or deliberately under-build sewer, (Fairfax County) water, and highway systems in order to plead environmental damage.

C. Since the American way is that you et what you pay for, an approach to mitigate fragmented and self-serving land use policies is to shift cash from those exclusive growth management areas to those which suffer the consequences in terms of higher cost they can ill afford:

1. This is the logic in Serrano vs Prest which requires equal distribution of school tax monies rather than allowing rich communities to have super systems and poor communities to have higher taxes or a minimal system. Governor Lucey wanted a negative school tax to shift funds from Madison and Milwaukee to areas of lower tax base per child.

2. A second shift would be to shift Federal and State grants for sewer, water, open space, and roads from those areas unwilling to accept more housing or low income households to those that do.

3. We could require that environmental protection agencies include the impact on consumer cost of housing, travel, and education over the life cycle of the decision as one element in the environment.

VI. After all, consumer and environmental protection means we ought to be protected to some degree from decisions we cannot afford. In the real estate process, we require equilibrium in terms of the collective consumer and the individual consumer just as we do between the production sector and the consumer sector. Who will protect the consumer from the cost of consumer protection?

Lecture #11 Outline
Institutional Structure of Mortgage Lending

I. High cost of real estate requires heavy debt financing. Real estate capital represents 2/3 of the nation's wealth and almost 50% of this is mortgage.

   A. A capital pool for loans requires assembly of small savings through intermediary financial institutions.

   B. Dominant institutions have been insurance companies, banks, and savings & loan associations but in the last decade several new institutional intermediaries have been created.

   C. Differences between instiutional intermediaries can be shown by comparison of five basic subsystems:

      1. A marketing system to compete for savings.
      2. A marketing to compete for loans
      3. The transaction preference system of the policy makers
      4. The liquidity system
      5. The safety system

   D. This lecture will relate historical development and reform affecting subsystems above.

II. Mortgage always associated with financial panic and brutality of capitalistic system.

   A. Absence of federal real estate credit policy until after World War I. Cheap land was incentive for national development.

   B. Mortgage business very local, provincial, and cyclical and subject to abuse by promoter.

   C. Mortgage banking industry grew up after World War I to bring capital surpluses into contact with real estate development needs.

      1. Prosperity made mortgages the blue chip investment for the middle class.
      2. Savings pools were created by cooperative action (S & L's)

   D. Flaws on mortgage instrument and lending procedures contributed to depression.

      1. Short term 1-5 year notes, interest only
      2. 50% loan ratios led to second and third mortgages to reduce down-payment.
      3. Decline in prices made borrower unable to refinance or unwilling to pay.
      4. Amount of loan depnded upon appraisal so competition took advantage of distorted appraisal.

   E. Depression made it impossible to finance which accelerated foreclosures which meant intermediaries were iliquid.

      1. Investors lost confidence in the mortgage form.
      2. Savers lost confidence in intermediary

F. Collapse of orderly market gave liquid investors tremendous buying power.

III. 1930's were a remarkable period of successful federal reforms of the individual mortgage transaction and mortgage lending intermediary.

A. Immediate temporary relief through HOLC Home Owners Loan Corporation and Reconstruction Finance Corporation.

B. Protection of the saver through FDIC and FSLIC.

C. For the borrower - long term, monthly amortized loan including interest, principle, insurance and taxes at high ratios to eliminate need for large downpayments or second mortgages.

D. Protection for the lender by insuring the loan against default by the Federal Housing Administration.

E. Federal takeover of appraisal and credit analysis functions.

F. Regional mobility and liquidity through Federal National Mortgage Association (FMNA). Injection of federal funds into mortgage money supply through Fannie May.

G. Modification of lenders ability to compete for funds to favor savings & loans as a residential mortgage intermediary.

H. Depression taught federal government it could manipulate total supply of mortgage money available.

I. Control of money supply led to special credit for special housing problems.

1. Housing for veterans
2. Housing for college students
3. Housing for the elderly
4. Housing for low income groups
5. Housing for those displaced by urban renewal

J. While protecting special groups it learned it could manipulate housing quality or relate to other social issues or cause problems in:

1. Urban sprawl or land conservation
2. Social fragmentation or integration
3. Proliferation of the auto or public transportation
4. Inflation of labor costs or labor saving innovation

IV. Institutional innovation since 1960 brought about by tremendous demands for mortgage money and serious credit cycles.

A. For the saver looking for appropriate denomination, safety, and better yields.

1. Variety of thrift plan offered by banks and S & L's for deposits of alternative maturity dates.

2. Collateral trust bonds guaranteed by GMA.
3. Real estate mortgage trusts.
4. New bond series issued by Home Loan Bank, Freddie Mack, Fannie May and Ginnie May.

B. For the lender looking for a better spread between cost of savings and yield on mortgages with liquidity, safety, etc.

1. One bank holding companies with mortgage company.
2. Savings and loan sabings corporation.
3. Real estate investment truzs management company.
4. Home Loan Bank subsidy by federal government.
5. Private mortgage loan insurance.
6. Secondary mortgage market for both FHA and conventional loans.

C. The borrower enjoys more liberal terms due to:

95% loan ratio conventional loans.
2. Subsidized loan rates for low income families.
3. Subsidized loans for industrial development.
4. Piggyback loans to reduce points on multi-family projects via tandem plans through GMMA, and FMHA.

D. Capital requirements for real estate target of 26,000,000 new and rehabilitated housing by 1980 will require further reform of:

1. Consumer savings patterns
2. Reduction in non-durable financing
3. Modification of building cost
4. Further modification of credit delivery systems
5. Long term stabilization of the dollar.

REAL ESTATE 550/705
Outline--Lecture #11

THE MORTGAGE

The mortgage is one of the more amazing forms of financial documents as it succeeds in bringing together a lender and borrower whose motivations in theory are virtually incompatible.

A. The objectives of the mortgage lender:
   1. Safety of principal.
   2. Reliable yield.
   3. Planned recapture of initial investment.

B. The objectives of the mortgage borrower:
   1. Cost of money is cheaper than yield on investment "Leverage".
   2. Real estate is so risky the investor seeks an <u>early payback</u> of equity to reduce risk of loss.
   3. Leverage permits increase in the span of control while increasing the risk of default.

C. Important ratios for measurement of objectives:
   1. Default Ratio--Measures financial risk from lendors view point.
   2. Payback Ratio--Measures equity exposure of investor.

D. Positioning of participants:
   1. Lendor = looking at a preferential position on project productivity. Lendor gets his before owner gets his.
   2. Borrower = "Equity Investor" is seeking control of real estate cash outlays.

   Note that within the construct of the mortgage each can feel as though a good deal has been made.

E. Strategic Dimensions of Mortgage Lending (5):
   1. The pleasure, pain, and bailout theory.
   2. Direct managerial control versus oblique pressure of creditor.
   3. Constant dollars versus inflation dollars.
   4. Present hard dollars versus speculative future dollars--the quick and dependable nickel versus the slow quarter.
   5. Yield versus safety through planned recapture.

II. The Mortgage

Mortgage literally means death pledge in that the original motivation to repay was the alternative of a death pledge by jousting or simple forfeiture of ones life.

<u>Foreclosure</u> originally meant final elimination of your equitable rights rather than transfer of title. Since the Magna Carta borrowers and lendors have been seeking techniques to give one or the other the upper hand in the event of non-payment.

A. A <u>mortgage</u> is the creation of an interest in property as security for the payment of a debt or the fulfillment of an obligation. Consists of two basic documents:
   1. Note or contract of debt.
   2. Pledge of real estate as collaterial.

B. Essentials of the mortgage elements of a contract:
   1. Competent parties.
   2. Offer and acceptance.
   3. Consideration.
   4. Legality of object.
   5. Because it is real property and subject to the Statute of Frauds, it must be in writing and signed.
C. The parties to the mortgage:
   1. The mortgagor--the party pledging the property and borrowing the money.
   2. The mortgagee--the party to whom the pledge of property is made and the lendor or the money.
D. General clauses of the mortgage:
   1. Covenant to Pay Indebtedness.
   2. Covenant to Insurance.
   3. Covenant Against Removal.
   4. Covenant to Pay Taxes.
   5. Covenant to Maintenance to prevent waste.
E. Supplementary conditions to basic mortgage:
   1. Acceleration clause.
   2. Real estate tax, insurance, and escrow clause.
   3. Restrictions against other encumbrances or liens.
   4. Esculpatory clause.
F. Recourse on Default:
   1. Sue for specific performance.
   2. Sue for damages for breach of contract without taking item.
   3. Foreclose and take property.

III. Mortgage Lending is Risk Management

A. Collateral
   1. Title
   2. Survey
   3. Property insurance
   4. Mortgage insurance
B. Income of borrower
   1. Job history
   2. Insurance
   3. Economic base
C. Interest
   1. ARM vs. FRM
   2. Portfolio management
   3. Hedging
D. Purchasing power of capital
   1. SAMS
   2. Participation mortgages
   3. Convertible mortgages

REAL ESTATE FINANCE I: THE MORTGAGE

I. The mortgage transaction

A. The investment objectives of the lender:

1. Safety of principal
2. Reliable yield
3. Planned recapture or liquidation of the investment

B. The investment objectives of the borrower are:

1. Positive financial leverage
2. Using other people's money (OPM) to increase the investor's span of control
3. Reducing the amount of personal equity at risk <u>if</u> a nonrecourse mortgage loan is available

C. Strategic dimensions of mortgage lending (5)

II. Mortgage literally means "death pledge"

A. Under English common law, the "title theory" of mortgages decreed that the mortgagee (i.e., the lender) received "defeasible fee" title to the real property.

B. Viewing strict interpretation of the defeasance clause as being unfair at times, English courts of chancery (equity) began to decree what became known as the "equity of redemption."

C. In response to mortgagees' complaints about the time period for the equity of redemption being too liberal in many cases, the English courts developed the "decree of foreclosure."

1. A reasonable period of time for equitable redemption
2. A public sale (auction) of the real property pledged as collateral with any sale proceeds in excess of the debt obligation (and all of the expenses incurred in connection with the foreclosure suit and sale) being given to the mortgagor

D. The "lien theory" developed at a later date than the title theory and views the mortgage as merely a lien (claim) on the real property, not a transfer of title.

E. An additional legal right in about half of the states is the "statutory right of redemption." This right to redeem starts at the time of the foreclosure sale and runs for several months to two years (varies by state). In the meantime the purchaser receives only "nascent title" -- often represented by a "certificate of purchase" instead of a deed.

F. In general, the evolution of the mortgage has concerned the "give and take" between the lender's rights and equities and the borrower's rights and equities (also concerns the dynamics of the loan process from closing to termination).

III. A mortgage transaction consists of two basic documents -- a promissory note (i.e., a contract of debt) and a mortgage (i.e., a pledge of real estate as collateral).

A. Lender's recourse upon default consists of three alternative remedies:

1. Sue for specific performance of the terms of the promissory note.
2. Sue for money damages for breach of contract (without taking the collateral).
3. Foreclose on the pledged real estate.

B. Breach of contract means violation of basic covenants and is not limited to failure to make a payment on time. General covenants include:

1. Covenant to pay indebtedness on time
2. Covenant to maintain adequate insurance coverage
3. Covenant against removal
4. Covenant to pay taxes on time
5. Covenant to perform adequate maintenance to prevent waste

C. Supplementary conditions to the basic mortgage might include:

1. Acceleration clause
2. Real estate taxes and insurance escrow clause
3. Restrictions against other encumbrances or liens
4. No assignment or sale subject to mortgage
5. Esculpatory clause

D. The essential elements of the mortgage contract are:

1. Competent parties
2. Offer and acceptance
3. Adequate consideration
4. Legality of object
5. In writing and signed

IV. Key vocabulary terms of mortgage finance are:

A. The parties to the mortgage transaction (mortgagor/mortgagee)

B. Loan-to-value ratio (LVR) and lender's yield

C. Methods of repayment:

1. Fully-amortizing loan
2. Partially-amortizing loan (& ballon payment)
3. Interest-only loan (a.k.a. a bullet, straight, or standing loa
4. Constant term loan
5. Constant payment loan
6. Participation loan
7. Closed loan
8. Prepayment penalties
9. Blanket loan (& release prices)

D. Priority of claims must be related to the nature of the real estate interest assigned or pledged (e.g., first mortgage on the leasehold interest).

V. Essentially, you can build whatever you can finance. Thus, real estate deals ultimately depend on the financing terms available.

A. The downpayment required determines the effective demand by qualifying the number of buyers with sufficient means.

1. Downpayments also control the rate of payback, yield on equity, and motivation to repay the loan.
2. Efforts to reduce the downpayment may lead to "tiering" of the financing.

B. As noted previously, "leverage" has many dimensions, including the relative cost of borrowed funds, span of control, and the amount of equity at risk if the loan is nonrecourse.

C. The desire to "mortgage out," i.e., to eliminate equity money, is limited by legal loan ratios and the desire to limit risk by holding all obligations within cash breakeven or default point.

D. The variety of financing strategies that are commonly used include

1. Creating a refinancing surplus
2. Converting income to capital gain
3. Covering principal payments with depreciation

E. To understand the variety of financing devices that are used in the real estate industry, it is necessary to look at the revolutionary changes which have been taking place among financial institutions which is the subject of the next lecture.

REAL ESTATE FINANCE II: THE INSTITUTIONS

I. A historical perspective

A. Prior to the Great Depression of the 1930s most real estate loans were in the form of demand loans or one-year loans.

B. Just as the stock market had crashed in 1929, the mortgage market collapsed during the Great Depression that followed. There were several reasons for the collapse:

1. Low loan-to-value ratios were lowered even further making refinancing very difficult.

2. Need for additional financing resulted in the use of short-term second and third mortgages. High effective interest rates made this a costly source of funds which resulted in many foreclosure actions.

3. Primary lenders' demands for repayment usually came when the demand for new loans exceeded the supply of funds. This also made refinancing very difficult.

4. Many borrowers shopped around for excessively high appraisals to overcome the low LVR constraint. Lenders were not very knowledgeable about appraisal techniques at the time and often got burned. As a result, lenders lost confidence in mortgages as security instruments.

5. Capital funds were not very mobile geographically at this time. Thus, some parts of the country might have a surplus of funds while another part suffered from a shortage of funds

6. Construction quality varied considerably and suffered from a lack of standards.

7. Many homeowners did not have the capacity to withstand disturbances to their economic situations. Foreclosures flooded the market causing real estate values to fluctuate even more.

C. The collapse of an orderly mortgage market gave liquid investors tremendous buying power.

D. Fortunately, Uncle Sam came to the rescue (albeit a bit late). The post-1929 reconstruction of the mortgage market was a remarkable period of federal action in response to a crisis.

1. To provide immediate assistance to current homeowners:

   a. Reconstruction Finance Corporation (RFC)

   b. Homeowners Loan Corporation (HOLC)

2. To protect the saver and to foster competition among financial institutions in attracting funds:

   a. Federal Deposit Insurance Corporation (FDIC)

   b. Federal Savings & Loan Insurance Corporation (FSLIC)

3. For the borrower:

   a. Long-term loans were introduced (up to 40 years).

   b. Amortized loans via monthly payments of PITI.

4. To protect the lender (and as a bribe to participate) the Federal Housing Administration (FHA) was created in 1934.

   a. Three major objectives of the FHA are:

      (1) to operate a housing loan insurance program designed to encourage improvement in housing standards and conditions,
      (2) to facilitate sound home financing on reasonable terms
      (3) to exert a stabilizing influence in the mortgage marke

   b. The FHA took over responsibility for appraisal and credit analysis. The result was a total reform of the appraisal industry.

   c. The FHA succeeded in standardizing the mortgage instrument and the lending process.

   d. Accomplished these objectives through its own initiative and thus usurped the traditional power of the mortgage lender.

5. To provide regional liquidity the Federal National Mortgage Association (FNMA) was created by Congress in 1938.

6. To aid returning veterans in obtaining home financing the Veterans Administration (VA) -- created in 1944 -- was allowed to introduce a loan guarantee program.

7. FNMA was rechartered by Congress in 1954 and assigned three objectives:

   a. Secondary mortgage market operations (FHA/VA)
   b. Management and liquidation functions with respect to the portfolio of loans that the previous FNMA had acquired
   c. Special assistance functions

8. In 1968 the "old" FNMA was reorganized. The assets and and liabilities connected with the secondary mortgage market operations were placed in a new private corporation which kept the FNMA name.

9. The remaining functions of the "old" FNMA were placed in the newly created Government National Mortgage Association (GNMA) in 1968. GNMA has three major objectives -- the two the agency inherited and the guaranteeing of pass-through securities.

10. After spinning off FNMA into a private corporation in 1968, Congress created the Federal Home Loan Mortgage Corporation (FHLMC) in 1970 as a government corporation under the sponsorship of the FHLBS. FHLMC has three major objectives:

D. 10. Continued...

a. To circulate funds from capital surplus geographical areas to capital deficit areas.
b. To develop new sources of funds during periods of credit stringency.
c. To develop new financing instruments to aid in the development of the private secondary mortgage market.

II. Major sources of mortgage funds & their respective regulatory agencie

A. Savings & Loan Associations

1. Federally-chartered S&Ls are regulated by the Federal Home Loan Bank System (FHLBS) which consists of:

a. FHLBBoard
b. FHLBanks
c. FSLIC
d. FHLMC

2. State chartered S&Ls are regulated at the state level and at the federal level if they desire FSLIC coverage.

B. Commercial Banks

1. National banks are regulated by several federal agencies:

a. Comptroller of the Currency
b. Federal Reserve System
c. FDIC

2. State chartered banks are regulated at the state level and at the federal level if they desire FDIC coverage.

C. Mutual Savings Banks

D. Life Insurance Companies

E. Pension and Endowment Funds

F. Note that all of the above groups are subject to IRS regulations and often are also subject to SEC regulations.

III. Factors influencing the supply of loanable funds

A. The Federal Reserve Board & Monetary Policy

1. Open market operations
2. Changes in reserve requirements
3. Changes in the discount rate

B. Other factors

1. Anticipated inflation
2. Institutional restraints (e.g., usury laws)
3. Employment and income levels

IV. Primary vs. Secondary Mortgage Markets

A. Primary mortgage market characteristics:

1. Local
2. Supply and demand disequilibrium
3. Primary lender & borrower

B. Secondary mortgage market characteristics:

1. National
2. Third-party investors
3. Standardized mortgage packages
4. Institutions in the secondary market include:

a. FNMA
b. GNMA
c. FHLMC

V. New institutional forces in the real estate capital markets

A. National policy responses to capital shortage

1. Modification of the propensity to save via the Economic Recovery Tax Act of 1981 (ERTA)
2. Modification of institutional specialization via the Depository Institutions Deregulation & Monetary Control Act of 1980
3. Channeled capital distribution via:

a. tax incentives
b. yield incentives
c. subsidy of special groups

(1) housing
(2) industrial
(3) infrastructure and urban redevelopment

B. New institutional forms of equity capital

1. Pension funds
2. Syndications
3. Public Sector Corporations
4. Cooperatives
5. Condominiums
6. Public/private consortiums

C. New sources of regulation

1. Employment Retirement Income Security Act (ERISA)
2. Securities & Exchange Commission (SEC)

D. In response to the above, we are now observing:

1. Escalation clauses in loan agreements and in leases
2. Less leverage (more equity) to reduce the risk of default
3. More indirect profits being structured into deals
4. Exploitation of tax benefits for new capital investment
5. A renewed emphasis on actual value creation (i.e., can the project stand on its own?)

Business 550

New Institutional Sources of Real Estate Capital

I. National Policy Responses to Capital Shortage

   A. Modification of the propensity to save - Economic Recovery Act.
   B. Modification of institutional specialization--monetary institution's Reform Act of 1980.
   C. Channeled Capital Distribution
      1. Tax incentives
      2. Yield incentives
      3. Subsidy of special groups
         a. Housing
         b. Industrial
         c. Infra-structure and urban redevelopment

II. Real estate in general must compete with all other capital needs without subsidy of its cost of funds.

   A. Since real estate does not provide enough income on capital invested situation will require:
      1. Raising rents or
      2. Shifting cost and risk to tenant just as borrower must pay cost of inflation and economic risk
      3. Less leverage--more equity to protect break-even point or default point.
      4. More indirect profits from operations, estate planning, value creation.
      5. Exploitation of tax benefits for new capital investment

III. New Institutional Forms of Equity Capital

   A. Pension funds
   B. Syndications - Balfour - Consolidated Capital
   C. Public corporations - Wisconsin Housing Finance Authority
   D. Co-ops--Creatwood
   E. Condominiums
   F. Public/private consortium (Capital Centre, Jackson Clinic)

IV. New Sources of Regulation

   A. Group investment brings in SEC and state securities regulation
   B. Pension fund brings in ERISA (employee retirement insurance + security act) and creates fiduciary status real estate managers

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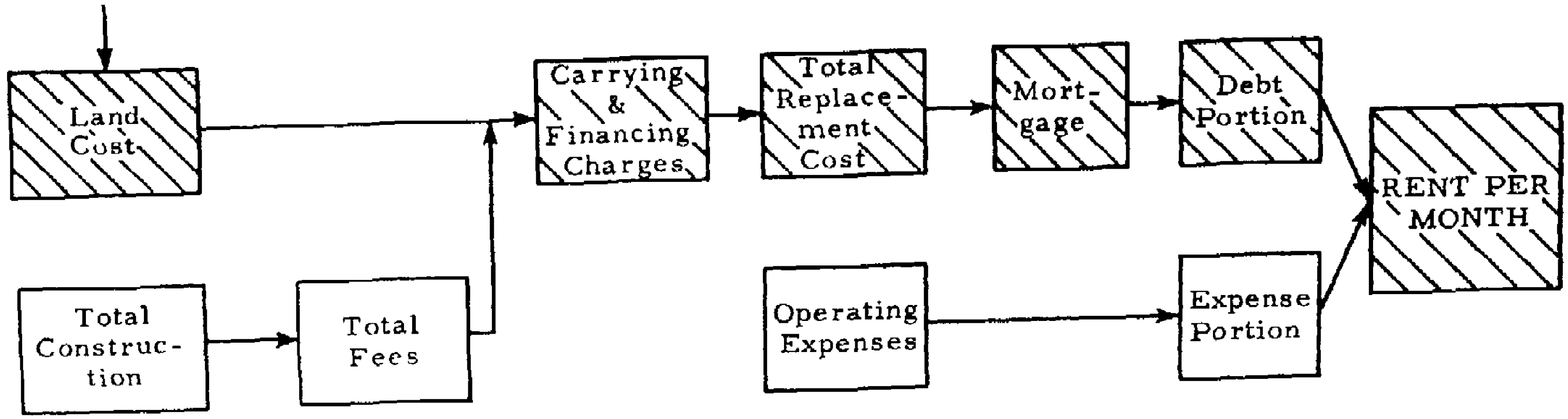
3. Proliferation of the auto or public transportation
4. Inflation of labor costs or labor saving innovation

The Consumption Sector	The Financial Sector		The Production Sector
OCCUPANT	PRIVATE INVESTOR	GOVERNMENT SUBSIDY	TECHNOLOGY
1. Ability to pay rent 2. Requirements demanded of the product	1. Type of investor 2. Rates of return (profit, present value) 3. The supply of units and/or dollars 4. Tax shields, depreciation, and tax bracket 5. Ability for training and organization	1. Type of programs available [221 (d), rent supplement] 2. Quantity of funds 3. Efficiency of funds	1. Land and/or building acquisition. 2. Rehabilitation and/or new constructions 3. Fees, financing and carrying charges 4. Operating costs 5. Standard conditions of the above 6. Forecast the impact of technology on the above and the other three sectors

Figure 3. The Three Sectors in the Housing Study

I. Land Write-Down Subsidy



II. Construction Cost Subsidy

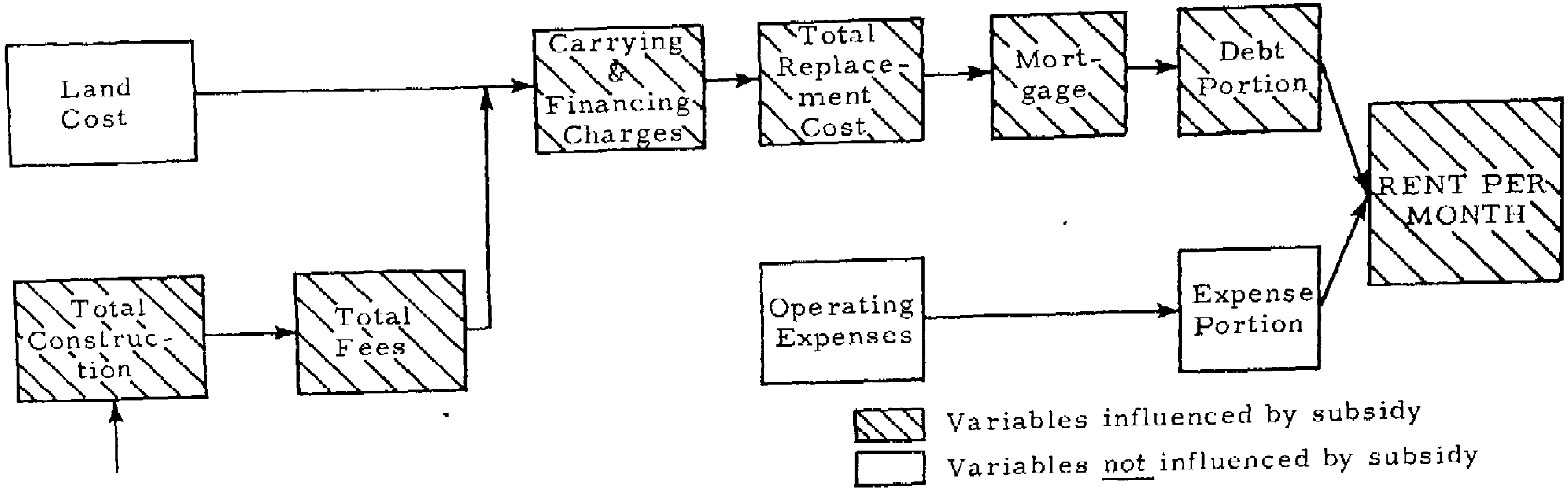
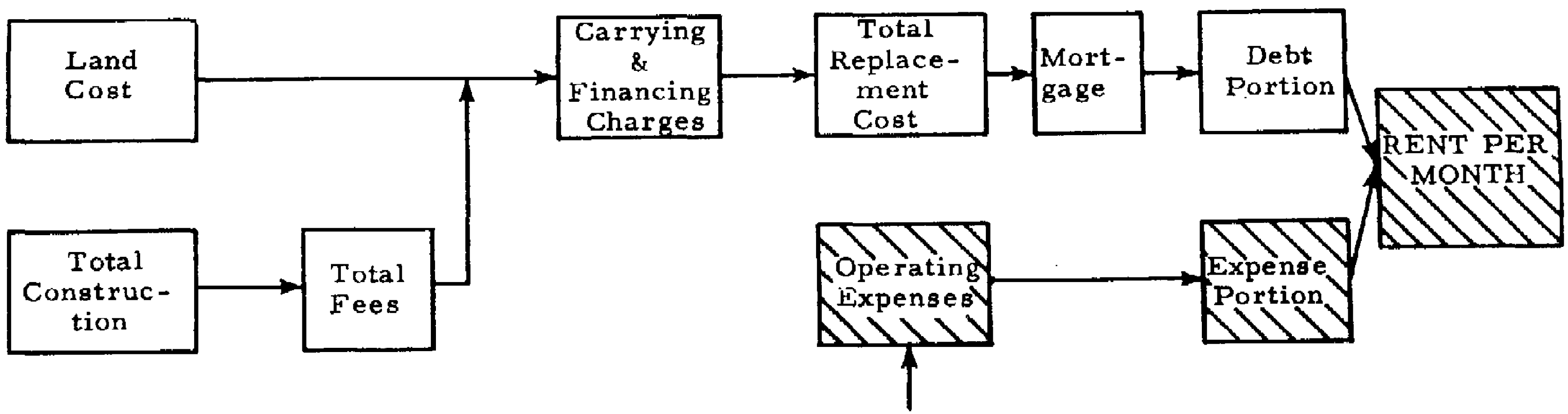
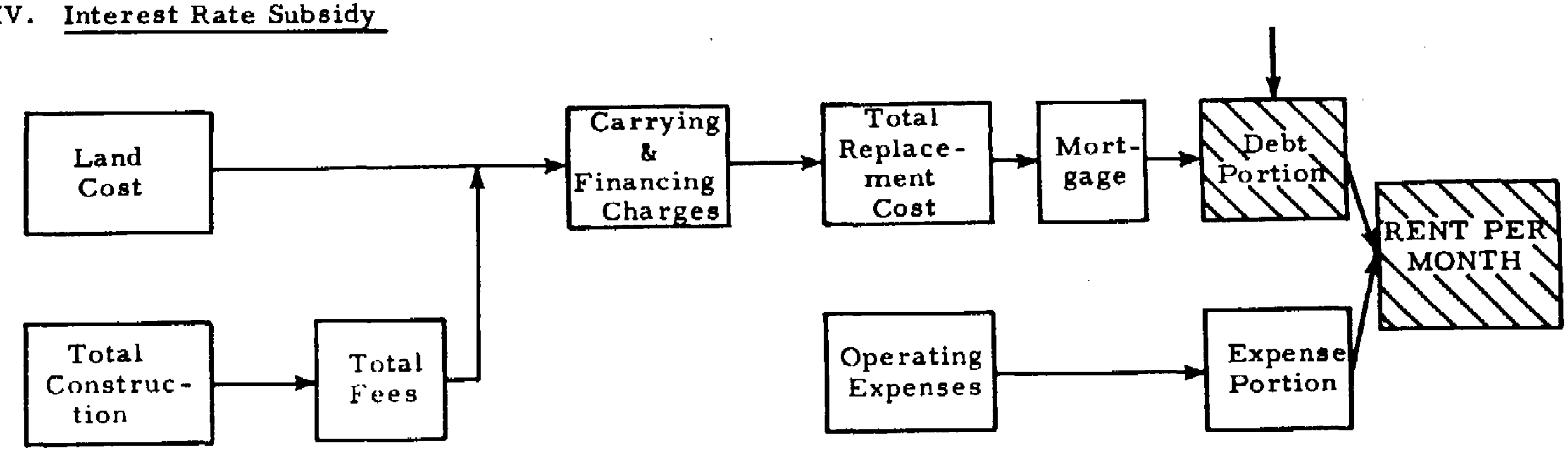


Figure 6. Schematic Representation of Alternate Subsidy Flows

III. Operating Expense Subsidy



IV. Interest Rate Subsidy



Variables influenced by subsidy

Variables not influenced by subsidy

Figure C. Schematic Representation of Alternate Subsidy Flows (Continued)

REAL ESTATE 550/705
Outline--Lecture #13

THE MORTGAGE

The mortgage is one of the more amazing forms of financial documents as it succeeds in bringing together a lender and borrower whose motivations in theory are virtually incompatible.

A. The objectives of the mortgage lender:
   1. Safety of principal.
   2. Reliable yield.
   3. Planned recapture of initial investment.
B. The objectives of the mortgage borrower:
   1. Cost of money is cheaper than yield on investment "Leverage".
   2. Real estate is so risky the investor seeks an <u>early payback</u> of equity to reduce risk of loss.
   3. Leverage permits increase in the span of control while increasing the risk of default.
C. Important ratios for measurement of objectives:
   1. Default Ratio--Measures financial risk from lendors view point.
   2. Payback Ratio--Measures equity exposure of investor.
D. Positioning of participants:
   1. Lendor = looking at a preferential position on project productivity. Lendor gets his before owner gets his.
   2. Borrower = "Equity Investor" is seeking control of real estate cash outlays.

   Note that within the construct of the mortgage each can feel as though a good deal has been made.
E. Strategic Dimensions of Mortgage Lending (5):
   1. The pleasure, pain, and bailout theory.
   2. Direct managerial control versus oblique pressure of creditor.
   3. Constant dollars versus inflation dollars.
   4. Present hard dollars versus speculative future dollars--the quick and dependable nickel versus the slow quarter.
   5. Yield versus safety through planned recapture.

II. The Mortgage

Mortgage literally means death pledge in that the original motivation to repay was the alternative of a death pledge by jousting or simple forfeiture of ones life.

<u>Foreclosure</u> originally meant final elimination of your equitable rights rather than transfer of title. Since the Magna Carta borrowers and lendors have been seeking techniques to give one or the other the upper hand in the event of non-payment.

A. A <u>mortgage</u> is the creation of an interest in property as security for the payment of a debt or the fulfillment of an obligation. Consists of two basic documents:
   1. Note or contract of debt.
   2. Pledge of real estate as collaterial.

B. Essentials of the mortgage elements of a contract:
   1. Competent parties.
   2. Offer and acceptance.
   3. Consideration.
   4. Legality of object.
   5. Because it is real property and subject to the Statute of Frauds, it must be in writing and signed.
C. The parties to the mortgage:
   1. The <u>mortgagor</u>--the party pledging the property and borrowing the money.
   2. The <u>mortgagee</u>--the party to whom the pledge of property is made and the lendor or the money.
D. General clauses of the mortgage:
   1. Covenant to Pay Indebtedness.
   2. Covenant to Insurance.
   3. Covenant Against Removal.
   4. Covenant to Pay Taxes.
   5. Covenant to Maintenance to prevent waste.
E. Supplementary conditions to basic mortgage:
   1. Acceleration clause.
   2. Real estate tax, insurance, and escrow clause.
   3. Restrictions against other encumbrances or liens.
   4. Esculpatory clause.
F. Recourse on Default:
   1. Sue for specific performance.
   2. Sue for damages for breach of contract without taking item.
   3. Foreclose and take property.

III. Mortgage Lending is Risk Management

A. Collateral
   1. Title
   2. Survey
   3. Property insurance
   4. Mortgage insurance
B. Income of borrower
   1. Job history
   2. Insurance
   3. Economic base
C. Interest
   1. ARM vs. FRM
   2. Portfolio management
   3. Hedging
D. Purchasing power of capital
   1. SAMS
   2. Participation mortgages
   3. Convertible mortgages

Lecture #14 Outline
Institutional Structure of Mortgage Lending

I. High cost of real estate requires heavy debt financing. Real estate capital represents 2/3 of the nation's wealth and almost 50% of this is mortgage.

   A. A capital pool for loans requires assembly of small savings through intermediary financial institutions.

   B. Dominant institutions have been insurance companies, banks, and savings & loan associations but in the last decade several new institutional intermediaries have been created.

   C. Differences between instiutional intermediaries can be shown by comparison of five basic subsystems:

      1. A marketing system to compete for savings.
      2. A marketing to compete for loans
      3. The transaction preference system of the policy makers
      4. The liquidity system
      5. The safety system

   D. This lecture will relate historical development and reform affecting subsystems above.

II. Mortgage always associated with financial panic and brutality of capitalistic system.

   A. Absence of federal real estate credit policy until after World War I. Cheap land was incentive for national development.

   B. Mortgage business very local, provincial, and cyclical and subject to abuse by promoter.

   C. Mortgage banking industry grew up after World War I to bring capital surpluses into contact with real estate development needs.

      1. Prosperity made mortgages the blue chip investment for the middle class.
      2. Savings pools were created by cooperative action (S & L's)

   D. Flaws on mortgage instrument and lending procedures contributed to depression.

      1. Short term 1-5 year notes, interest only
      2. 50% loan ratios led to second and third mortgages to reduce downpayment.
      3. Decline in prices made borrower unable to refinance or unwilling to pay.
      4. Amount of loan depnded upon appraisal so competition took advantage of distorted appraisal.

   E. Depression made it impossible to finance which accelerated foreclosures which meant intermediaries were iliquid.

      1. Investors lost confidence in the mortgage form.
      2. Savers lost confidence in intermediary

F. Collapse of orderly market gave liquid investors tremendous buying power.

III. 1930's were a remarkable period of successful federal reforms of the individual mortgage transaction and mortgage lending intermediary.

A. Immediate termporary relief through HOLC Home Owners Loan Corporation and Reconstruction Finance Corporation.

B. Protection of the saver through FDIC and FSLIC.

C. For the borrower - long term, monthly amortized loan including interest, principle, insurance and taxes at high ratios to eliminate need for large downpayments or second mortgages.

D. Protection for the lender by insuring the loan against default by the Federal Housing Administration.

E. Federal takeover of appraisal and credit analysis functions.

F. Regional mobility and liquidity through Federal National Mortgage Association (FNMA). Injection of federal funds into mortgage money supply through Fannie May.

G. Modification of lenders ability to compete for funds to favor savings & loans as a residential mortgage intermediary.

H. Depression taught federal government it could manipulate total supply of mortgage money available.

I. Control of money supply led to special credit for special housing problems.

1. Housing for veterans
2. Housing for college students
3. Housing for the elderly
4. Housing for low income groups
5. Housing for those displaced by urban renewal

J. While protecting special groups it learned it could manipulate housing quality or relate to other social issues or cause problems in:

1. Urban sprawl or land conservation
2. Social fragmentation or integration
3. Proliferation of the auto or public transportation
4. Inflation of labor costs or labor saving innovation

Business 550

New Institutional Sources of Real Estate Capital

I. National Policy Responses to Capital Shortage

   A. Modification of the propensity to save - Economic Recovery Act.
   B. Modification of institutional specialization--monetary Institution's Reform Act of 1980.
   C. Channeled Capital Distribution
      1. Tax incentives
      2. Yield incentives
      3. Subsidy of special groups
         a. Housing
         b. Industrial
         c. Infra-structure and urban redevelopment

II. Real estate in general must compete with all other capital needs without subsidy of its cost of funds.

   A. Since real estate does not provide enough income on capital invested situation will require:
      1. Raising rents or
      2. Shifting cost and risk to tenant just as borrower must pay cost of inflation and economic risk
      3. Less leverage--more equity to protect break-even point or default point.
      4. More indirect profits from operations, estate planning, value creation.
      5. Exploitation of tax benefits for new capital investment

III. New Institutional Forms of Equity Capital

   A. Pension funds
   B. Syndications - Balfour - Consolidated Capital
   C. Public corporations - Wisconsin Housing Finance Authority
   D. Co-ops--Creatwood
   E. Condominiums
   F. Public/private consortium (Capital Centre, Jackson Clinic)

IV. New Sources of Regulation

   A. Group investment brings in SEC and state securities regulation
   B. Pension fund brings in ERISA (employee retirement insurance + security act) and creates fiduciary status real estate managers

Business 550

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THE REAL ESTATE PROCESS 550

Lecture Outline
Plant Location Choice and Cash Flow Analysis

I. Unlike the retail establishment which emphasises direct linkages to its consumers and their costs of travel when visiting the site, the industrial location decision is much more concerned with linkages to its input supplies and its own shipping cost and travel expense.

   A. Choice of the industrial location may affect every component of the income statement and the balance sheet of the firm.

   B. While mathematical models may be used to determine the optimal location for a warehouse or a feed mill, many location judgments reflect strategic positioning in the politics of business, value judgments, and idiosyncracies of management, and matters of accident.

   C. Nevertheless, once choices have been narrowed by qualitative screens or criteria, the final choice between alternatives must be measured in terms of which choice provides the best ratio of net cash flow to net equity investment of the firm.

      1. Understanding of the cash flow dynamics permits public planner to provide bonuses or penalties which will tend to channel industrial site decisions consistent with public planning.
      2. Understanding the dynamics will also help the manager look at the real estate decision as more than a simple question of the cost of land and building which may not be relevant.

II. A simple format for the income statement and balance sheets of a firm might look something like this:

   A. Gross sales
      Less: delivery expense
      Less: returns and allowances
      Net sales
      Less: cost of raw materials and transportation cost
      Less: cost of manufacturing labor including indirect benefits/unit of production
      Less: cost of occupying plant (real estate taxes, insurance, maintenance, etc)
      Less: cost of machinery and equipment
      Less: cost of energy inputs
      Less: cost of management salaries and benefits
      Less: cost of non-equity funds
      Net taxable income
      Less: local and state taxes
      Less: federal income taxes
      Plus: state and federal investment tax credits
      Net income available for distribution

   B. At the same time one must compute the net change in investment assets required of a new site or relocation of an existing site.

      1. Cost of land including search and acquisition
      2. Cost of building off-site utility and transportation linkages including cost of time delays
      3. Cost of plant and equipment net of borrowed funds
      4. Cost of moving equipment, staff, inventories
      5. Cost of training new work force and start-up cost

6. Cost of maintaining double inventories or double plant facilities during change-over

   Total equity investment in new location
   Less: net salvage from old plant
   Less: State and federal grants toward relocation and retraining, defense or environment conservation investment, or income tax refunds in case of short term operating losses

   Net investment at new location

C. △ net income abailable for distribution

   △ net equity investments at alternative locations
   1. Compute for each location
   2. Highest cash return is best alternative

D. The site with the return on investment may not be chosen when management considers certain qualitative or political factors but at least management will know the monetary cost or trade-off among alternative sites due to non-financial selection criteria.

III. Since the number of possible industrial locations may appear to be almost infinite management will narrow alternatives with a progressive series of yes/no or regional perimeter devices to exclude as many alternatives as possible:

A. Definition of regional supply limitations on raw material and labor

B. Definitions of marketing area to be served by facility

C. Specification of energy source and price requirements

D. Definition of selected interstate, regional or local highway systems, rail lines, and airport capacity

E. Specification of labor pool which is under-employed or unemployed in terms of number, age, sex, and skill levels

F. Environmental sensitivity and regulatory control systems within area

G. Compatability with existing employers competing for same labor pool, raw materials, etc.

H. Specification of maximum size of community preferred (10,000 or less, etc.)

I. Quality of community water system or ground water

J. Capacity of community sewer and solid waste disposal system

K. History of union activity in community

L. Availability of regional or community technical training schools

M. Availability of ancillary supporting wholesalers, equipment dealers, trucking companies, etc.

N. Community amenities or proximity to amenities desired by executive managemen

O. These only suggest the type of criteria used to narrow the selection and each might have a different level of importance for individual firms

P. Many trade-off decisions may be necessary in choosing between sites with similar investment advantage but dissimilar qualitative attributes. Often these trade-offs are implicit, unrecorded but should be made explicit:

1. Statement of negotiation objectives for marketing, production, personnel management, etc.
2. Simple list of "essentials" and "desirables"
3. Point system scoring charts for qualitative comparison

IV. Industrial location is constrained in part by cash flow parameters, in part by systematic analysis of qualitative factors, and in part by subjective and intuitive management bias.

Business 550

Retail Enterprise Location Choice

I. The significance of retailing models for a first course in real estate goes beyond the issue of where should a supermarket be because:

A. The retail concept is applicable by analogy to any land use requiring multiple customers which come to the site - store, dentist, restaurant, hotel, etc.

B. Retail potential measurement is instructive on devices for market segmentation.

C. Retail experience is instructive on the sensitivity of people's behavior relative to locational linkages, cost of friction, stress or their sense of security.

D. Retail strategies are instructive on how locations and improvements impact on total cash revenues and cash expenses of an enterprise.

II. Most often retail location is a site in search of a market, although a given retail operation knows its market from past experience and is searching for a site which meets its specification.

A. A site must be referenced to a specific use to test it for suitability or fit as a supermarket, a florist, dentist, campground or whatever.

B. Identification of the proposed use implies identification of a customer group and the need to relate that group to the site. That relationship leads to ...

C. Definition of primary and secondary trade areas is a device for segmentation of the relevant. The primary trade area is typically that area which will provide 60-70% of the customers while the secondary trade area represents 10-20%. There is always a small random element to most enterprise sales. The perimeter of a trade area may be defined by a critical linkage of the retail use to:

1. A general area by driving time and road pattern.
2. By clusters of potential customers organized by income, employment or some other common interest such as school, recreation, etc.
3. By linkage to primary centers of employment, etc.
4. By the decision point of the consumer to utilize the given retail service such as the interstate filling station, a Fanny Farmer candy store, etc. Is it an impulse good, a carefully planned trip, a shopping item, or a search item.

III. Ultimately the retailer will relate to the frequency of customer visitation the average expenditure of the customer per visit and the loyalty to the customer of a particular retail source, either by choice or necessity. The analysis of sales potential within a retail area as initially defined above may follow a pattern something like this:

A. Typical expenditures per customer for selected retail items as a percent of disposable income or as a percent of some category of expenditure such as medical, travel, clothes, etc.

B. Reduction of that total expenditure by leakage of sales to:

1. Other geographic areas
2. Other non-competitive suppliers
3. Special buyer reallocations of discretionary purchases

C. The potential demand must then be related to available retail capacity already available in the area before the next proposed unit goes on stream. Only capacity competitive with the proposed project must be considered if leakage has been reasonably identified.

D. If capacity is low relative to potential demand then the retailer can expect to penetrate that demand without necessarily encroaching significantly on existing retail sources. This may be correlated to significant leakage.

E. If capacity of existing retail services is high relative to existing retail demand and there is little leakage, then the retailer must make the competitive decision as to who he expects to replace competitively.

F. In either case the retail analyst makes a high and low estimate of the capture rate which the new facility would enjoy as a percentage of both unmet demand and competitive encroachment on existing sales of other retailers.

G. An estimate of potential sales must be made for a sequence of periods and the analyst must determine the reasonable level of sales that might be expected of operations following the initial entry into the market.

IV. Potential sales volume can then be converted to determine both the total space requirements necessary to support a given sales volume and the dollars per space unit which should be paid for rent or to support the justified investment required of purchase.

A. Gross sales can be converted by various standards to an indication of space needs and justified budget such as:

1. Sales per sq. ft. of customer area, gross building area per table of four, per bowling alley, per bar stool, per parking space, per room, per gas pump, per 1000 cars of traffic count, etc.
2. Established retailers have the advantage of either knowing who their customers are or of statistical analogs of various operations (filling station models, fast food models, Sears, Roebuck data on one out of every five families in the U.S., etc.)
3. Laymen and outsiders can find public standards of rent as a percentage of sales, etc. in a variety of trade publications and services such as Dollars and Cents of Shopping Centers, published by the Urban Land Institute, bulletins by International Council of Shopping Centers, and many trade publications of NAR.

B. Obviously the forecast of sales is subject to a good deal of variance with the landlord maintaining that the site will do wonders for sales volume and the retailer maintaining reluctance to accept a fixed cost for an unproven advantage.

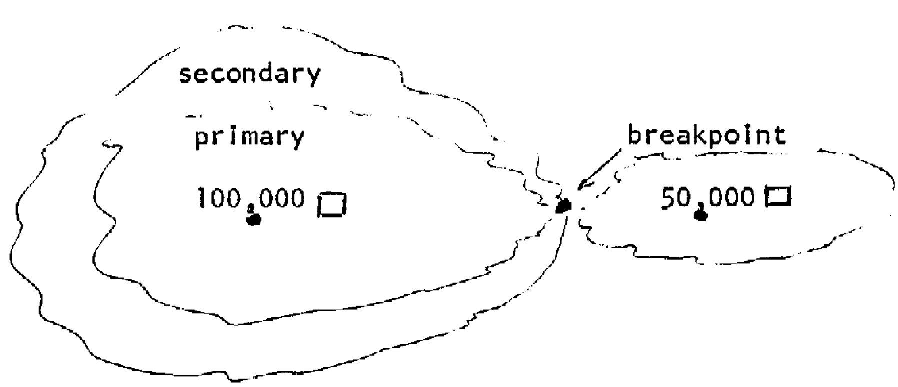
1. Therefore retailers use a percentage rent lease. The landlord receives a percent of sales reported quarterly and a minimum rent calculated to cover the landlords cash breakeven point.
2. Notice the variance due to error and estimating potential sales or the delay in reaching maximum market penetration is shared by contract.
3. Percentage rents in excess of required minimum rents is called overage rent.

C. However, retail management can relate rental cost to a variety of location strategies as they impact on his costs and sales volume:

1. The retailer of impulse goods must pay a premium rent to be at locations where people already are in sufficient density to give him adequate walk-in or drive-in volume.
2. Retailers of shopping goods might decide that the congestion of popular locations and the high rents requiring higher prices reduces sales so that a strategy of a peripheral location with lower rents can capitalize on more convenience by increasing advertising expense (Sears, Roebuck).
3. A retailer could start with a cheap location but create such an elaborate display or building that people are drawn out of their way to see the operation.
4. A discount retailer could take a cheap location with obsolete improvement and presumably pass the savings of low overhead to the consumer and rely on demand elasticity to provide greater frequency of visit and more sales per visit.

V. Many of these factors can be systematized by looking at the evolution of Reilly's Law (not Murphy):

A. Diversity of merchandise attracts customers but they are discouraged in visiting the site by the distance necessary to reach those goods at an increasing rate. Therefore the relative draw between two competing retail centers is represented by the sq. ft. of retail area divided by the travel distance squared. This presumably measured the break point between the primary trade area of Store A and Store B.



B. The age of the automobile modified that to be retail area (as a proxy for diversity) divided by travel time (from the consumer to the store) squared.

C. Behavioral psychologists have greatly modified the concept of diversity by substituting the concept of mass for retail area and a concept of cost of travel for the old idea of time or distance squared.

D. The concept of mass essentially modifies size by a factor representing perceived quality of bargain (fair pricing) and a comfort index in terms of (well being). If positive the factor is greater than one; if negative the factor is a fraction of 100%.

E. The concept of travel costs includes both cash cost of the trip and the elements of time, mental stress, and temptation to trade-off short term convenience for long term satisfaction (interception by a competitor).

F. Any site, transportation or neighborhood feature that increases the denominator will increase the numerator will increase the frequency of visits or the average of expenditure per visit or both. Anything that increases the denominator will reduce the drawing power or frequency of visit.

    1. The impact of increasing travel costs may actually increase the average purchase per visit as people travel to the center only for the most important purchases.
    2. The regional shopping center may eliminate high frequency low volume stores like a food market or a drug store if it creates so much congestion it discourages shoppers for higher ticket items.
    3. High frequency may reduce needs for parking area and permit more systematizing of the process. (4 of every 5 feet of retail land is for parking; only 20% is floor area).

G. The value of mass leads individual establishments to cluster as two or more create more total volume for each than a single isolated. enterprise might have enjoyed - thus the tendency of shopping centers, hotels, etc. to stick together.

    1. As an alternative the isolated enterprise must offer diversity and perceived uniqueness to create mass and drawing power of its own.
    2. Location analysts spend many hours analyzing traffic approach zones, anxiety caused by various traffic attributes, and the ability of the shopper to perceive traffic patterns, destinations at the center, and routes which are direct and free of stress, such as left turns, pedestrian conflicts or long walks uphill or downhill from parked cars to store.

Business 550 - Lecture Outline
CASH FLOW AND THE HOUSING LOCATION CHOICE

I. A number of recent surveys indicate the great majority of American families still plan or prefer purchase of a single family detached home as their housing objective. Neverthe less the cost of construction, land development, real estate taxes and interest rate suggest that less than 50% of American families could afford to purchase such a house at this time.

A. The purchasing power of a family is set by the amount of savings in excess of cash reserve funds available for a down payment, the direct cost of maintenance and operation and the cost of borrowed money as determined by interest rate and term of loan available.

B. As a housing cost calculator for purchase of a basic 1000 sq.ft. living area home consider the following:

1. Mortgage constant of .10 X 90% loan = .09
2. Real estate taxes at .65 of value and 45 mils = .03
3. Property insurance = .01
4. Utility services (percent of value) = .035
5. Maintenance (percent of value) = .015

.18 per year

or .015 or 1.5% per month of capital cost

6. The chart below assumes 5 differnet levels of construction quality from $15 per sq.ft. for a basic house without garage, appliances, etc. to a $27 per sq.ft. including a two car garage and basic appliances. Actually the $15 price would be true only of an older home in the north or the cheapest type of housing in the south.

Housing Cost Calculator

Size (area in sq.ft.)
Quality (dollars per sq.ft.)

Location Cost (thousands of dollars per acre)	15 15,000	18 18,000	21 21,000	24 24,000	27 27,000
6,000	($15,120) * 315 ($1260) **	360	405	450	495
8,000	345	390	435	480	525
10,000	375	420	($22,360) * 465 ($1865) **	510	555
12,000	405	450	495	540	585
15,000	435	480	525	570	($29,520) * 615 ($2460) **

* Annual income after tax
** Monthly take home pay

B. Given a site which is a farmhouse or a co-op it is possible to identify how many consumers there are, the relative supply and demand, and the longer term influences of enrollment, distribution of grads. and undergrads., and impacts of trends on the long term perspective.

1. There are a variety of ratios and models which begin to relate aggregate data or the scale of users to the capacity of a particular site. These demand models take many forms.
2. The site may suggest the group and then it becomes desirable to name the prospect for primary survey research; conversely, a group may be segmented to identify significantly different subgroup patterns. Consider the elderly on the attached chart.

C. In a pioneer economy when space is short people are not too fussy about housing, office space, or whatever. Historically in America scarcity permitted the production segment to initiate construction and price on a take-or-leave-it basis.

1. More recently a surplus of space requires that the producer first research the market and custom tailor to the special needs of small consumer groups - MICRO MARKETS.
2. 24 customers today for 2-bedroom apartments requires a capital investment of $500,000 and a rent roll approaching $100,000 (annual sales).

D. The complexity of fitting space-time users to particular sites and structures is an exacting and creative marketing problem.

III. Project feasibility therefore involves an iterative and reversable series of studies:

A. Market trends (opportunity areas).

B. Merchandise targets (micro market consumer groups).

C. Physical-technical site/use context.

D. Legal-political context.

E. Financial context (frontdoor/backdoor approaches; long term cash flow).

F. Strategic objectives of producer and community.

Lecture #14
Urban Land - 550
Prof. James A. Graaskamp

Outline of Property Development Lecture

I. Definition of Property Development and Management

   A. The commodity "real estate" is manufactured space with service amenities

   B. The manufacturing process is termed property development

   C. Maintenance and services to create environment can be termed property management.

   D. Development includes great variety in type and scale of project

   E. In the long term view development is not distinct from management

II. Areas of Decision Making Giving Form to Development

   A. The grand strategy - value framework - objectives - criteria

   B. Identification of opportunity areas in demand sectors

   C. Selection of merchandising target

   D. Determination of legal-political feasibility

   E. Ethical and social acceptability

   F. Determination of physical-technical feasibility

   G. Elements of financial feasibility

      1. Profit centers

      2. Calendar of financial events

      3. Capital budget

      4. Pattern of operating revenue and expense

      5. Financial package

      6. Tax strategy

      7. Measures of yield

      8. Measures of risk

   H. Execution of development plan

   I. Operation of project

   J. Monitoring process for feedback cycle

III. Property Development and the Time Constraint

A. Capital cost and revenue schedule equated by timeline of development

B. Value is a function of time lapse between outlay dollar and revenue dollar

C. Time is critical resource to be controlled through planning and management according to plan

D. Capital budget schedules, operating schedules, and time schedules

1. Lead time for planning and regulatory review

2. Construction in process time

3. Start-up or rent-up time

4. Receipt schedule - the collection lag

5. Schedule for refinancing of equity buildup

E. A nightmare of deadline dates: For example:

1. Option date to acquire site

2. Regular meetings of regulatory boards

3. Lead time dates to meet completion dates to serve a market

4. Take-down dates on loan agreements

5. Seasonal limitations on construction factors

6. Occupancy clauses in tenant leases

7. Repayment dates on temporary financing

8. Employment dates for staff

F. Talent, time, and momey are interchangeable raw materials

1. Trade talent for money

2. Packaging - trade access to money for percent of gross

3. Fast track construction - trade time for contract

4. Developer is the central management of a multi-business venture

IV. Property Development Trends

A. Historical segmentation by function and land use type

B. Current trend - planned unit development

1. Balanced residential community complexes

2. Balanced industrial-commercial complexes

3. Balanced retail-residential complexes

4. New town development

C. Big business means big capital

1. Creative financing via multiple approaches to capital markets

2. Large corporate investors

3. Insurance company participation

4. Construction material suppliers-vertical integration

D. Partnership between public agencies and private enterprise

1. The entrepreneur ego in public administration

2. Turnkey projects - integration of construction management

3. Government subsidy for selected private projects

Business - 550
Urban Infrastructure Systems - Outline

I. Real estate in an urban area depends on a complex web of mechanical and service systems to operate.

A. People create real estate value to the degree that they concentrate in a given area but as the concentration increases more and more of the life support systems must be artificial rather than natural until at some critical point the benefits of urban living are more than offset by the cost of maintaining an aritficial terrarium.

B. Population and industrialization leads to a "take-off principle" of environmental imbalance and economic costs of urban environmental systems.

C. Human capacity to tolerate must be measured in physical, mental, and sociological standards and expectations.

D. As environmental problems become more complex so do the responsibilities of urban government in the development of systems to offset the problems:

Mechanical Systems

1. Water
2. Sewer
3. Solid waste
4. Air pollution
5. Transportation
6. Communication services (including mail)

Professional Services Systems

1. Fire
2. Police
3. Education
4. Health
5. Recreation
6. Justice
7. Arts & culture
8. Political organization

E. Lecture will focus on the real estate process, mechanical systems, and economic constraints related to environmental quality, or conversely urban pollution.

1. Pollution has been defined as a resource in the wrong place at the wrong time.
2. For the individual decision maker the impact of pollution leads to malfunctioning of the market system because the aggregate consequences would be difficult to regulate by private agreement.
3. Impact on individual consumption decisions (demand side) such as altered housing pattern.
4. Impact on investor-developer altering cash flow, feasibility, present value of investment (supply side) changing quantity and location of new real estate.
5. Pure hearts and high standards do not make fresh water and clean air. Solution requires technology, financing, and social mechanism for pollution decision.

II. Technology of water and air quality is obsolete. Water quality and air quality are interrelated problems.

A. Water is used as vehicle for solid waste disposal but limited in capacity both in nature and in processed form.

1. Primary treatment
2. Secondary treatment
3. Advanced treatment
4. Sewer taps limit urban growth
5. Recycling of sewage water in Denver
6. Cost to transport fresh water or remove waste water
7. Combining waste disposal with agricultural irrigation
8. Recycling of sewage sludge as animal feed
9. Grinding sewage and pumping solids

B. Vacuum systems, home oxydation systems, or home recycling means increased housing costs and resulting impact on demand.

C. Water quality and solid waste disposal

1. Facts: 365 million tons per year, 10# per capita per day. Only 50% collected. Industrial waste burned (10%), 90% of municipal waste is dumped on land fills. Substantial industrial recycling.
2. Sanitary land fill threatens water table pollution
3. Incineration for sterile fill creates air pollution
4. Trends: Increasing cost of removal implies increasing efforts to recycle, re-use, re-power, restrain wasteful and inefficient use. Awareness of real social cost creates incentive to find alternative uses.
5. Effects on real estate process: increased emphasis on separators, efficient intra-firm collection, sophisticated (and costly) public facilities for recycling. All imply increased land and structure taxation, greater land acquisition cost and more costly structure requirements.

III. Air pollution related to investion of fire and fossil fuels

A. Facts: sources are 60% from automobiles, 16% from industry, 14% from electrical generation, 5.5% from heating, and 3.5% from refuse disposal.

B. The fasoline engine and the private automobile

1. Paving for automobile destroys necessary green oxygen producers
2. Exhust is major source of urban pollution
3. Public transportation or electric automobile requires urban density and compactmess.
4. Modern location theory implies private mobility and inertia of convenience.
5. Environmental theory for urban economics requires public systems of mobility and consumer preference for active motion.

C. Electric capacity related to coal and natural gas

1. Purification of exhausts means contamination of water
2. Transmission problems mean inefficient land use
3. Inert gas and transmission line insulators
4. Atomic power, water pollution, and air pollution

IV. Noise, Privacy, Aesthetics

A. Close relationship between income and level of privacy. Social tension increases not in high density urban areas but in housing with many individuals per room.

B. Privacy is a resource whose value is measured by the productive and creative potential of the central city. Privacy is a space attribute leading to essential sensory regeneration.

C. Residential design to enhance privacy, aesthetics, and freedom from noise, imply greater development costs.

V. Market economy does not work well to internalize cost of environment controls. Economics of controls differ for society as opposed to individual investor in the urban site.

A. Marginal benefit vs. marginal cost for society

B. No benefit for cost incurred for investor

C. Competing claims for investment productivity

D. Some urban environment has benefit for developer

1. Good esthetics can be good merchandising
2. Environment undisturbed lowers cost

E. Legislative mechanisms to internalize cost

1. Uniform cost allocations shifted to consumer through price
2. Legal penalties
3. Incentive in the form of subsidies, tax relief or privilege
4. Education to create social approval or disapproval for individual actions.

F. Problems: Individual investor is subject to cash flow solvency limits. Any economic entity will suffer to a greater degree when costs cannot be shifted. But some market reallocation of goods and activities is required because of long term pollution products misallocation. (it is cheaper to pollute)

G. Final guidelines

1. Avoidance of the catastrophic loss
2. Maintenance of large choice set for future generations/
3. Maintenance of institutional flexibility and ability to change.

C. This chain of common ownership was the means sought to entice the owners of the Grand Central Terminal to transfer the development rights from the landmark on 42nd Street to various other lots they controlled. In 1967 a proposal by the Penn Central and a British developer to construct a 55-story tower on the roof of the terminal was rejected by the Landmarks Preservation Commission. In 1969 Penn Central and the developer were again before the commission, this time with a proposal for a 59-story tower requiring demolition of the terminal facade. When this proposal was rejected--the city still insisting on transferring the development rights--Penn Central and its partner sued.

1. The trial court's decision did not question the constitutionality of the Landmarks Preservation Law but did find the law's application to the Grand Central Terminal to be an "economic hardship" because it prevented the bankrupt railroad from earning the income it would receive from the office tower. For this reason, the court invalidated the landmark designation.
2. The New York State appellate court, however, has recently overturned the trial court, conceding that hardship might be suffered by the Penn Central because of the landmark designation, but stating that "such hardship, in the proper exercise of the city's police power, must be subordinated to the public weal."

D. On June 29, 1977, the Supreme Court in the State of New York held that TDR's are of value and can be used to determine whether or not a property owner can receive a reasonable return on his investment. A summary of the case of Penn Central Transportation Company versus the City of New York is attached.

1. It is unique because the development rights have been transferred to other properties owned by the plaintiff and also connected to the station.
2. It is controversial because of the distinction it draws between privately created capital and socially generated capital.
3. It distinguishes between existing management and potentially efficient management.

E. TDR's are significant because it illustrates the tarnsferrability of space-time units and money-time units, the significance of expertise in creating solvent real estate which fits social priorities, and the need for ingenuity to achieve social goals without placing an impossible or unfair burden on the individual property owner, the public treasury or the general taxpayer. Finally, it shows the measure of gain or loss is the net change in spendable cash or liquidated net worth and not unrealized potential.

CONSUMER PROTECTION & LAND USE

550/705

I. Historical Examples

- A. Land Use Controls
- B. Building Codes
- C. Community Infrastructure
- D. Zoning
- E. Real Estate Sales Guilds
- F. FSLIC & FDIC
- G. FHA/VA Housing Standards
- H. RESPA
- I. Truth-in-Lending
- J. ECOA
- K. Regulation Q
- L. SEC
- M. Environmental Protection

II. Growth Management Issues

- A. Polarization of Housing Quality
- B. Increased Cost of New Housing
- C. Allowable Growth Management Policies
  - 1. Petaluma, CA
  - 2. Ramapo, NY
- D. Unacceptable Exclusionary Zoning Policies
  - 1. Mt. Laurel I & Mt. Laurel II (NJ) '75 & '83
  - 2. Knee v. Town of Atkinson (NH) '84
  - 3. Berenson v. Town of New Castle (NY) '75
  - 4. Asian Americans for Equality v. Koch (NY) '84
- E. Inclusionary Zoning

III. Reasons for Land Use Imbalance

- A. Future Consumer
- B. Labor & Materials Suppliers
- C. Taxpayers
- D. Existing Homeowners
- E. Heterogeneous Housing Consumers
- F. Planner, Designer, & Developer Arrogance & Ignorance

IV. Proposals to Improve Land Use Decision-Making &/or to Reduce Inequities

- A. More Insightful Studies of Alternatives
- B. Government Policies & Programs
  - A. School Funding
  - B. Public Works Funding
- C. Court Rulings

REAL ESTATE DEVELOPMENT AFFECTED BY MAJOR FEDERAL ENVIRONMENTAL REGULATIONS

July, 1975

Purpose of Regulation	Inter-Govt. Consistency	Overall Environmental Quality			Land Use Quality		Water Quality			Air Quality		Noise Quality
Responsible Agency	(1) OMB	HUD/ (2) FHA	(3) VA	USDA (4) FmHA	HUD (5) FIA	(6) COMM.	EPA					HUD
Regulation	A-95	Environmental Clearance Procedures			Flood Ins.	Coastal Zone Mgt.	(7) Basin Plans	(8) Waste Treatmt. Plans	Pollution (9) Dischge Elim.	State Imp (10) Plans	Air Quality Maintenance & Signif. (11) Deter.	(12) Noise
RESIDENTIAL:												
Single-Family	x	x	x	x	x	x	x	x	x	x	x	x
Multifamily (sales or rental)	x	x		x	x	x	x	x	x	x	x	x
Townhouse (sales or rental)	x	x	x	x	x	x	x	x	x	x	x	x
Mobile Home Parks	x	x	x		x	x	x	x	x	x	x	x
COMMERCIAL:												
Shopping Centers					x	x	x	x	x	x	x	
Office Parks					x	x	x	x	x	x	x	
Multi-Use					x	x	x	x	x	x	x	
INDUSTRIAL:												
Industrial Parks (including warehouses)					x	x	x	x	x	x	x	
Heavy Industrial					x	x	x	x	x	x	x	
RECREATIONAL:												
Second Home (Investment Properties)					x	x	x	x	x	x	x	

Note: Numbers indicate description reference in text.

POINT SIMULATION [illegible]

Urban Land 550 - Final Lecture

Final exam covers only last 1/2 of course including week #8, October 15-19.

Exam will be held in Chemistry, Room 1351, at 12:25 Thursday, December 13

Some lessons to be learned from Columbia:

1. Capital budgeting for 20 years established with an economic model using average costs per acre for different types of land use

2. Developers set up simultaneous equations to determine:

    a. Budgets and funding for public resources
    b. Budgets and funding for consumer services within their means
    c. Devices for providing equity money with profit participation for long term risks.
    f. A decision system which permits the social planners and physical planners complete latitude within the solvency constraints of the consumer, the county government, and the developer
    g. Rouse provides the entrepeneurial management and Connecicut General supplies the money. Two former industrial cost accountants actually manage the day to day operation of Howard County Development Corporation.

3. Underlying the real estate physical structure are a large number of software delivery systems.

    a. Medical health system
    b. Recreational utility
    c. Political system built on neighborhood-village modules
    d. Educational system
    e. Arts and culture system
    f. Public transit system
    g. County government system
    h. Ecumenical church system stressing services rather than buildings

4. Some lessons learned for adaptation

    a. The Hartford process - applying techniques to an existing city
    b. Creation of smaller satellite of communities of village scale
    c. Delivery of social systems by private expertise and capital

Collect course evaluation sheets

The pro-urbanite, the non-urbanite
The rational integration of private self interest (including property) & public self-interest
any enterprise has a form and behavior which is a negotiated [illegible] between external forces [illegible] and internal capabilities

D

HANDOUT - Business 550: REAL ESTATE MATHEMATICS

Terms to Know

Amortization

The process of payment of a debt or obligation by a series of payments over time. Generally the payments are in equal amounts that include principal and interests; and generally the payments are made at uniform intervals of time.

Capital Gain

Income that is a result of sale of an asset and not from the general course of business. Capital gains are taxed at a lower rate than ordinary income.

Capitalization

The process of reflecting future income in present value; the discounting of the future income stream to arrive at a present value.

Capitalization Rate

The rate at which future income is discounted.

Cash Flow

The net income from a property before depreciation and other non cash expenses.

Depreciation

Loss in property value due to any cause.

Disposable Income

After tax income.

Equity

The value of the interest of an owner of property exclusive of the encumbrances on the property.

(g) In Yards.

1. Unless the district regulations provide otherwise, off-street vehicle parking is permitted in the following yards:
   a. A rear yard.
   b. A side yard not adjoining a street.
   c. A side yard adjoining a street, including the extension of a street side lot line, but only on one paved or graveled driveway existing prior to April 1, 1978, not exceeding twenty (20) feet in width, and for not more than two (2) vehicles parked not nearer than three (3) feet to a side or rear lot line.
   d. A front yard, but only on one paved or graveled driveway not exceeding twenty (20) feet in width and for not more than two (2) vehicles parked not nearer than five (5) feet to a front property line or three (3) feet to a side lot line.

(Sec. 28.11(3)(g)1. Am. by Ord. 6271, 6-9-78)

2. Regardless of the provisions of Paragraph 1, the Plan Commission may permit off-street vehicle parking in any yard of a residential development where the overall housing plan and design for such development, in the judgment of the Plan Commission, is substantially improved thereby, as compared to where off-street parking is limited by Paragraph 1, and where sole access from such development is to local and collector streets. In this paragraph, "substantially improved" means a substantial increase in the value of the property. Such permission shall be granted only after proceeding under Section 28.12(10). No such permission shall be granted for any residential development which is adjacent to either a public right-of-way or other residences unless sufficient and suitable screening is provided so as to prevent, to as great a degree as practicable, direct view of such off-street parking areas from such adjacent areas. (Am. by Ord. 7223, 1-29-81)

(h) Design and Maintenance.

1. Open and Enclosed Parking Spaces. Accessory off-street parking spaces located on the same lot as occupied by the use served may be open to the sky or enclosed in a building. Accessory off-street parking spaces located elsewhere than on the same lot occupied by the use shall be open to the sky, except when an off-site storage garage or parking structure is approved for such required accessory parking.
2. a. Surfacing. All open off-street parking areas, except a parking space accessory to a single-family dwelling, shall be improved with a bituminous or Portland cement concrete pavement or paving brick surface in accordance with City of Madison standards and specifications. Such parking areas shall be so graded and drained as to dispose of all surface water. Such parking areas shall also be so arranged and marked to provide for orderly and safe parking and storage of vehicles, and shall be so improved with wheel stops or bumper guards to prevent encroachment into adjacent lots or public ways. (Am. by Ord. 5800, 3-28-77)

Present Value Concepts

The entire concept of value is based on a determination of the present value (worth) of future dollars of anticipated income.

The driving force of present value determination is the concept of compounding of interest; only running backwards. Thus with compounding being of primary importance it is important to understand what compounding is and how it works.

By definition, compound interest is interest calculated on an accumulation of principal and prior earned interest--not on the original principal only. Compound interest is not paid when earned, but is added to the principal balance, thus causing the balance to continually change.

In contrast, simple interest is interest on original principal only. The base does not grow, for interest does not accumulate. It is paid and collected periodically as it is earned. For example, suppose we have 1,000 to invest and we have a choice of placing this money into (a) a simple interest account of (b) a compounding account, both at the same interest rate of 5%. Suppose further, that we have decided that regardless of which account is chosen we will leave the money in the account for five (5) full years.

Question: Which should we choose, (a) or (b)?

	(a)	Int. Paid
1.	1,000 * .05 =	50
2.	1,000 * .05 =	50
3.	1,000 * .05 =	50
4.	1,000 * .05 =	50
5.	1,000 * .05 =	50
		250

	(b)		Int. Paid	
1.	1,000	* .05 =	50	= 1,050
2.	1,050	* .05 =	52.50	= 1,102.50
3.	1,102.50	* .05 =	55.125	= 1,157.625
4.	1,157.625	* .05 =	57.88125	= 1,215.50625
5.	1,215.50625	* .05 =	60.77631	= 1,276.28156
			276.28	

Under proposition (a) the value of our investment is equal to the original deposit of 1,000 plus all interest earned, the 250, which is equal to 1,250. Under proposition (b) the same holds true, but since we earned an extra 26.28 of interest (276.28 - 250.00) the value of this proposition is equal to 1,276.28. Therefore, if our goal is to maximize our income during the five year investment period (holding period) we would choose proposition (b).

SIX FUNCTIONS OF A DOLLAR

* The mathematics of finance are based on three simple concepts:
  - Present Value (PV) -- the value of a stream of cash flows as of "right now" (time 0).
  - Future Value (FV) -- the value of a stream of cash flows as of a specific future date.
  - Annuity (A) -- a series of equal cash flows at equal intervals of time.

* The six functions of a dollar are the six interest factors that allow one to convert one concept into another:

Desired Value	=	Known Value	×	Interest Factor
FV_n	=	PV_0	×	$(F/P, i, n)$
FV_n	=	A	×	$(F/A, i, n)$
A	=	FV_n	×	$(A/F, i, n)$
PV_0	=	FV_n	×	$(P/F, i, n)$
PV_0	=	A	×	$(P/A, i, n)$
A	=	PV_0	×	$(A/P, i, n)$

where: 0 denotes time 0,
n " " n (n years after time 0),
i is the interest rate at which cash flows are compounded or discounted.

Note: The "numerator" of the interest factor notation indicates the unknown value that is being solved for (i.e., the desired value) while the "denominator" indicates the known value that is being converted.

With this basic comprehension of elementary compound interest, it is now possible to develop a knowledgeable basis for understanding the derivation, interrelationships, and functions of the six standard functions of a dollar.

Names of the tables vary in different texts, but the factors themselves are uniform. The following summarizes the basic function of each table and illustrates the interrelationship between the tables.

#1 AMOUNT OF 1 AT COMPOUND INTEREST

Shows: Growth at compound interest of a single initial deposit or investment. recommended conceptual notation

Formula: $S^n = (1 + i)^n \quad = (F/P, i, n)$

actuarial notation

Example: (All examples taken from page 92 of Ellwood Tables.) What will 655 be worth after 5 years in an account compounding annually at 8-1/2%.

Factor from Table: (Col. #1 and 5 yrs.) 1.503657
$S^n = (1.0 + .085)^5$

$PV_0 \times (F/P, 8\tfrac{1}{2}\%, 5\,yrs.) = FV_5$

Answer: 655 * 1.503657 = 984.89 (rounded)

Proof:
Yr. 1 - 655 * 1.085 = 710.67
Yr. 2 - 710.67 * 1.085 = 771.08
Yr. 3 - 771.08 * 1.085 = 836.62
Yr. 4 - 836.62 * 1.085 = 907.74
Yr. 5 - 907.74 * 1.085 = 984.89

#2 ACCUMULATION OF 1 PER PERIOD

Shows: Growth at compound interest of a level, i.e. equal, series of periodic deposits.

$\frac{(1+i)^n - 1}{i}$

Formula: $s_{\overline{n}|} = \frac{S^n - 1}{i} \quad = (F/A, i, n)$

Example: What will 166.23 deposited annually for 5 years be worth if the account compounds annually at 8-1/2%?

Factor from Table: (Col. #2, 5 yrs.) 5.925373
$s_{\overline{n}|} = \frac{1.503657 - 1.0}{.085}$

$A \times (F/A, 8\tfrac{1}{2}\%, 5\,yrs.) = FV_5$

Answer: 166.23 * 5.925373 = 984.97 (rounded)

Proof: Yr. 1 - 0 + 166.23 = 166.23 * 1.085 = 180.36
Yr. 2 - 180.36 + 166.23 = 346.59 * 1.085 = 370.05
Yr. 3 - 370.05 + 166.23 = 542.28 * 1.085 = 588.37
Yr. 4 - 588.37 + 166.23 = 754.60 * 1.085 = 818.74
Yr. 5 - 818.74 + 166.23 = 984.97

Note: An annual deposit of 166.23 was made 5 times, but compounding took place only 4 times. The question states 5 equal deposits <u>not</u> 5 compounding periods.

#3 <u>SINKING FUND</u>

Shows: Amount of periodic deposit required which will grow at compound interest to a specified future amount.

$\frac{i}{(1+i)^n - 1}$

Formula: $1/S_{\overline{n}|} = \frac{1}{Sn-1}$ $= (A/F, i, n)$

Example: An investor plans to repaint an apartment house in 5 years at an estimated cost of 985. What amount must be deposited annually for 5 years in a sinking fund savings account paying 8-1/2% annually?

Factor from Table: (Col. #3, 5 yrs.) .168766

$\frac{.085}{1.503657-1.0} = .168766$

$FV_5 \times (A/F, 8\tfrac{1}{2}\%, 5\,yrs) = A$

Answer: 985 * .168766 = <u>166.23</u>

Note: Special relationship between Table #2 and #3. They are just opposit each other, i.e. reciprocal.

Proof: See #2 above.

#4 <u>PRESENT VALUE REVERSION OF 1</u>

Shows: Present worth of a single future income payment. Computes and deducts compound interest from a known or assumed future worth, at a stipulated interest rate and for a given period of time.

$\frac{1}{(1+i)^n}$

Formula: $V^n = \frac{1}{S^n}$ $= (P/F, i, n)$

Example: What is the most that an investor should pay today to receive an item worth 985 five years into the future, assuming an alternative investment rate of 8-1/2% annually?

Factor from Table: (Col. #4, 5 yrs.) .665045

$v^n = \frac{1.0}{1.503657} = .665045$

$FV_5 \times (P/F, 8\tfrac{1}{2}\%, 5\,yrs) = PV_0$

Answer: 985 * .665045 = 655.069

Proof: See Proof #1. Note special relationship between Tables #1 and #4, Reciprocal.

#5 <u>PRESENT VALUE OF 1 PER PERIOD - ORD. ANNUITY</u>

Shows: Present worth of a series of future income payments. Computes and deducts compound interest from any level (equal) terminal series of future income payments, such as a lease or annuity of any type.

$$\frac{1 - \frac{1}{(1+i)^n}}{i}$$

Formula: $a_{\overline{n|}} = \frac{1 - v^n}{i} = (P/A, i, n)$

Example: What is the most that an investor should pay today to receive 5 annual payments of 166.23 beginning 1 year from today, assuming an alternative investment rate of 8-1/2% annually?

Factor from Table: (Col. #5, 5 yrs.) 3.940642

$a_{\overline{n|}} = \frac{1.0 - .665045}{.085} = 3.940642$

This same factor can be derived by summing the 5 annual factors for reversions, Col. #4.

Yr. 1	=	.921659
2	=	.849455
3	=	.782908
4	=	.721574
5	=	.665045
		3.940642

$A \times (P/A, 8\tfrac{1}{2}\%, 5\,yrs.) = PV_0$

Answer: 166.23 * 3.940642 = 655.05

Proof:
655.05 * 1.085 = 710.73 - 166.23 = 544.50
544.50 * 1.085 = 590.78 - 166.23 = 424.55
424.55 * 1.085 = 460.64 - 166.23 = 294.41
294.41 * 1.085 = 316.43 - 166.23 = 150.20
150.20 * 1.085 = 166.97 - 166.23 = -.0326 (Close enough)

#6 INSTALLMENT TO AMORTIZE 1

Shows: Amount of periodic payment required to amortize a loan.

$$\frac{i}{1-\frac{1}{(1+i)^n}}$$

Formula: $1/a_{\overline{n}|} = \frac{1}{1-V^n}$ $= \left(A/P, i, n\right)$

Example: What is the annual payment required to amortize (pay-off) a 985 loan over a period of 5 years at an annual interest rate of 8-1/2%.

Factor from Table: (Col. #6, 5 yrs.) .253766

$\frac{.085}{1.0-.665045} = .253766$

Also by sinking fund plus interest:

.168766 + .085 = .253766

$PV_0 \times \left(A/P, 8\tfrac{1}{2}\%, 5\text{yrs.}\right) = A$

Answer: 985 * .253766 = 249.96

Proof:

985	818.77	638.40	442.70	230.37
*.085	*.085	*.085	*.085	*.085
-83.72	-69.60	-54.26	-37.63	-19.58
249.96	249.96	249.96	249.96	249.96
166.23	180.36	195.69	212.33	230.37

EXAMPLE PROBLEMS

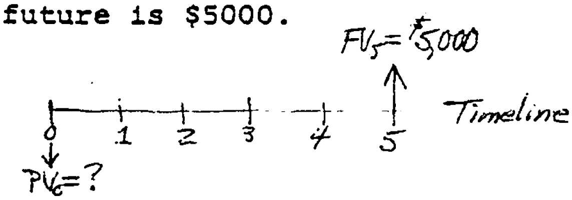
Here you have the sum total of what is known as Present Value Calculations as they relate to real estate.

Problem #1

Present Value of "Lump Sum" in the future.

<u>Given</u>:

Reversion value of property in future is $5000.
5 year term.
6% interest rate.



<u>Question</u>:

What is the present value of this property?

<u>Calculation</u>:

$FV_5 \times (P/F, 6\%, 5yrs) = PV_0$

5000 * .7473 = 3736.50

Because we are asking for today's value of a future amount at a given interest rate we simply locate in the Present Worth Table the factor for 6% at 5 years, i.e. <u>.7473</u>.

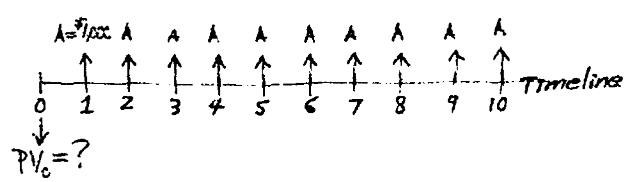
We have discounted the $5000 amount back to today's value, using the 6% rate.

Problem #2

Present value of an income stream.

<u>Given</u>:

$1000 income per year.
10 year term.
7% interest rate.



<u>Question</u>:

What is the present value of this income stream today?

<u>Calculation</u>:

$A \times (P/A, 7\%, 10yrs) = PV_0$

1000 * 7.024 = 7024

This means that a constant income of $1000 for 10 years is worth 7024 today if the best rate of interest is 7% per year. The difference between the total monies received (10,000) and the Present Value of these monies, 7024, is the interest (2976) which could be earned on the 7024.

Given:

$2000 income per year.
20 year term.
7% interest rate.

Question:

What is the present value of this income stream today? OR How much is the income stream worth in a lump sum today?

Calculation:

2000 * 10.594 = 21,188

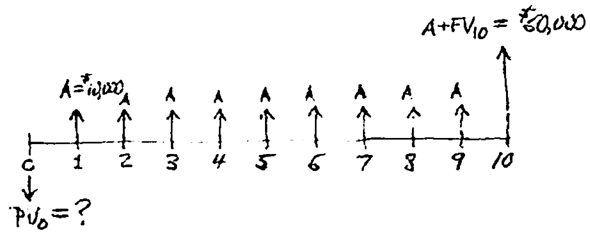
Today this income stream is worth 21,188. Note that this amount is much different then the total income (2000 per year * 20 years = 40,000). This is the effect of the compounding at 7% interest.

Problem #3

Present Value of a stream and reversion.

Given:

10,000 income for 10 years.
50,000 reversion at end of 10 years.
8% interest rate.



Question:

What is the total value of this project today?

Calculation:

Here we have two items of value and we must calculate the value for both.

Rather than compute these two PV's separately, try solving for the total present value directly (i.e., as one equation).

A. Income Stream
10,000 * 6.710 = 67,100
$A \times (P/A, 8\%, 10yrs) = PV_0$ of Income Stream

B. Reversion
50,000 * .4632 = 23,160
$FV_{10} \times (P/F, 8\%, 10yrs) = PV_0$ of Reversion

Total Value today: 67,100
23,160
90,260

$PV_0 = A\,(P/A, 8\%, 10yrs) + FV_{10}\,(P/F, 8\%, 10yrs)$

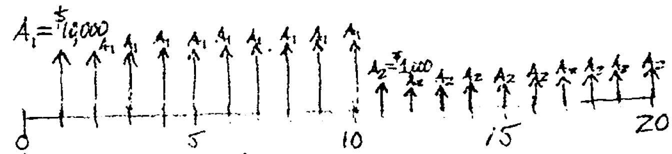
STOP 301

Problem #4

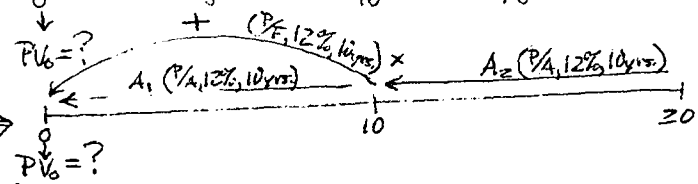
Present Value of a variable stream

Given:

Timeline ⇒



10,000 income for years 1 to 10
1,000 income for years 11 to 20
12% interest for all years



Question: Solution Conceptually ⇒

What is the present value of this income stream?

Calculations: Solution Formula ⇒ $PV_0 = A_1 (P/A, 12\%, 10yrs.) + A_2 (P/A, 12\%, 10yrs)(P/F, 12\%, 10yrs)$

10,000 * 5.650 = \$56500.
1,000 * 5.650 = \$5650. Try to solve this.

So far so good, but because the 1,000 per year income is for a 10 year period but for years 11 to 20 this amount 5650 must be discounted back to year 1 by adjusting with a Present Value such that the \$5650 earned in years 11 to 20 is worth 5650 * .3220 = \$1819. today.
Today's Value is

a.	10,000 * 5.650	=	1-10	56,500
b.	1,000 * 5.650	=	5650. 11-20	
c.	5650 * .3220	=		1,819
	Total			58,319

*** Take special note of the way the income in years 11-20 was processed this is very important.

Given:

2000 income for years 1 to 10
4000 income for years 11 to 20
5000 income for years 21 to 30
All at a 10% interest rate

Question:

What is the present value of this income stream.

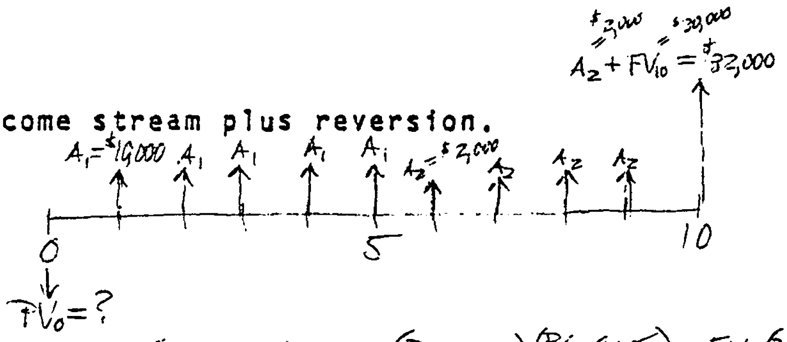
Calculations:

a.	Yrs. 1-10	2000 * 6.145	=		12,290
b.	Yrs. 11-20	4000 * 6.145	=	24,580	
	adj. to yr. 1 = 24,580 * .3855 =				9,475
c.	Yrs. 21-30	5000 * 6.145	=	30,725	
	adj. to yr. 1 = 30,725 * .1486 =				4,565
		Total Value Today			26,330

Note that the adjustment for years 11-20 was .3855 this is equal to discounting the dollar amount back to today from 10 years in the future. The adjustment for years 21-30 was .1486 because even though the interest rate was the same i.e. 10% the number of years had changed from 10 years in the future to 20. Thus the different adjustment.

Problem 5

Present Value of variable income stream plus reversion.



Given:

10,000	income years 1-5
2,000	income years 6-10
30,000	reversion year 10
6%	interest rate

Question: Solution Formula ⇒ $PV_0 = A_1(P/A, 6\%, 5yrs) + A_2(P/A, 6\%, 5yrs)(P/F, 6\%, 5yrs) + FV_{10}(P/F, 6\%, 10yrs)$

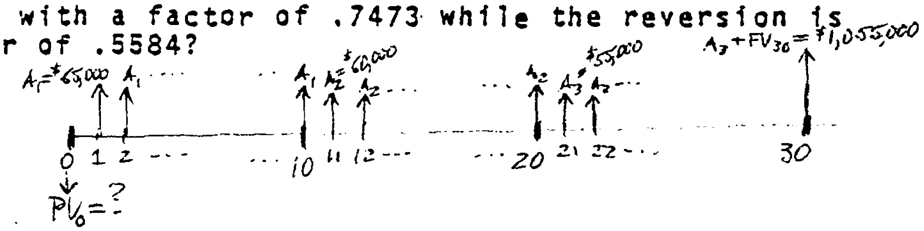
$PV_0 = \$10,000(\quad) + \$2,000(\quad)(\quad) + \$30,000(\quad)$

What is the present value of this property?

Calculations:

a.	1-5 = 10,000 * 4.212 =			42120.
b.	6-10 = 2,000 * 4.212 =		8424	
	adj to 1 = 8424 * .7473 =		6295.	6295.
c.	Reversion = 30,000 * .5584 =			16752
		Today's Value		$65,167

Why adjust years 6-10 with a factor of .7473 while the reversion is adjusted with a factor of .5584?



Given:

65,000 for years 1-10
60,000 " " 11-20
55,000 " " 21-30
1,000,000 reversion at year 30
All at 12% interest rate

Solution Formula ⇒ $PV_0 = A_1(P/A, 12\%, 10yrs) + A_2(P/A, 12\%, 10yrs)(P/F, 12\%, 10yrs) + A_3(P/A, 12\%, 10yrs)(P/F, 12\%, 20yrs) + FV_{30}(P/F, 12\%, 30yrs)$

Question: $PV_0 = \$65,000(\quad) + \$60,000(\quad)(\quad) + \$55,000(\quad)(\quad) + \$1,000,000(\quad)$

What is the present value of this project

Calculations :

a.	1-10 = 65,000 * 5.650 =			367250.
b.	11-20 = 60,000 * 5.650 =		339000	
	339000 * .3220 =			109158.
c.	21-30 = 55,000 * 5.650 =		310750	
	310750 * .1037 =			32,224
d.	reversion = 1,000,000 * .0334 =			33,400
		Today's Value		$542,032.00

UNIVERSITY OF WISCONSIN
Real Estate Investment Teaching Model
Demonstration Case Study #2

ANALYSIS FOR PURCHASE OF APARTMENT HOUSE INVESTMENT

1. Assume you wish to analyze the investment value at alternative purchase prices of a 24 unit apartment building, located at 2575 University Avenue, Madison, Wisconsin. The building has twelve two-bedroom apartments that each rent furnished for $140 per month and twelve one-bedroom apartments that rent each for $125 per month. The building is five years old, unfurnished, in need of maintenance and available as is for about $225,000.

2. The building is well located and vacant land in the area is selling for about $1700 per unit. This means that $40,000 of the purchase price could be designated as land value. In addition to the land and building, the purchase price could be allocated to include $12,500 for the elevator and $7,200 to the parking stalls.

3. Market analysis indicates that the building would rent very well if all the units were carpeted and furnished. For this work it is estimated that it would cost $600 per two-bedroom unit and $500 for each one-bedroom unit or a total investment of $13,200 by the prospective buyer.

4. The total capital expenditures could be allocated for depreciation purposes as follows, keeping in mind that the prospect would be a second user and therefore only entitled to a maximum of 125% declining balance except for his new investment in furnishing. The percent depreciable and the number of years of remaining useful life are reasonable estimates given some knowledge of the practices of the Internal Revenue Service and the condition of the building:

Land	$40,000	No depreciation allowed		
Parking	7,200	50%	10 yrs.	125%
Elevator	12,500	90%	12 yrs.	125%
Building	165,300	100%	35 yrs.	125%
Furnishings	13,200	100%	7 yrs.	sum of digits
Transaction costs	1,800	100%	35 yrs.	125%

5. After completion of repairs and refurbishing it is anticipated that the two-bedroom apartments will rent for $170 a month and the one-bedrooms $150 per month. The gross rent roll of the building would then be:

$$\$170 \times 12 \times 12 = 24,480$$

$$\$150 \times 12 \times 12 = \underline{21,600}$$

$$\$\ \overline{46,080}$$

6. During the first year of changeover in ownership, refurbishing and re-leasing you estimate that each unit will be vacant about two months, that is about one-sixth of the time, (i.e. a vacancy of 17%) so that your average occupancy will

APARTMENT CASE STUDY #2

be 83% of potential for the first year. Thereafter you anticipate a normal vacancy rate of 5%, or an occupancy of 95%. Thus first year extra expenses include an additional 12% of future gross for rental losses.

7. The current real estate and personal property taxes to be paid in the first year following purchase are estimated to be $9,000. The normal current operating expenses, excluding real estate taxes but including management fees, are determined to be $8,400.

8. The property has been poorly maintained and will require additional expenditures of $2100 in the first year to justify the new rent schedule. This deferred maintenance charge will be added to the extra operating expenses of the first year washing it out as a tax deductible expense.

9. The buyer is considering this property because his accountant suggested that with his 30% tax bracket, including state and federal taxes, he should look for some tax shelter to offset some of his other current income. Using the accelerated method of depreciation, this real estate project should satisfy this requirement.

10. The investor feels that while the normal ratio of market value to income in his community ranges between 8% and 11%, proper financing should raise the pre-tax yield on his cash equity to at least 18%. The accountant suggests that if the investor considers the cash saved on deferred income taxes due to depreciation, the investor should seek at least 18% to 22% on his investment annually on an after-tax basis. His opportunity cost is 12% as that is his common stock return including capital gains.

11. The financing available to the investor would initially combine the assumption of a first mortgage with a balance of $180,000 with 240 months to run and a second mortgage taken back by the seller to be repaid in ten years, in monthly payments. The investor would plan to refinance both loans at the end of the sixth year of ownership when the prepayment penalty would lapse on the first mortgage. The seller feels he should receive $1000 as points on the second mortgage since that is the discount he will take when he sells the note.

1st Mortgage	180,000 20 year 5 year balloon	7 3/4%	
Private loan	15,000 10 year 5 year balloon	8 1/2%	$1000 discount

12. While the seller will pay for title insurance, a survey, and related items the buyer expects to pay about $800 in professional appraisal and legal fees related to this transaction. These fees plus points in #11 equal transaction costs of $1800 which increase original cash required and must be amortized over life of structure.

13. Temporary cash deficits at the end of any month can be covered with bank notes at a rate of 9% per annum and repaid out of positive cash flows when available.

APARTMENT CASE STUDY #2

14. The financial plan is to maintain a highly leveraged position and therefore payoff the original loans at the end of the fifth year by obtaining a new mortgage. To discover some measure of influence of such refinancing on yield to equity and cash flows, the investor will assume that in five years the best loan he could obtain would equal $190,000 for 20 year term at 8$ interest. The age of the building at that time would require granting a bonus interest feature equal to 4% of gross rent as of the beginning of sixth year when the loan begins.

UNIVERSITY OF WISCONSIN SCHOOL OF BUSINESS

Real Estate Investment Teaching Model

February, 1971

Card 1

Student's Name	Last 2 Digits of Social Security #	Course & Section #'s	Equity Discount Rate	Income Tax Rate	# Cards #3	# Cards #4
MORTGAGE BANKERS SCH	[redacted]	- [redacted]	.1800	.3000	[redacted]7	[redacted]4

Card 2

Project Description	Extraordinary Expenses	Cost of Equity Capital	Staging Multiplier	Staging Year
24 UNIT APT - CASE 2	7625	.1200	.	

Card 3

Component Description	Original Cost	Percent Depreciable	Depreciation Method	Starting Year	Useful Life
LAND	40000	0.0000	00	1	00
BUILDING	165300	1.0000	03	1	35
PARKING	7200	0.5000	03	1	10
FURNISHINGS	13200	1.0000	01	1	07
ELEVATOR	12500	0.8000	03	1	12
TRANSACTION COST	1800	1.0000	03	1	35
7TH YR REFURBISHING	10000	1.0000	01	8	07

Card 4

Mortgage Description	Principal Amount	Monthly Payment	Interest Rate	Bonus Interest Rate	Start	End	Term	Refinanced By Mortgage #
FIRST ASSUMED MORTG.	180000		.0775	.	01	05	20	03
SELLERS 2ND MORTG.	15000		.0850	.	01	05	10	03
REFINANCED FIRST	190000		.0800	0.0400	06	10	20	
REFURBISH CHATTEL	10000	150	.0900	.	08	10		

UNIVERSITY OF WISCONSIN SCHOOL OF BUSINESS

Real Estate Investment Teaching Model

February, 1971

Card Type 5

Gross Rent	Expenses	Rental Growth Rate	Expense Growth Rate
46080	8400	.0200	.0200

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65

Card Type 6

R E Taxes	R E Tax Growth Rate	Project Value Rate of Growth
9000	.0500	.0100

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65

Card Type 7

Vacancy Rate	Working Capital Loan Interest Rate
.0500	.0900

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65

To code Depreciation Method, use the following code no's.

0 = no depreciation
1 = sum of the digits
2 = straight line depreciation
3 = 125% declining balance
4 = 150% declining balance
5 = 200% declining balance

HAVE YOU CHECKED CARD I COLS. 61 and 64?

UNIVERSITY OF WISCONSIN SCHOOL OF BUSINESS
Real Estate Investment Teaching Model
February, 1971
Basic Definitions of Model Outputs

1) Current period return on Net Worth before taxes =

$$\frac{\text{Cash Throw-off + Change in Net Worth}}{\text{Net Worth at End of Previous Year}}$$

2) Current period return on net worth after taxes =

$$\frac{\text{Spendable cash + tax savings on other income + (Change in net worth - change in cap. gains tax)}}{\text{Net worth at the end of previous year less capital gains tax of previous year}}$$

3) Cash return on original cash equity before taxes =

$$\frac{\text{Cash throw-off}}{\text{Total initial investment less initial mortgage debt}}$$

(This is adjusted for staged projects)

4) Cash return on original equity cash after taxes =
(This is adjusted for staged projects)

$$\frac{\text{Spendable Cash after taxes + Tax savings on other income}}{\text{Total initial investment cost less initial mtge. debt}}$$

5) Net income - market value ratio

$$\frac{\text{Net Income}}{\text{Market Value for the same period}}$$

6) After tax cash recovered - cash equity ratio (payback) =

$$\frac{\text{Accumulated spendable cash after taxes + accumulated tax savings other income}}{\text{Cash equity required}}$$

7) Default ratio =

$$\frac{\text{Operating Exp. + R.E. Taxes + Prin. \& Interest on Mtge. + Working Cap. Loan Prin. Repayment}}{\text{Gross Income}}$$

8) Lender Bonus Interest Rate =

$$\frac{\text{\% of effective gross (not to exceed cash throw-off for period)}}{\text{Balance due on loan at beginning of period}}$$

9) Resale Market Value at End of Year

Total Initial Investment Cost + Additional Staged Investment X Index for Year

10) Net worth of property =

Market value less balance of loans less working capital loans

11) A. Sales proceeds subject to capital gains tax =

Market value - (Total Capital Investment - Straight-line depreciation - Allowed excess depreciation)

B. Sales proceeds subject to income tax =

Cumulative depreciation taken - Straight-line depreciation - Allowed excess depreciation

C. Taxes on sale = (A X 1/2 Income Tax rate*) + (B X Income Tax Rate)
* Not to exceed 25%

12) Present value of project before taxes =

Original mortgage balance + PV of received stream of cash throw-off + PV of net worth if sold at end of year indicated by column number.

13) Present value of project after taxes =

Original mortgage balance + present balue of received stream of spendable cash after taxes + PV of received tax savings on other income + PV of (net worth less capital gains tax) if sold at end of year indicated by column number.

14) Cash Equity Required = $\sum$\$ components utilized - $\sum$face value of mortgages in force

15) For each year N (net worth - cap gains tax) +

$$X = \sum^{N} \left[(\text{Spendable Cash Aft Taxes + Tax Savings}) * (1. + \text{Cost of Equity Cap})^{N-1} \right]$$

Y = (LOG (X) - LOG (Original Investment)/N

Equity Rate = Exp (Y) - 1.

COMPONENTS	PCT. DEPR	BEGIN USE	USEFUL LIFE	DEPR METHOD	COST
LAND	.00	1	.	0	$ 40000.
BUILDING	1.00	1	35.	3	$ 165300.
ELEVATOR	.80	1	9.	3	$ 12500.
FURNISHINGS	1.00	1	7.	5	$ 13200.
PARKING	.50	1	10.	3	$ 7200.
TRANSACTION COST	1.00	1	35.	3	$ 1800.
7TH YR REFURBISH	1.00	8	7.	1	$ 10000.
TOTAL INITIAL INVESTMENT					$ 240000.

GROSS RENT	$ 46080.
EXPENSES	$ 8400.
R E TAXES	$ 9000.
INCOME TAX RATE	.3000
VACANCY RATE	.0500
EQUITY DISCOUNT RATE	.1800
STAGING YR(0),FACTOR	.00

RATE OF GROWTH OF GROSS RENT	.0200
RATE OF GROWTH OF EXPENSES	.0200
RATE OF GROWTH OF R E TAXES	.0500
RATE OF GROWTH OF PROJECT VALUE	.0100
WORKING CAPITAL LOAN RATE	.0900
EXTRAORDINARY EXPENSES	$ 7625.
COST OF EQUITY CAPITAL	.1200

	1	2	3	4	5	6	7	8	9	10
CASH EQUITY REQUIRED	45000.	45000.	45000.	45000.	45000.	50000.	50000.	50000.	50000.	50000.

FINANCING PLAN

FIRST ASSUMED MORTG $ 180000.
MONTHLY PAYMENT $ 1477. INTEREST RATE .0775 STARTS 1 ENDS 5 BONUS INTEREST .0000 OF GROSS RENT

	1	2	3	4	5	6	7	8	9	10
PRINCIPAL	3919.	4234.	4574.	4942.	5339.	.	.	.	.	.
INTEREST	13812.	13497.	13157.	12790.	12393.	.	.	.	.	.
BALANCE	176080.	171845.	167270.	162328.	156989.	.	.	.	.	.

SELLERS 2ND MORTG. $ 15000.
MONTHLY PAYMENT $ 185. INTEREST RATE .0850 STARTS 1 ENDS 5 BONUS INTEREST .0000 OF GROSS RENT

	1	2	3	4	5	6	7	8	9	10
PRINCIPAL	994.	1082.	1178.	1282.	1396.	.	.	.	.	.
INTEREST	1236.	1148.	1053.	948.	835.	.	.	.	.	.
BALANCE	14005.	12922.	11743.	10460.	9064.	.	.	.	.	.

REFINANCED FIRST $ 190000.
MONTHLY PAYMENT $ 1589. INTEREST RATE .0800 STARTS 6 ENDS 10 BONUS INTEREST .0400 OF GROSS RENT

	1	2	3	4	5	6	7	8	9	10
PRINCIPAL	.	.	.	.	.	4016.	4349.	4710.	5101.	5524.
INTEREST	.	.	.	.	.	15054.	14721.	14360.	13969.	13546.
BALANCE	.	.	.	.	.	185983.	181634.	176924.	171822.	166297.

REFURBISH CHATTEL $ 10000.
MONTHLY PAYMENT $ 150. INTEREST RATE .0900 STARTS 8 ENDS 10 BONUS INTEREST .0000 OF GROSS RENT

	1	2	3	4	5	6	7	8	9	10
PRINCIPAL	.	.	.	.	.	.	.	938.	1026.	1122.
INTEREST	.	.	.	.	.	.	.	861.	773.	677.
BALANCE	.	.	.	.	.	.	.	9061.	8035.	6913.

	1	2	3	4	5	6	7	8	9	10
GROSS RENT	46080.	47001.	47923.	48844.	49766.	50688.	51609.	52531.	53452.	54374.
LESS VACANCY ALLOWANCE	2304.	2350.	2396.	2442.	2488.	2534.	2580.	2626.	2672.	2718.
EFFECTIVE GROSS INCOME	43776.	44651.	45527.	46402.	47278.	48153.	49029.	49904.	50780.	51655.
LESS REAL ESTATE TAXES	9000.	9450.	9900.	10350.	10800.	11250.	11700.	12150.	12600.	13050.
LESS EXPENSES	16025.	8568.	8736.	8904.	9072.	9240.	9408.	9576.	9744.	9912.
NET INCOME	18751.	26633.	26891.	27148.	27406.	27663.	27921.	28178.	28436.	28693.
LESS DEPRECIATION	11578.	10038.	8847.	7913.	7169.	6565.	6067.	7790.	7178.	6223.
LESS INTEREST	15049.	14646.	14210.	13739.	13229.	17082.	16785.	17323.	16881.	16398.
TAXABLE INCOME	-7876.	1948.	3832.	5495.	7007.	4015.	5068.	3064.	4375.	6071.
PLUS DEPRECIATION	11578.	10038.	8847.	7913.	7169.	6565.	6067.	7790.	7178.	6223.
LESS PRINCIPAL PAYMENTS	4914.	5317.	5753.	6224.	6735.	4016.	4349.	5648.	6127.	6647.
CASH THROW-OFF	-1213.	6669.	6926.	7184.	7441.	30510.	6785.	15206.	5427.	5647.
LESS TAXES	.	584.	1149.	1648.	2102.	1204.	1520.	919.	1312.	1821.
CASH FROM OPERATIONS	-1213.	6084.	5777.	5535.	5339.	29306.	5265.	14287.	4114.	3826.
WORKING CAPITAL LOAN(CUM BALANCE)	1213.	.	.	.	.	.	.	.	.	.
SPENDABLE CASH AFTER TAXES	.	4762.	5777.	5535.	5339.	29306.	5265.	4287.	4114.	3826.
TAX SAVINGS ON OTHER INCOME	2363.	.	.	.	.	.	.	.	.	.

* *

	1	2	3	4	5	6	7	8	9	10
MARKET VALUE	240000.	242400.	244800.	247200.	249600.	252000.	254400.	266800.	269200.	271600.
BALANCE OF LOANS	191298.	184767.	179014.	172789.	166054.	185983.	181634.	185985.	179858.	173211.
NET WORTH OF PROPERTY	48701.	57632.	65785.	74410.	83545.	66016.	72765.	80814.	89341.	98388.
CAPITAL GAIN	8131.	18662.	29193.	39724.	50255.	60786.	71317.	83277.	95046.	106605.
CAPITAL GAINS TAX	1219.	2799.	4378.	5958.	7538.	9117.	10697.	12491.	14256.	15990.
INCOME TAX ON EXCESS DEPRECIATION	1034.	1606.	1821.	1756.	1467.	997.	378.	.	.	.

* *

	1	2	3	4	5	6	7	8	9	10
PERCENT INITIAL EQUITY PAYBACK AFTER TAX	.0525	.1583	.2867	.4097	.5283	1.0616	1.1669	1.2527	1.3350	1.4115
NET INCOME-MARKET VALUE RATIO	.0781	.1098	.1098	.1098	.1098	.1097	.1097	.1056	.1056	.1056
RETURN ON NET WORTH BEFORE TAXES	.0552	.3203	.2616	.2403	.2227	.1553	.2050	.3195	.1726	.1644
RETURN ON NET WORTH AFTER TAXES	.0846	.2484	.2280	.2122	.1976	.1430	.1977	.1770	.1591	.1483
CASH RETURN ON ORIG CASH EQUITY BEF TAX	-.0269	.1482	.1539	.1596	.1653	.6102	.1357	.3041	.1085	.1129
CASH RETURN ON ORIG CASH EQUITY AFT TAX	.0525	.1058	.1283	.1230	.1186	.5861	.1053	.0857	.0822	.0765
DEFAULT RATIO	.9763	.8339	.8054	.8029	.8004	.8204	.8185	.8508	.8484	.8461
LENDER BONUS INTEREST RATE	.0000	.0000	.0000	.0000	.0000	.0122	.0110	.0115	.0114	.0120

* *

	1	2	3	4	5	6	7	8	9	10
PRESENT VALUE OF PROJECT BEFORE TAXES	236272.	241180.	244044.	246091.	247482.	246720.	247239.	254941.	254808.	254543.
PRESENT VALUE OF PROJECT AFTER TAXES	236364.	238649.	240204.	241194.	241709.	240691.	241002.	245953.	245633.	245179.
EQUITY RATE W/ COST OF CAPITAL AT .120	.0846	.1607	.1785	.1825	.1817	.1741	.1716	.1683	.1648	.1615

BUSINESS 550/705
THE REAL ESTATE PROCESS

Cash Flow Handout #2

Given:

a. Investor equity rate = 13%
b. Income
   1. years 1 - 10 = \$60,000 per year
   2. years 11 - 20 = 65,000 per year
   3. years 21 - 30 = 90,000 per year
c. Reversion value = \$600,000

Question

What is the most that this investor should pay for this project with 100% equity money?

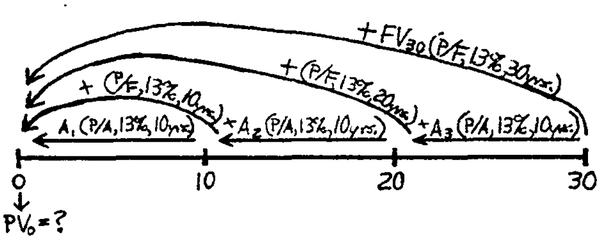
Calculations

$$PV_0 = A_1(P/A,13\%,10yrs.) + A_2(P/A,13\%,10yrs.)(P/F,13\%,10yrs.)$$
$$+ A_3(P/A,13\%,10yrs.)(P/F,13\%,20yrs.) + FV_{30}(P/F,13\%,30yrs.)$$

$$PV_0 = \$60,000(5.42624) + \$65,000(5.42624)(.29459)$$
$$+ \$90,000(5.42624)(.08678) + \$600,000(.02557)$$

PV_0 = $\underline{\underline{\$487,200}}$ -- This is the present value of the cash flows to the equity investor if 100% equity is used to finance the purchase (i.e., no debt).

Solution Conceptually:



Given:

A. Bank financing
Repayment = \$50,000 per year
Interest = 10%
Term = 20 years

B. Insurance Co. financing
Repayment = \$40,000 per year
Interest = 9%
Term = 25 years

Question

Compare these two financing packages.

Calculations

A. Bank financing

Step 1: PV of mortgage loan = ADS(P/A, 10%, 20yrs.)

= \$50,000 (8.51356)

= \$425,678

Step 2: PV of cash flows to equity investors:

$$PV_0 = (A_1\text{-ADS})(P/A,13\%,10yrs.) + (A_2\text{-ADS})(P/A,13\%,10yrs.) \times (P/F,13\%,10yrs.)$$

$$+ (A_3\text{-ADS})(P/A,13\%,10yrs.)(P/F,13\%,20yrs)$$

$$+ FV_{30}(P/F,13\%,30yrs.)$$

$$PV_0 = (\$60,000-\$50,000)(5.42624)$$

$$+ (\$65,000-\$50,000)(5.42624)(.29459)$$

$$+ (\$90,000-\$0)(5.42624)(.08678)$$

$$+ \$600,000(.02557)$$

$$PV_0 = \$135,962$$

Step 3: Investment value of project = PV of loan + PV of equity

= \$425,678 + \$135,962

= \$561,640

Remarks:

1. Note that the lender discounts his(/her) cash flows at 10% in this example while the equity investor(s) discounts his cash flows at 13%. Always be careful that you are using the appropriate discount rate.

2. At the end of 20 years in this example, the mortgage loan has been fully repaid; hence, no annual debt service (ADS) is deducted from the income during years 21 through 30.

Calculations (Cont'd)

B. Insurance Co. financing

Step 1: PV of mortgage loan = ADS(P/A, 9%, 25 yrs.)

= $40,000 (9.82258)

= $392,903

Step 2: PV of cash flows to equity investors:

$$PV_0 = (A_1\text{-}ADS)(P/A, 13\%, 10yrs.)$$
$$+ (A_2\text{-}ADS)(P/A, 13\%, 10yrs.)(P/F, 13\%, 10yrs.)$$
$$+ (A_3\text{-}ADS)(P/A, 13\%, 5yrs.)(P/F, 13\%, 20yrs.)$$
$$+ A_3(P/A, 13\%, 5yrs.)(P/F, 13\%, 25yrs.)$$
$$+ FV_{30}(P/F, 13\%, 30yrs.)$$

$$PV_0 = (\$60{,}000-\$40{,}000)(5.42624)$$
$$+ (\$65{,}000-\$40{,}000)(5.42624)(.29459)$$
$$+ (\$90{,}000-\$40{,}000)(3.51723)(.08678)$$
$$+ \$90{,}000(3.51723)(.047102)$$
$$+ \$600{,}000(.02557)$$

$$PV_0 = \$194{,}001$$

Step 3: Investment value of project = PV of loan + PV of equity

= $392,903 + $194,001

= $586,904

Comparison of financing packages

The insurance company financing package is more valuable since it produces a higher investment value for the project. This is due to the lower interest rate and the longer term of the loan. Note that the insurance company financing package involves a smaller mortgage loan, however.

FRONT DOOR/BACK DOOR DEMO PROBLEM

The purpose of this problem set is to demonstrate the two general approaches to value. The first approach is called the "FRONT DOOR" approach and represents the Capital Allocation form of real estate valuation. The "solution" of this approach is value of the investment to investors.

The second approach is called the "BACK DOOR" approach and represents the Revenue Justified (RJV) form of real estate valuation. The "solution" of this approach is the justified capital allocation costs. This is determined on a Before Tax Basis.

GIVEN INFORMATION

I. Basic Building

Gross Area 60' x 228' = 13,680 S.F.
13,680 * 3 floors = 41,040 S.F.

Office Space on First Floor
26' * 228 = 2,964 S.F.

II. Revenue Units

A. Apartments

1. 10 efficiency @ 400 S.F. = 4,000 S.F.
2. 30 one bedroom @ 650 S.F. = 19,500 S.F.
3. 10 two bedroom @ 925 S.F. = 9,250 S.F.

Net Rentable Area-Apartments = 32,750 S.F.

B. Office Space

Net Rentable Area-Office Space = 2,839 S.F.

III. Building Efficiencies

A. Apartments

$\frac{32,750 \text{ S.F.}}{38,076 \text{ S.F.}}$ (41,040 - 2,964) = 86%

B. Office Space

$\frac{2,839 \text{ S.F.}}{2,964 \text{ S.F.}}$ = 96%

C. Building Average

$\frac{35,589 \text{ S.F.}}{41,040 \text{ S.F.}}$ = 87%

IV. Gross Income

A. Apartments

1. Efficiency (400 S.F. * .475/S.F.) = 190/mo/unit
190/unit * 10 units = 1,900/mo.
2. One bedroom (650 S.F. * .400/S.F.) = 260/mo/unit
260/unit * 30 units = 7,800/mo.
3. Two bedroom (925 S.F. * .324/S.F.) = 300/mo/unit
300/unit * 10 units = 3,000/mo

Total Monthly Income-Apartments = 12,700

4. Gross Income-Apartments
   12,700 * 12 months = 152,400

5. Parking Income
   20 stalls @ 12.50/mo * 12 mo = 3,000

6. Miscellaneous Income (washer & dryer)
   6.00/unit/mo * 50 units * 12 mo = 3,600

7. Furniture Rental
   25.00/unit/mo * 10 units * 12 mo = 3,000

   Total Apartment Income = 162,000

B. Office Space
   2,840 S.F. * 6.50/S.F./yr = 18,460

   Total Gross Income 180,460

V. Expenses

A. Operating Expenses

1.	Utilities	(.28/S.F.)*	=	9,170
2.	Insurance	(.04/S.F.)	=	1,424
3.	Leasing Comm	(8.00/unit/yr)	=	400
4.	Payroll & Taxes	(.18/S.F.)*	=	6,406
5.	Management Fees	(6% of gross)	=	10,827
6.	Maintenance	(.30/S.F.)	=	10,677
	Total	(25.55% gross)		38,904

*Apartment units only

B. Real Estate Taxes
   (11.5% of gross) = 20,753

   Total Expenses = 59,657

VI. Replacement Reserves (Sinking Fund Deposit @ 5.5%)

A. Replacement of carpeting - 5 year life
   3911 Sq. Yd. @ 8.00/Sq. Yd. = 31,288
   31,288 * .179176 = 5,606

B. Replacement of A/C units - 7 year life
   50 units @ 485 ea. = 24,250
   24,250 * .120964 = 2,933

   Total Reserves (4.73% gross) = 8,539

VII. Vacancy Determination

A. Apartments

1. Efficiency = 1 unit/month
   1 * 12 = 12 * 190/mo = 2,280
2. One bedroom = 1.75 unit/month
   1.75 * 12 = 21 * 260/mo = 5,460
3. Two bedroom = .5 unit/month
   .5 * 12 = 6 * 300/mo = 1,800
   9,540

4. Fixed Income Vacancy As A %

$$\frac{9,540}{152,400} = 6.26\%$$

5. Variable Income Vacancy As A Dollar Amount
   .0626 * 9,600 = 600

Total Apartment Vacancy Amount = 10,140

Total Apartment Vacancy
% of Gross Income

$$\frac{10,140}{180,460} = 5.62\%$$

B. Office Space
5 year triple net lease - no vacancy

VIII. Projected Costs

1.	Land (36,000 S.F. @ 2.50/S.F.)	=	90,000
2.	Building Shell & Mech. (24.56/S.F.)	=	1,007,943
3.	Architects Fees (6% of building)	=	60,477
4.	Accounting & Const. Mgnt. (3.5% of Building)	=	35,280
5.	Parking Lot (8,000 S.F. @ .5 S.F.)	=	4,000
6.	Washer & Dryer (5 sets @ 650 ea.)	=	3,250
7.	Furnishings (10 units @ 1,150 ea.)*	=	11,500
8.	Legal & Insurance	=	15,000
9.	Promotion	=	5,000
	Total Cost		1,232,450

*Furnishings

1.	Hide-A-Bed	450
2.	Dresser	200
3.	2 Chairs	300
4.	2 End Tables	100
5.	Dinette	325
6.	2 Lamps	65
		1,440

1,440 * 20% discount = 1,152 = 1,150

IX. Unit Costs - Less Land

1,232,450 - 90,000 = 1,142,450

A. Apartment Costs

1,142,450 * .9278* = 1,059,965

$$\frac{1{,}059{,}965}{38{,}076} = 27.84\text{/S.F. Gross}$$

$$\frac{1{,}059{,}965}{32{,}750} = 32.37\text{/S.F. Net Rentable}$$

1.	Efficiency	= 400 S.F. * 32.37	=	12,948
2.	One bedroom	= 650 S.F. * 32.37	=	21,040
3.	Two bedroom	= 925 S.F. * 32.37	=	29,942

B. Office Space

1,142,450 - 1,059,965 = 82,485

$$\frac{82{,}485}{2{,}964} = 27.83\text{/S.F. Gross}$$

$$\frac{82{,}485}{2{,}839} = 29.05\text{/S.F. Net Rentable}$$

X. Investment Assumptions

A. Mortgage

1.	Loan-to-Value Ratio	=	80%
2.	Interest Rate	=	9%
3.	Term	=	30 years
4.	Payments Per Year	=	12
5.	Mortgage Constant	=	.096552
6.	Default Ratio	=	85%

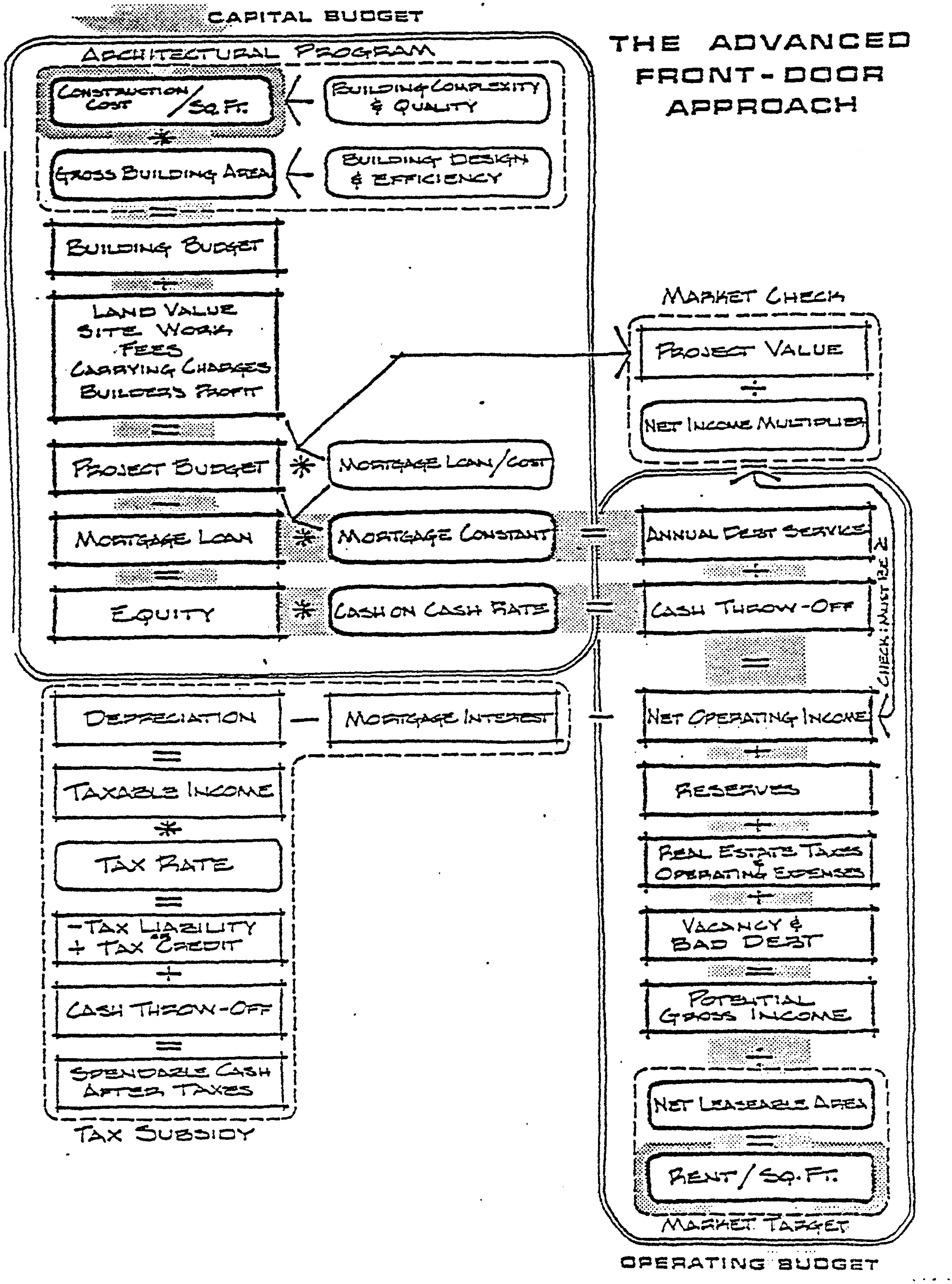
B. Investor

1.	Maximum Equity	=	250,000
2.	B/4 Tax Return	=	7.5%
3.	Payback Year	=	7
4.	Marginal Income Tax Rate	=	50%

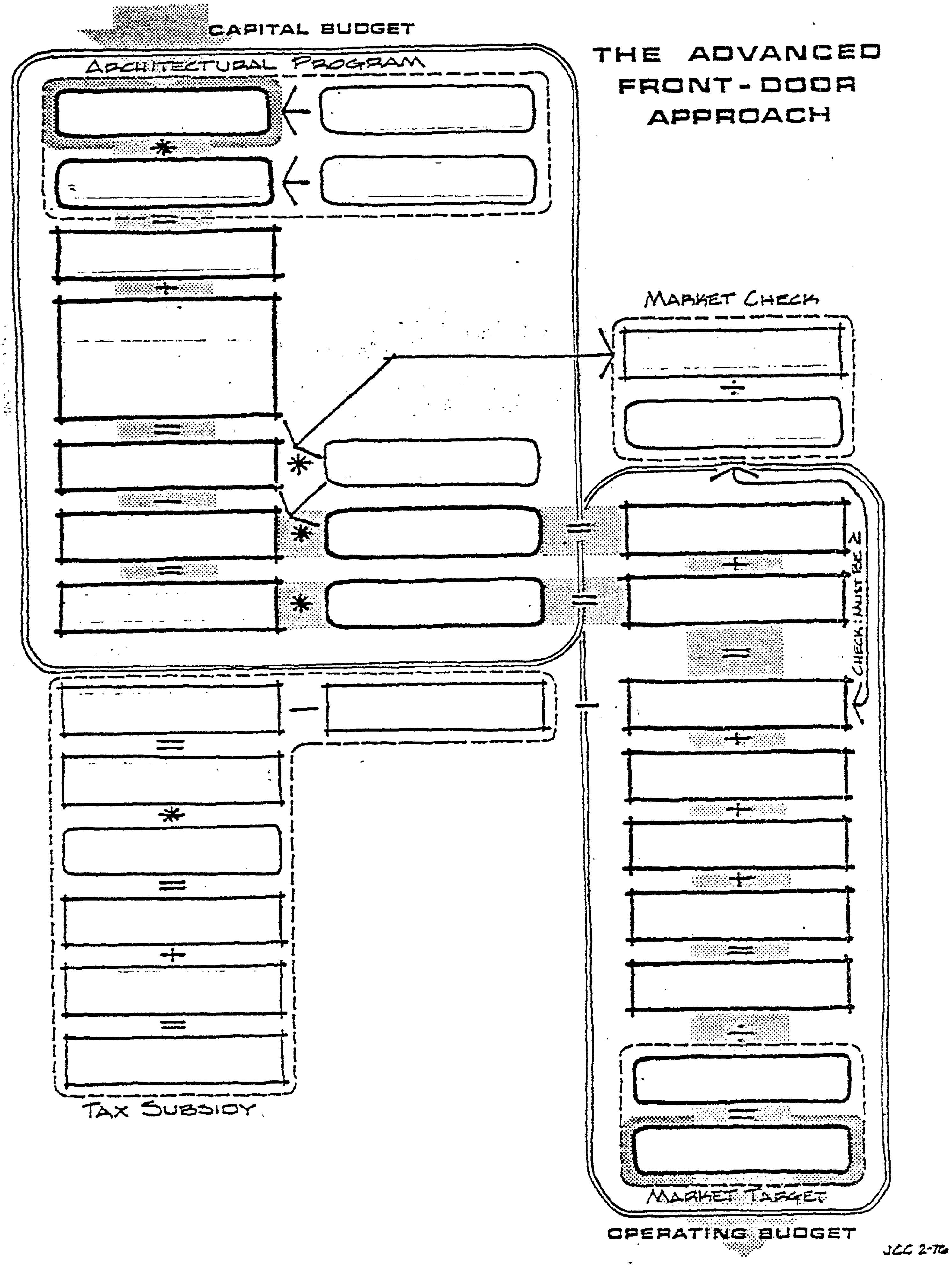
C. Components

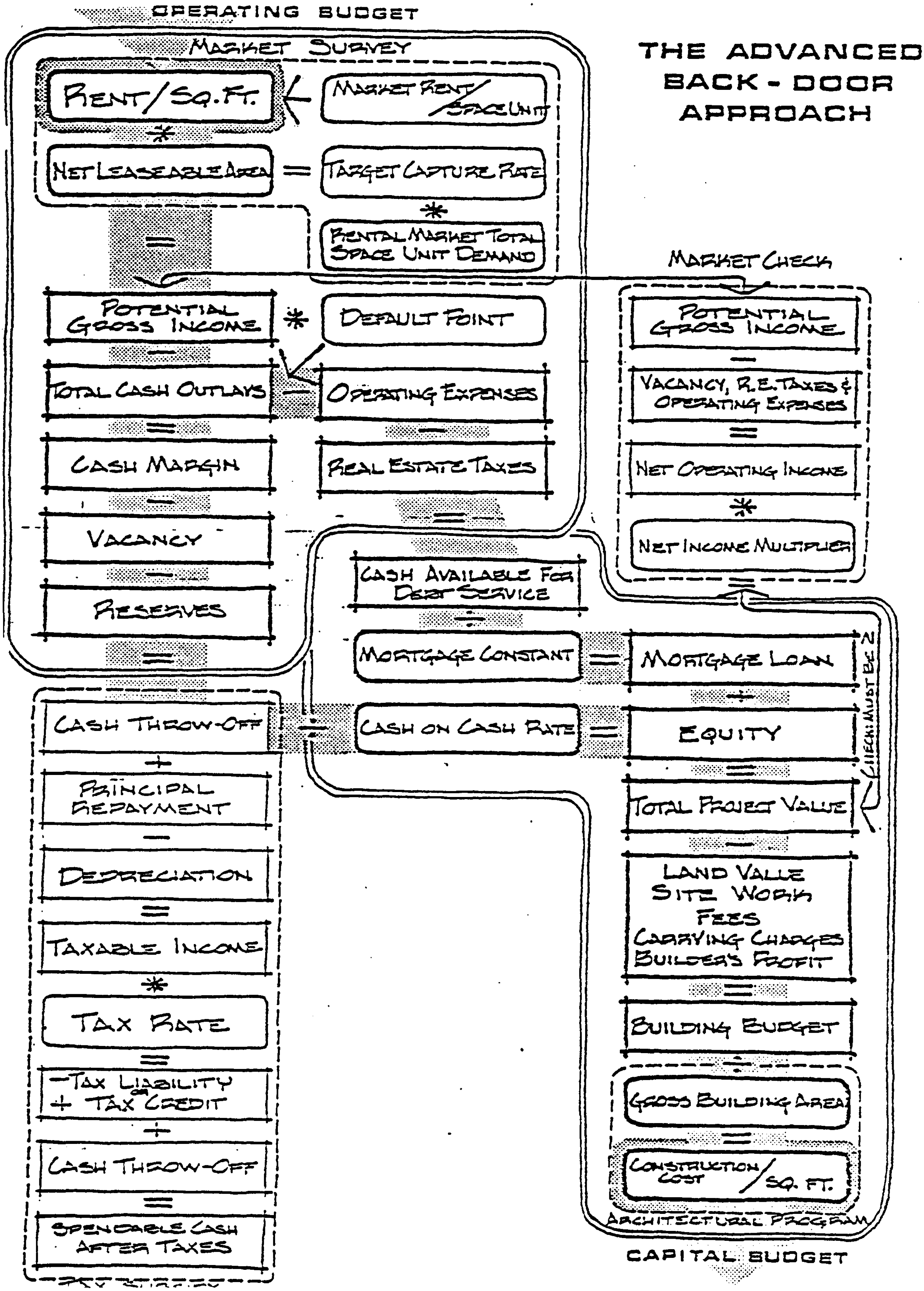
1.	Depreciation Rate	=	200% D.D.B.
2.	Annual Growth Rate	=	1.75%
3.	Working Capital Loan Rate	=	13%

THE ADVANCED FRONT-DOOR APPROACH

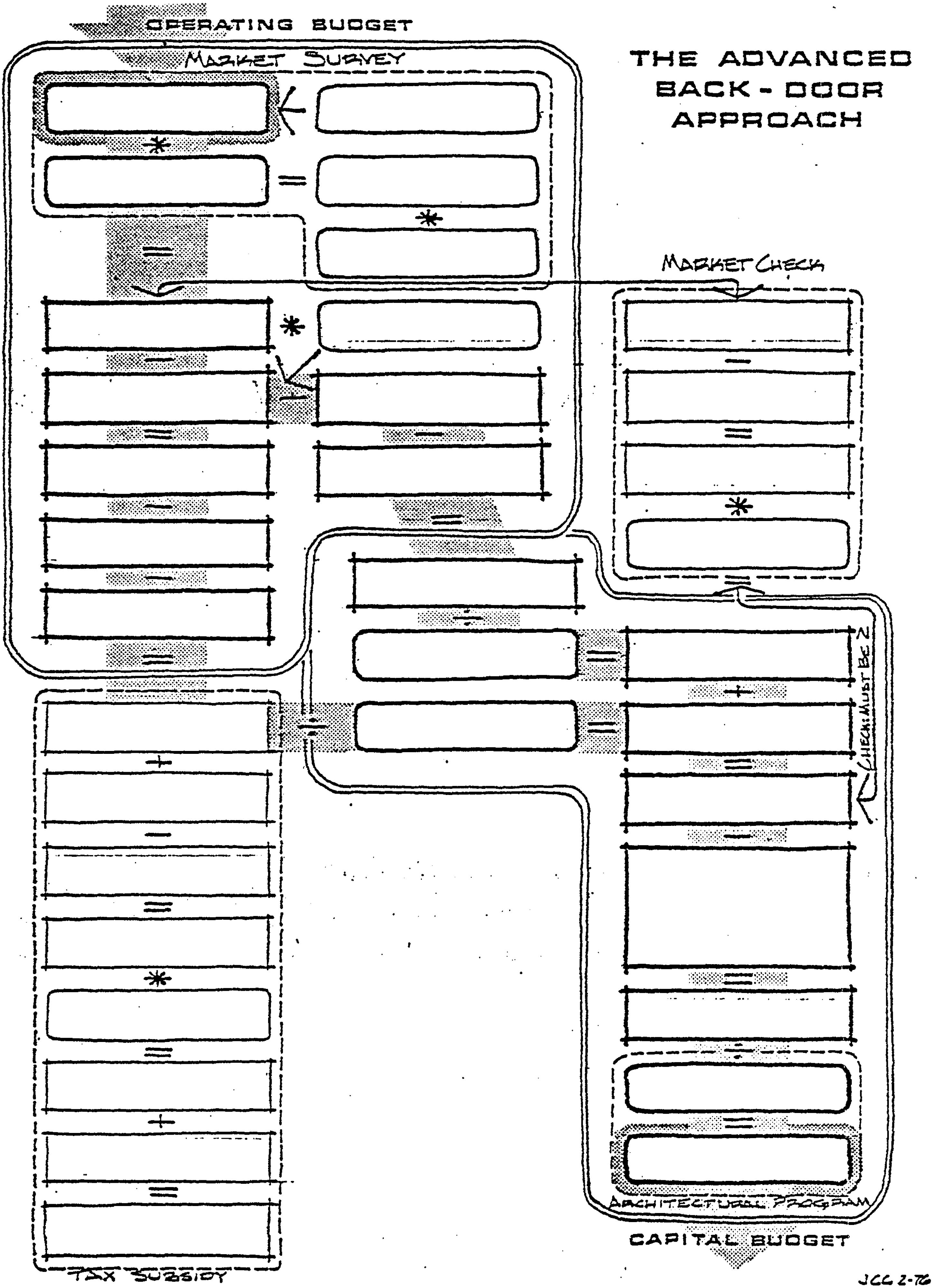


THE ADVANCED FRONT-DOOR APPROACH




THE ADVANCED BACK-DOOR APPROACH
OPERATING BUDGET
MARKET SURVEY
RENT/SQ.FT.
MARKET RENT/SPACE UNIT
*
NET LEASEABLE AREA
=
TARGET CAPTURE RATE
*
RENTAL MARKET TOTAL SPACE UNIT DEMAND
=
POTENTIAL GROSS INCOME
*
DEFAULT POINT
−
TOTAL CASH OUTLAYS
=
OPERATING EXPENSES
−
REAL ESTATE TAXES
=
CASH MARGIN
−
VACANCY
−
RESERVES
=
CASH AVAILABLE FOR DEBT SERVICE
÷
MORTGAGE CONSTANT
=
MORTGAGE LOAN
+
CASH THROW-OFF
÷
CASH ON CASH RATE
=
EQUITY
=
TOTAL PROJECT VALUE
CHECK: MUST BE =
MARKET CHECK
POTENTIAL GROSS INCOME
−
VACANCY, R.E. TAXES & OPERATING EXPENSES
=
NET OPERATING INCOME
*
NET INCOME MULTIPLIER
=
+
PRINCIPAL REPAYMENT
−
DEPRECIATION
=
TAXABLE INCOME
*
TAX RATE
=
−TAX LIABILITY OR + TAX CREDIT
+
CASH THROW-OFF
=
SPENDABLE CASH AFTER TAXES
−
LAND VALUE
SITE WORK
FEES
CARRYING CHARGES
BUILDER'S PROFIT
=
BUILDING BUDGET
÷
GROSS BUILDING AREA
=
CONSTRUCTION COST / SQ. FT.
ARCHITECTURAL PROGRAM
CAPITAL BUDGET

THE ADVANCED BACK-DOOR APPROACH



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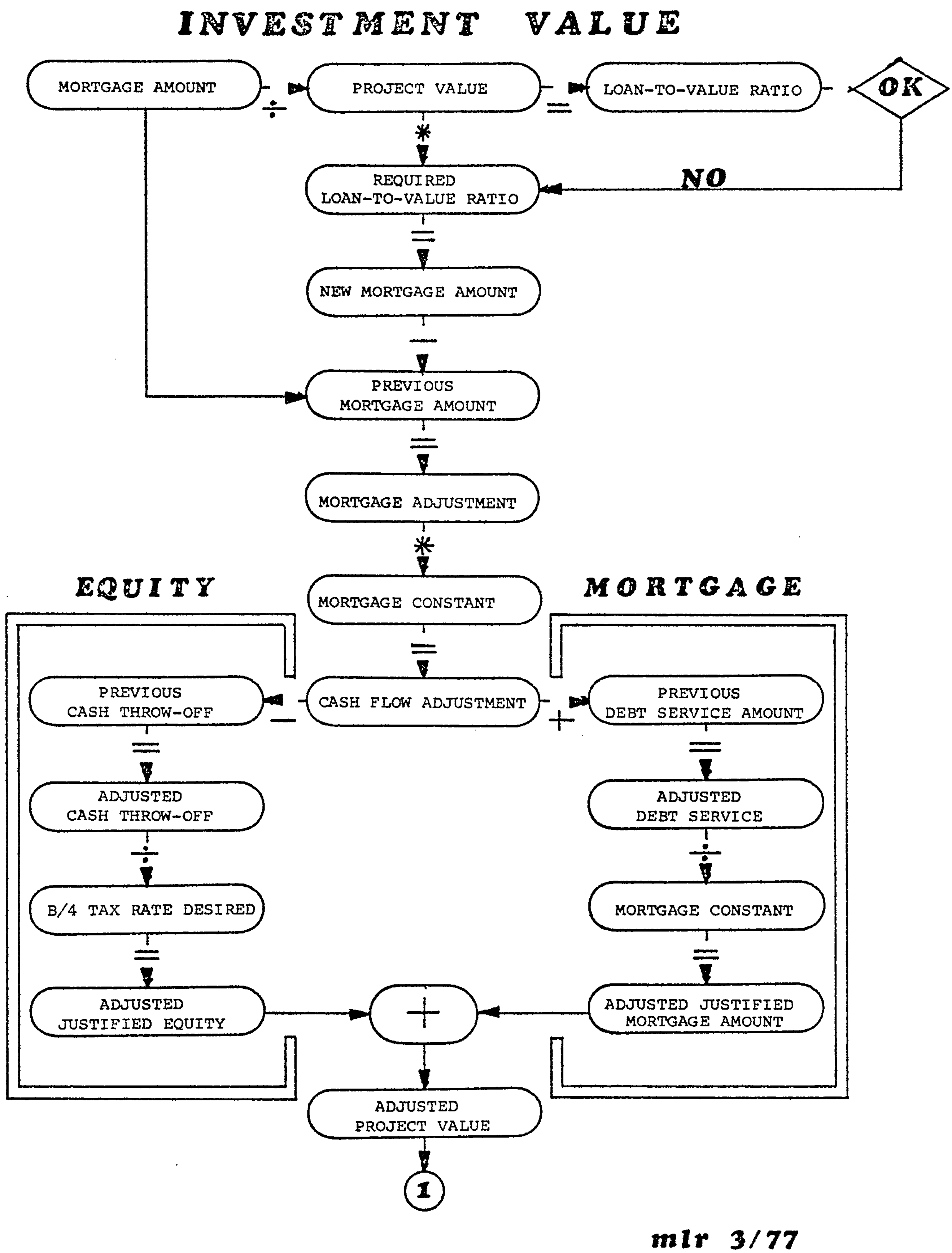

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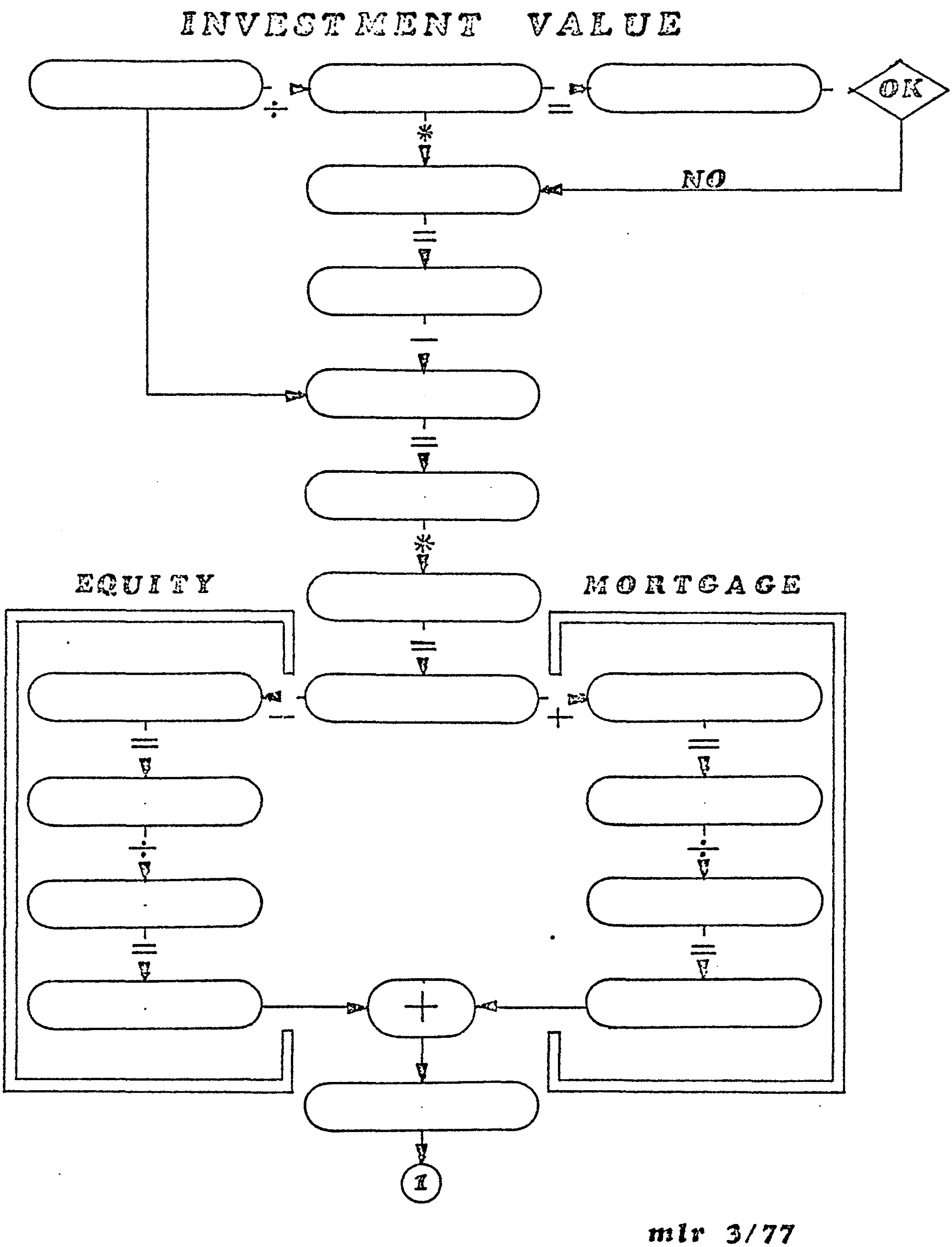


Business 550
The Real Estate Process

Project I - Part 2
Due February 23 (in class)

Name ______________________

Section ______________________

Grade ______________________

Mortgages & Annual Debt Service
(15 points)

I From the lab sessions to date you should understand the operation of mortgage financing in an income producing property. To test this proficiency, you are asked to carefully review the Project Data Sheet and in the space provided below determine:

A. the mortgage coefficient for the mortgage debt of $277,600.
B. the mortgage term using the 11% compound interest tables.
C. the portion of annual debt service which is the interest payment, for the first five years of the mortgage.

YEAR	1	2	3	4	5
MORTGAGE BALANCE	______	______	______	______	______
INTEREST RATE	______	______	______	______	______
ANNUAL DEBT SERVICE	______	______	______	______	______
INTEREST PAYMENT	______	______	______	______	______
PRINCIPAL REPAYMENT	______	______	______	______	______

I The mortgage is used as a means of increasing leverage for the investor and thus providing a greater return at a specified purchase price or allowing the investor to purchase the property at a higher purchase price while still maintaining his desired rate of return. In this case an investor is considering the purchase of an income producing property which has the following characteristics:

$25,000 net operating income for years 1-5
$30,000 net operating income for years 6-15
$35,000 net operating income for years 16-25
$30,000 net operating income for years 26-30
$300,000 reversion in year 30

The investor will discount returns to equity at 12% and has his choice of using:

1. 100% equity financing
2. .11% interest mortgage with a 20 year term and $20,000 annual debt service
3. .105% interest mortgage with a 25 year term and $17,500 annual debt service
4. .105% interest mortgage with a 20 year term and $19,000 annual debt service
   and
   .12% chattel mortgage for a 5 year term with a $4,000 annual debt service

Which financing option allows the investor to pay the highest price for the property and still maintain his 12% rate of return. Show calculations for all four financing options.

URBAN LAND ECONOMICS

Spring 1974

Project II. REAL ESTATE INVESTMENT PROPOSAL FOR A SELECTED SITE

A. PURPOSE

The purpose of this project is to formulate a proposal for a real estate investment project situated at the site which you selected. Present your report in a form which would be convincing evidence for a financial institution or investor. Presentation is important. The report should be typed and neat.

A preface to the report should include summary statements concerning: the proposal use, purpose of the report, findings, date, address, legal description, and brief physical description. You are encouraged to use a partner for this project. However, only two people may work as partners.

B. OUTLINE OF PROCEDURE

1. As a back drop for your investment decision, make a brief but thorough analysis of the city of Madison. Examine the nature and trend of important socio-economic and physical indicators. What is (and will be) the economic climate for an investment on your site? Use the sources listed below.

2. Make a decision as to the best suited use for your site, briefly supporting your conclusion from your knowledge of the local market and your analysis above. The use selected will be a function of the land uses that surround the site, the land uses that serve the site, other linkages, and the zoning and other constraints affecting the site in question. The basic elements of the micro locational analysis can also be illustrated with the use of maps. Suggested: zoning map, transportation map, and land use map. Property data should include the following:

   a. address and legal description
   b. relevant transaction data, i.e., important history affecting the site, dates, volume and page of deed in Register of Deeds Office, grantor, grantee, stamps, amount of consideration, etc.
   c. site: size, topography, etc.
   d. zoning and deed restriction
   e. taxes and special assessments
   f. visibility (sight lines to and from site)
   g. existing building: size, type, architecture, age and condition
   h. special features
   i. location: market and neighbor influences
   j. usual elements of functional or locational obsolescence
   k. linkages between site and surrounding uses
   l. transportation, traffic, and parking
   m. dynamics of above and probable future changes which will affect the site

3. Outline a general description of your concept of a proposed investment and any necessary improvements as related to land use trends, value trend, zoning, and critical design element. Indicate the forms of ownership, organization, etc.

4. Make a statement of your investment objective. That is, your investment objective is income, long term capital gain, short term specualtion as related to potential of highest and best use.

5. Estimate the total investment, in dollars, that will be necessary for a completed project.

   a. Substantiate land costs with market information.
   b. Estimate the total construction costs of the improvements.
   c. Indicate all other cost that may be necessary. Such as title search, architect's fee, etc.

6. Calculate the income that your project will generate:

   a. Local market information should be used to substantiate gross income, vacancies, and management and operating expenses based on simple market study.
   b. Indicate the income pattern for the life of the investment. Consider city-wide economic factors as well as local factors and the nature of the proposed improvement.
   c. Indicate the typical expense breakdown for your selected use and how these expenses are likely to vary over time.

7. Indicate the financial arrangements that are feasible for your project.

8. Place a valuation on your investment proposal using minimod (include only one minimod run in the report).

   a. State your pertinent assumptions as to the desired return on equity, economic life, depreciation, income and capital gain taxes, residual value, mortgage terms, etc., which you have not supported from the local market.
   b. Analyze the minimod output. What do the ratios mean?

C. CONCLUSION AND SUMMARY

1. Summarize your thinking up to this point. Make a decision as to the desirability and risk of your investment proposal. Would it be a wise investment?

2. Point out any special problems of your site, zoning, or neighborhood trends that might change the results. What pertinent assumptions in your financial analysis could you change to improve or make project feasible?

3. Review again your best use. In view of the knowledge gained from this project, would you propose the same use again?

4. List those individuals or firms who were particularly helpful to you. Also list any periodical or other sources of information. (simple list is adequate).

5. The overall strategy for completion for this project is to find as much relevant information as possible concerning the site and your assumptions in arriving at a decision. Strong factual data, concise presentation, logically supported assumptions, and criteral analysis are important factors in your presentation.

Business 550
Urban Land Economics

Project I

Spring, 1975

Prepare to hand in for a grade, solutions to the following problems. Show all work and indicate any assumptions made beyond those provided in the problems.

Problems 1 and 2 are designed to suggest to the student some basic tools of financial analysis in real estate investment. These two problems provide a practical introduction to present value theory and the use of mortgage funds. Problem 3 includes both of these concepts, but also causes the student to focus on after-tax income, accelerated depreciation and income and capital gains taxation as important facets of real estate investment analysis. For purposes of these problems, the present value factors may be selected from the tables of the text.

$8,000

1. The Civic Center commercial property has been analyzed and it has been determined that its earnings from henceforth can be projected on a step pattern as follows: $65,000 annual net income before income taxes for the second ten years, $90,000 annual net income before income taxes for the following ten years, after which time the property would have a residual capital value of $600,000. An investor wishes to purchase it with 100% equity equity money at a price that will give him a 13% return before income taxes. What is the <u>most</u> he should pay for this property?

2. Now assume that the above investor would be willing to borrow money to finance purchase of the property, but he still wants a 13% return on his equity down payment. The bank offers him a loan that could be repaid with a debt service of $50,000 per year at 10% for 20 years. An insurance company offers to lend him an amount that could be repaid at a rate of $40,000 per year at 9% for 25 years. Compare the investment under the two financing arrangements:

(a) How much of a loan is the bank willing to make? How much of an equity investment would the investor be willing to make? What is the total price offer for the property that would be justified under the assumptions? What percent of the total value is the loan?

(b) Answer the same questions for the insurance company financing proposal.

(c) Decide which method of purchase, <u>all equity</u>, <u>bank loan</u>, <u>insurance company loan</u> you would accept, briefly state your reasons.

3. For this problem, assume that an investor is considering paying $40,000 for an apartment site. You are analyzing his proposed project, and are trying to determine if it will be economical for him to go ahead with the project (that is, will the after-tax productivity of the project justify the land and improvement cost?). In making your analysis, you incorporate the following assumptions:

a) First year gross annual income of $43,000 increases by 3% per year for 10 years.

b) Vacancy allowance is assumed to be 5% of gross income.

c) Real estate taxes are $8,500 for the first year and increase at a rate of 5% per year.

d) Expenses are $6,000 for the first year and increase at a rate of 6% per year.

e) The total cost of the project is $280,000. Improvements are valued at $240,000. Land is valued at $40,000.

f) Mortgage debt of $210,000 is available. This debt is to be amortized at 12% with annual payments of $27,000.

g) The improvements will be depreciated through the use of the double declining balance method; the economic life of the improvements is 40 years.

h) The project value is expected to grow at 2% per year.

i) The investor's marginal income is taxed at 50%.

j) An after-tax return on the equity investment of 13% is sought

k) Capital gains on the sale of the property are taxed at 25%.

With this information provided, answer the following questions:

a) What is the total depreciation that the investor will take on the improvements over a ten year ownership period?

b) What is the amount of the capital gains tax?

c) What is the amount of mortgage amortization?

d) What is the present value of the spendable cash after taxes plus tax savings on other income generated by the project over its ten-year life?

e) What is the present value of the net proceeds from the sale of the property?

f) What is the total investment value of the project? (This may be more <u>or</u> less than the cost of land and improvements).

Note: you will probably find lecture handout materials halpful in completing these problems.

THE REAL ESTATE PROCESS
Business 550/705

TAKE-HOME QUIZ /
PROBLEM SET #2

Due at the beginning of lecture on Monday, March 3, 1986.

Name ____________________
Disc. Sec. _____ Attend ______

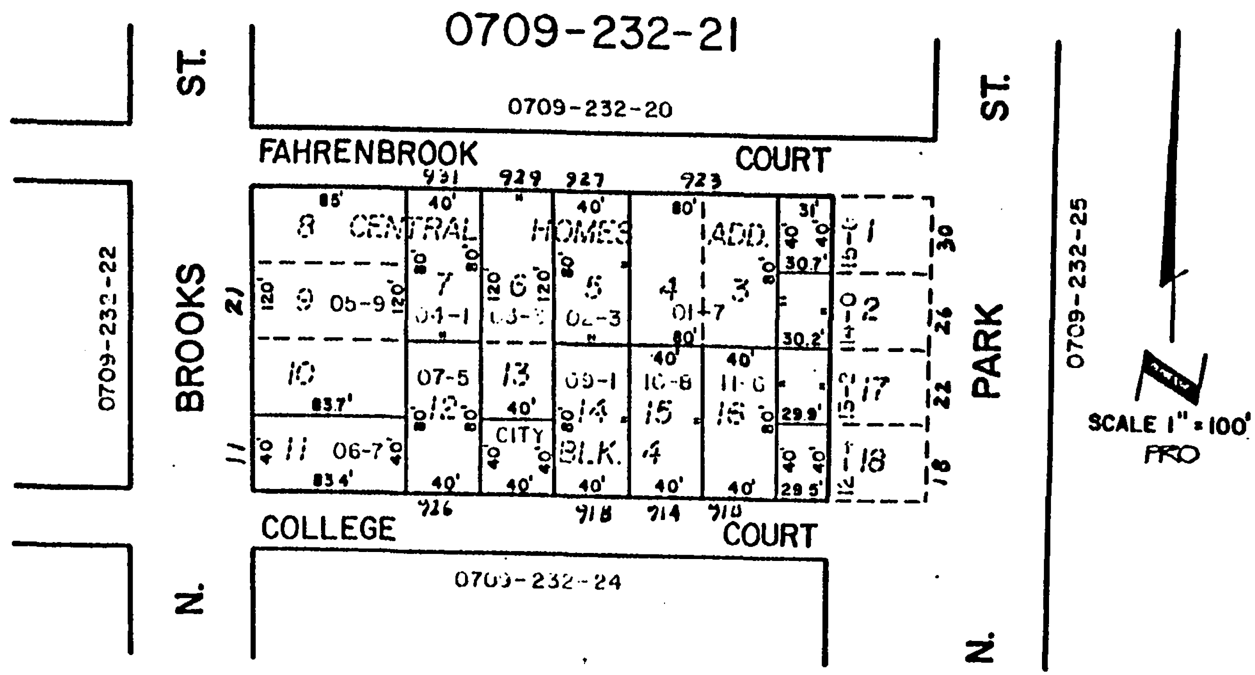
SUBJECT PROPERTY	The eastern portion of the block bounded by Park Street on the east, Fahrenbrook Court to the north, Brooks Street to the west, and College Court to the south.
ZONING	Mixed between R-5 and C-3 presently, but assume that the subject property will be rezoned C-2.
LEGAL DESCRIPTION	Lots 1-7 and 13-18 of Block 4 of Outlots 11 and 12 of the University Addition to the Central Homes Addition to the City of Madison.
DIMENSIONS	Irregular -- see dimensions on page 6.
ATTACHMENTS:	1. Tax Parcel Map - current as of 1-1-83 2. Plat Survey - original plat 3. Problem Worksheets 4. *in your Reading Packet* C2 Zoning Ordinance, et al

KEY ASSUMPTIONS

1. Park Street will be the front of the lot. Note: Street widening has claimed part of Lots 1, 2, 17, and 18.
2. Assume that the subject property is vacant and zoned C-2 while the rest of the block is zoned R-5.
3. Assume that utility easements now exist which require a 10' setback from all streets (as illustrated on the worksheets) and which forbid any "use" of the setback areas (including use as part of the building pad, as parking space, or as "useable open space").
4. Assume that the client requires each floor of the building to be the same size.
5. Building efficiency factors:

One-story building	95%
Two-story building	91%
Three-story building	87%

6. Each parking place will require 375 sq. ft. (on average) and all parking will be at grade.
7. Open space, if required, will be allocated ½ to the ground area and ½ to the roof.
8. Ignore (f)2.d under R-5 Yard Requirements.
9. All zoning questions/clarifications will be handled in the T.A.'s Office. DO NOT GO TO THE BUILDING PERMIT OFFICE



0709-232-21
0709-232-20
FAHRENBROOK
COURT
CENTRAL HOMES ADD.
CITY BLK. 4
COLLEGE
COURT
0709-232-24
0709-232-22
0709-232-25
N. BROOKS ST.
N. PARK ST.
SCALE 1" = 100'

3

336659 VOL. 5 PAGE 24.

PLAT OF

CENTRAL HOMES ADDITION

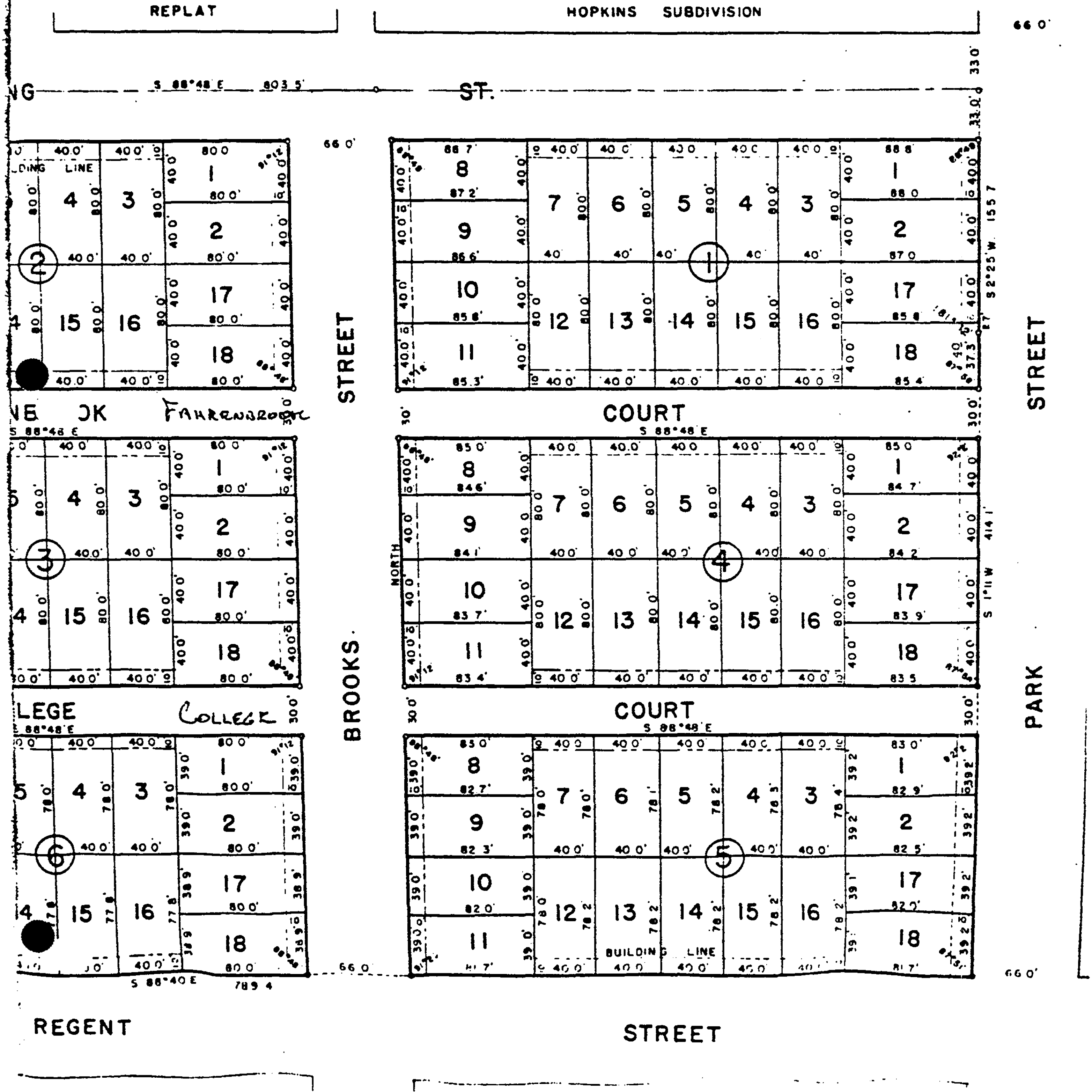
TO THE

CITY OF MADISON

BEING A

SUBDIVISION OF OUTLOTS 11 & 12 UNIVERSITY ADD.

RECORDED MAY 18 1916 SCALE 1" = 50' R S Ower, 1914



BUSINESS 550/705

THE REAL ESTATE PROCESS

PROBLEM SET #1

SHOW ALL CALCULATIONS! ! ! NAME ____________________

A. ONE-STORY RETAIL BUILDING - 14 POINTS

1. Lot Size:

2. Area Lost to Set-backs:

3. Buildable Area:

4. Maximum Allowable Floor Area:

5. Calculation of Standard Allocation Unit (SAU):

6. Number of SAUs within Buildable Area:

7. Total Building Area: **Gross** **Net**

8. Parking Area:

9. Open Space Area:

On ground

On roof

Total

10. Base Area Check:

Building

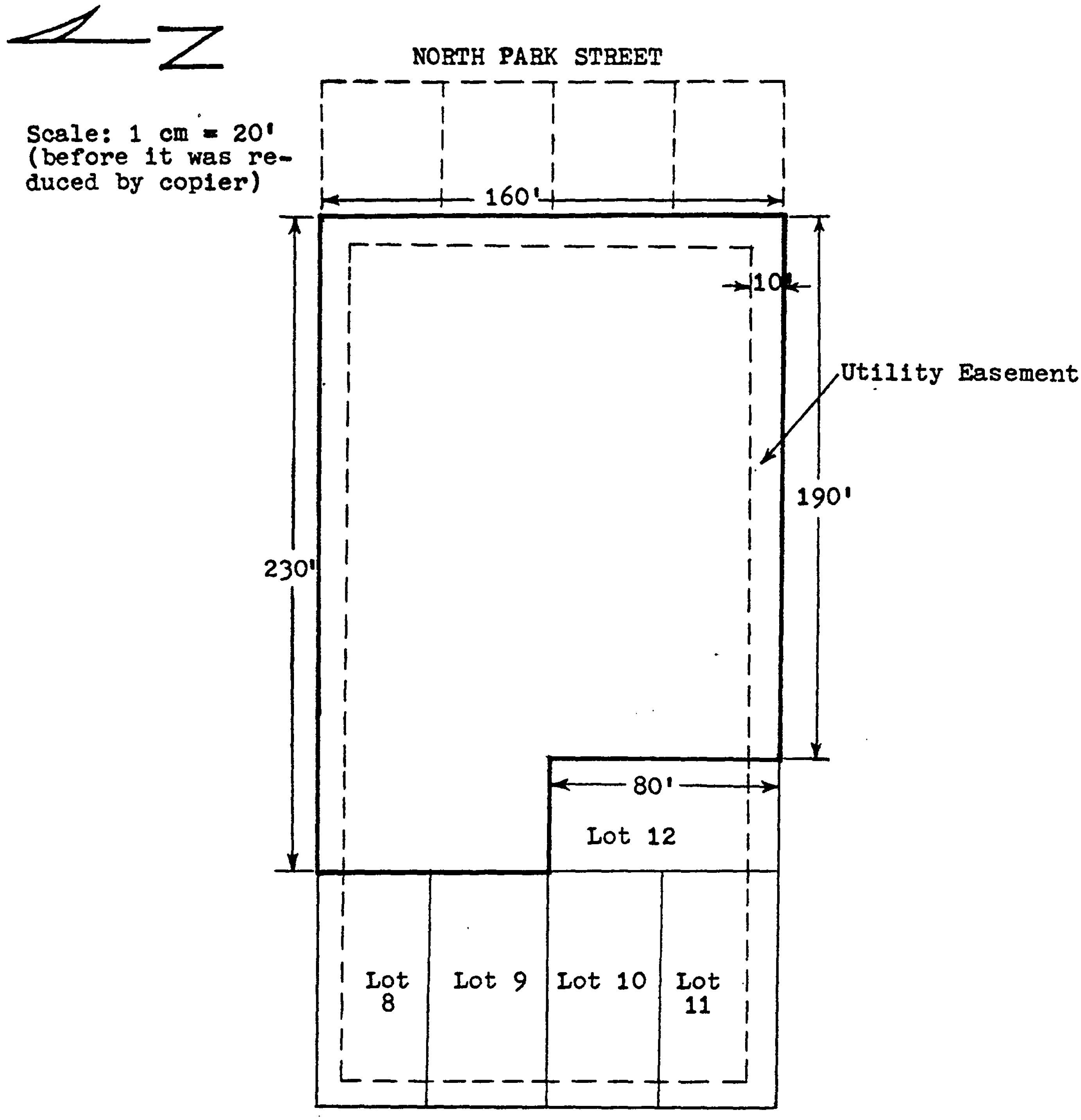
Parking

Open Space

Total

11. Is there a difference between #3 and #10? If so, how much? Why?

12. Illustrate on the attached sheet how you might allocate the required building, parking, and open space.



Your illustration should show:

(1) setbacks;
(2) location of building, openspace, and parking; and
(3) dimensions;

and should be drawn with a ruler roughly to scale.

SHOW ALL CALCULATIONS! ! !   NAME ____________________

B. FIRST FLOOR RETAIL, SECOND FLOOR 950 NET SQ. FT. TWO-BEDROOM APARTMENTS
18 POINTS

1. Lot Size:

2. Area Lost to Set-backs:

3. Buildable Area:

4. Maximum Allowable Floor Area:

5. Maximum Number of Apartments Allowed by Lot Area Requirements:

6. Standard Allocation Unit (SAU):

7. Number of SAUs within Buildable Area:

8. Number of Apartments on Lot Based on Number of SAUs on Lot:

9. Given Constraints #5 and #8, the Largest Number of Apartments that Can Be Built Is:

10. Total Building Area:	Gross	Net
Apartments		
Retail		
	______	______
Total		

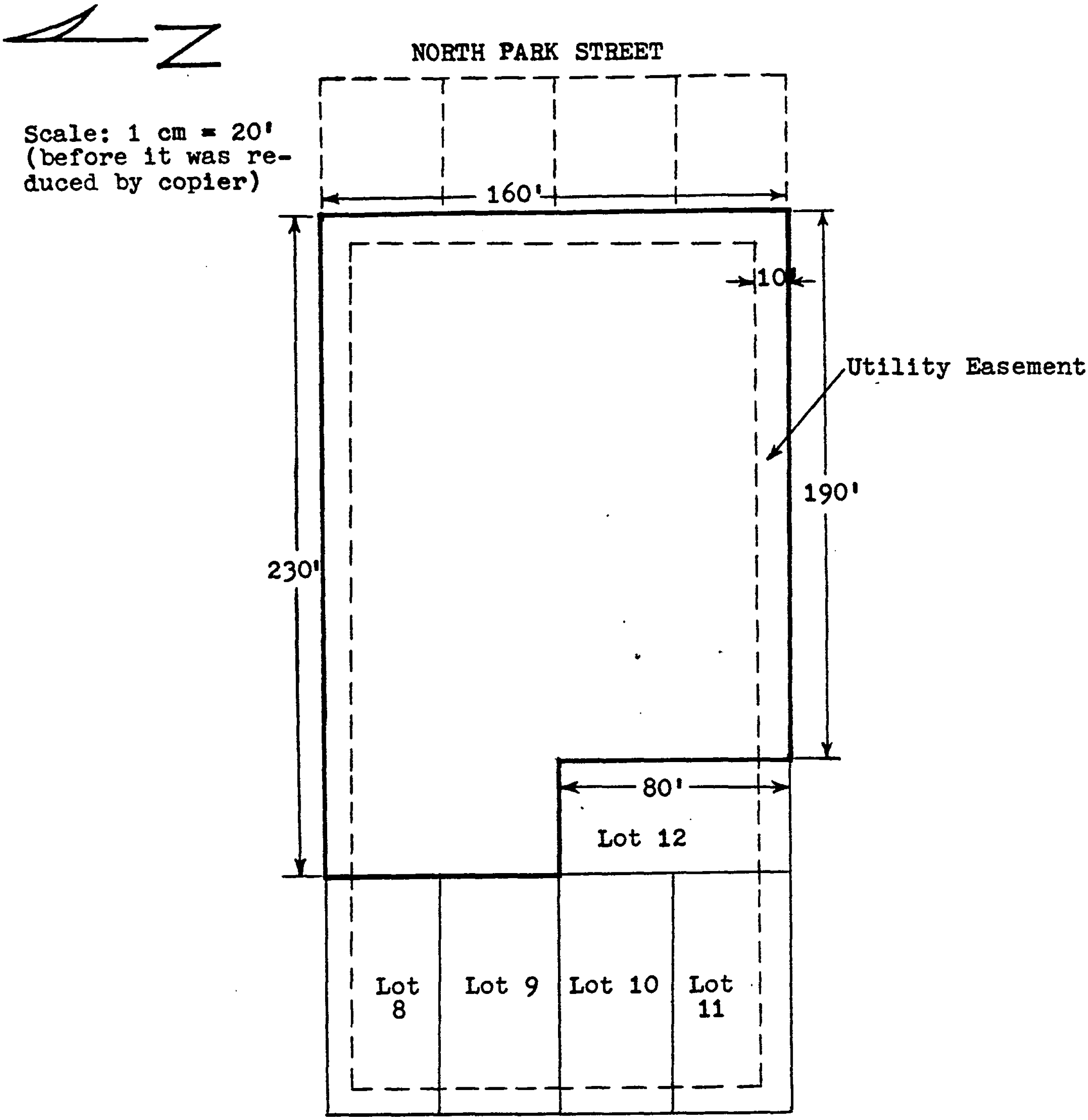
11. Parking Area:	Gross
Apartments	
Retail	
	______
Total	

12. Open Space Area:	Gross
On ground	
On roof	
	______
Total	

13. Base Area Check:	Gross
Building	
Parking	
Open Space	
	______
Total	

14. Is there a difference between #3 and #13? If so, how much? Why?

15. Illustrate on the attached sheet how you might allocate the required building, parking, and open space.



Your illustration should show:

(1) setbacks;
(2) location of building, openspace, and parking; and
(3) dimensions;

and should be drawn with a ruler roughly to scale.

SHOW ALL CALCULATIONS! ! ! NAME ______________________

C. TWO FLOORS OF ONE-BEDROOM 700 NET SQ. FT. APARTMENTS (ASSUME APPROVED AS A CONDITIONAL USE)

1. Lot Size:

2. Area Lost to Set-backs:

3. Buildable Area:

4. Maximum Allowable Floor Area:

5. Maximum Number of Apartments Allowed by Lot Area Requirements:

6. Standard Allocation Unit (SAU):

7. Number of SAUs within Buildable Area:

8. Number of Apartments on Lot Based on Number of SAUs on Lot:

9. Given Constraints #5 and #8, the Largest Number of Apartments that Can Be Built Is:

10. Total Building Area:

	Gross	Net
Apartments		
Retail		
Total		

11. Parking Area:

	Gross
Apartments	
Retail	
Total	

12. Open Space Area:

	Gross
On ground	
On roof	
Total	

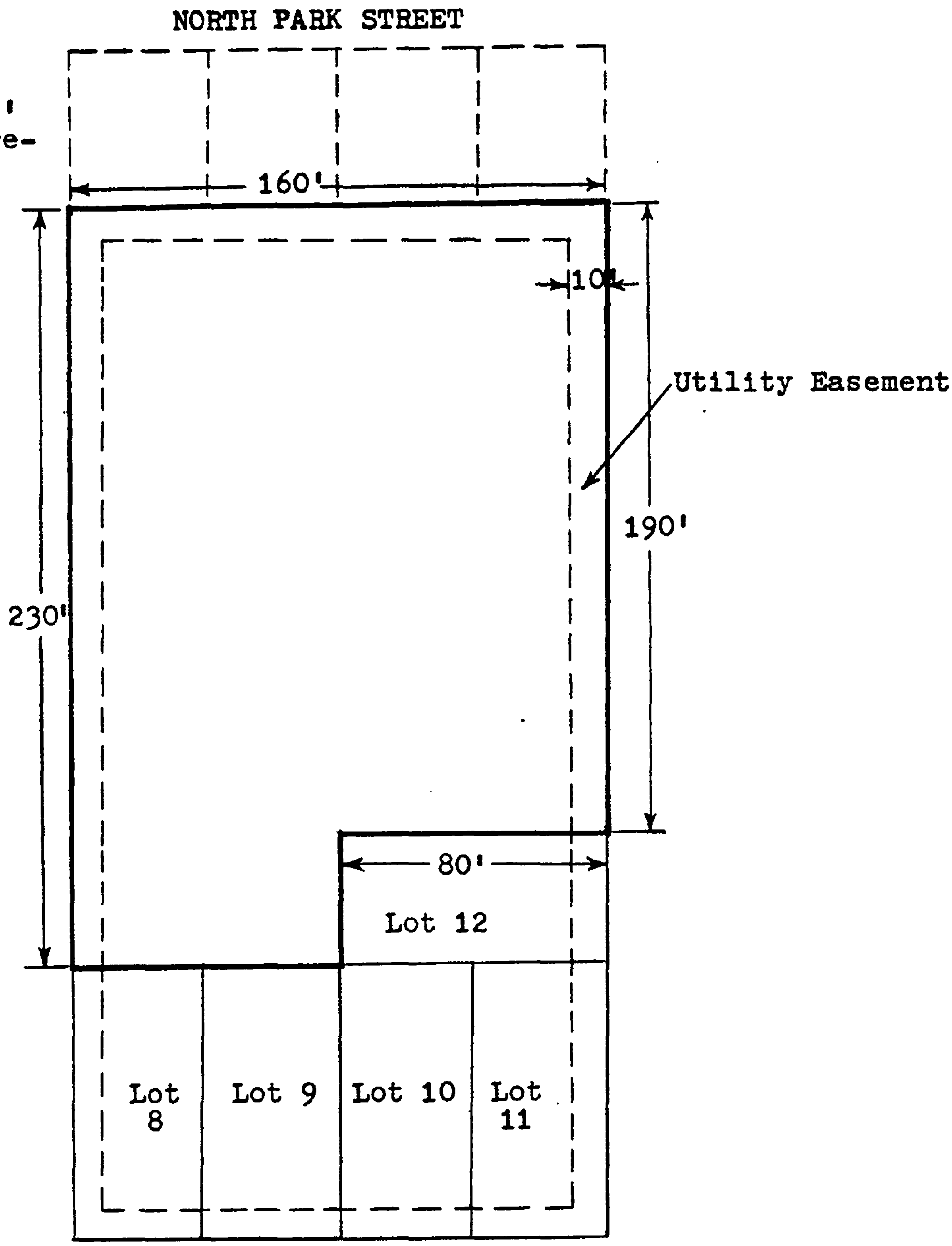
13. Base Area Check:

	Gross
Building	
Parking	
Open Space	
Total	

14. Is there a difference between #3 and #13? If so, how much? Why?

15. Illustrate on the attached sheet how you might allocate the required building, parking, and open space.

Scale: 1 cm = 20'
(before it was re-
duced by copier)



Your illustration should show:

(1) setbacks;
(2) location of building, openspace, and parking; and
(3) dimensions;

and should be drawn with a ruler roughly to scale.

THE REAL ESTATE PROCESS
Business 550/705

TAKE-HOME QUIZ /
PROBLEM SET #3

Due at the beginning of lecture on Monday, March 17, 1986.

Name ______________________
Disc. Sec. ____ Attend _____

GENERAL COMMENTS:

- All interest rates given are nominal annual rates.
- Ignore taxes and transaction costs (for now).
- Calculations are worth most of the possible points, so show all of the steps necessary to arrive at the correct solution manually -- including a clear specification of all interest factors and their values out to at least five decimal places.

---

1. Doug and Rose are newlyweds planning to buy a house five years from now. To accumulate a downpayment, the newlyweds plan to deposit $300 at the end of each month into a savings account yielding 7% (use monthly compounding). Bankers predict that the interest rate on a 30-year, fixed-rate loan will be around 12% five years from now.

   (a) If Doug and Rose will be able to pay $800 in monthly debt service at that time, what's the most they'll be able to pay for a house? (6 points)

   (b) Continuing with part (a), if Doug and Rose deposit a gift of $2,000 that they just received into the savings account now (i.e., at time zero), how much will they be able to pay for a house five years from now? (6 points)

   (c) Continuing with part (b), how much will they be able to pay for a house five years from now if they increase their monthly deposit in the savings account to $400 after two years and to $500 after four years? (8 points)

(Place your solution on the back of this page.)

2. An investor is contemplating the purchase of an apartment building in the Chicago suburbs. The seller is asking $1,700,000 for the building. Alternative investment opportunities of comparable risk are expected to yield 15% (before-tax). The net operating income (NOI) of the apartment building is projected to be as follows:

Years 1- 5: $200,000 per year,
Years 6-10: $240,000 per year,
Years 11-15: $300,000 per year, and
Years 16-20: $400,000 per year.

At the end of 13 years, however, the investor would sell the apartment building. The investor is confident that she will be able to sell the building for a net income multiplier of 8 at that time.

(a) How much is the apartment building worth to the investor according to a before-tax present value analysis of expected cash flows? Should the investor buy the building or not? (7 points)

(b) Suppose that the investor can borrow $1,275,000 at 12% for 20 years (assume annual payments and a mortgage will secure the loan). How much could the investor now justifiably pay for the apartment building (again, according to B/T present value analysis)? Should she buy the building? (11 points)

(Place your solution on the back of this page.)

3. Compute how much of the annual debt service on a $250,000 loan at 14.5% amortized **monthly** over 20 years is interest and how **much** is principal for each of the first three years. Use the "shortcut method" and do <u>not</u> interpolate -- i.e., use the appropriate formulas. (12 points)

THE REAL ESTATE PROCESS
Business 550/705

TAKE-HOME QUIZ /
PROBLEM SET #4

Due at the beginning of lecture on Wednesday, April 2, 1986.

Name ______________________
Disc. Sec. _____ Attend _______

REMEMBER TO SHOW ALL CALCULATIONS!

1. Being halfway through the introductory course in real estate you have agreed to assist a friend in determining whether an apartment building he is thinking of buying is a good investment. The building will be going under construction soon and the developer needs an answer by April 2, 1986. The apartment building will have 100 two-bedroom apartments of 900 net sq. ft. each and the building will be 92% efficient. Construction cost estimates are $30.00 per gross sq. ft. and land will cost $45,000 per acre (note: current zoning limits density to 12 units per acre). Soft costs (i.e., indirect development costs) are estimated at 20% of the construction budget.

   Your experience in the Madison rental market tells you that operating expenses will run $80.00 per unit per month, a vacancy rate of 5% is to be expected for this type of property, and Madison's property taxes are based on a mill rate of $28.45 per thousand of assessed value (assume that total project cost will equal market value initially) and an equalization rate of 98%. In addition, a replacement reserve of $300 per unit per year is anticipated.

   A local mortgage broker has indicated that interest rates have just come down and that financing would be available on a 75% loan-to-cost ratio at 11.5% for 20 years (payments monthly).

   Your friend has indicated that a cash-on-cash return (before taxes) of 8% would be required.

   On the attached sheet derive the monthly rental required for feasibility using the front-door approach (be sure to use the appropriate space-time unit for this type of property). (14 points)

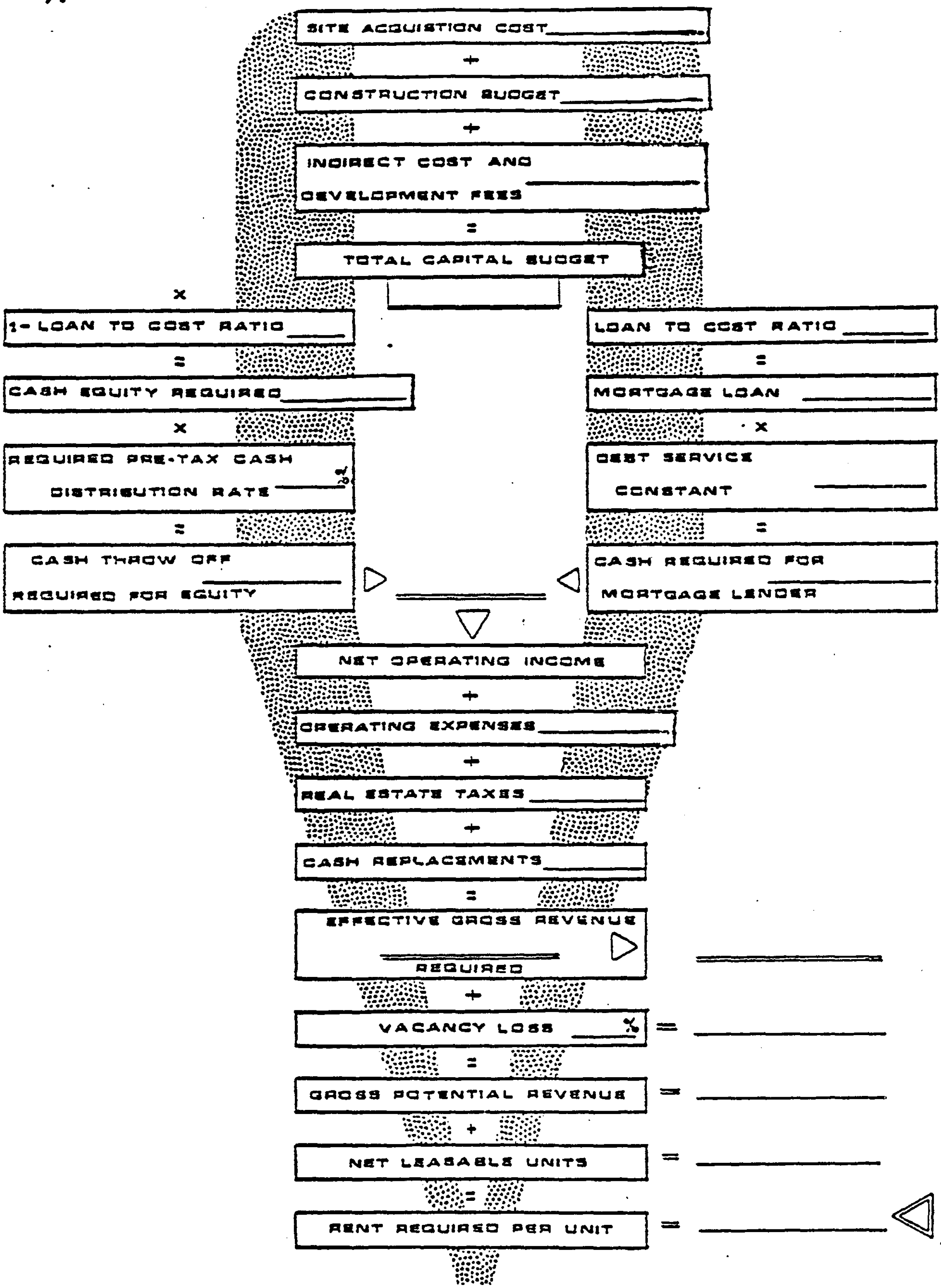
2. After calculating the required rent using the front-door approach you made some calls to check current market rents and found that current rents for this type of apartment are running about $550 per month. Assuming a default ratio of .80 (holding land costs, soft costs, and real estate taxes fixed), how will this affect your justified construction budget and construction cost per square foot? (Use the back-door approach on the sheet provided and assume that all other parameters will remain the same.) (10 points)

3. Compare and contrast the rent levels and construction costs from parts 1 and 2 (include the actual numbers in your answer) by briefly explaining what each number represents conceptually. (Be very careful with your terminology.) (8 points)

4. Still feeling that there is merit to the project, you have done further study and have discovered that most apartment buildings in town are anticipating a 5% increase in rent levels next year combined with a 6% increase in operating expenses and a 7% increase in real estate taxes (replacement reserve will not change). In addition, the interest rate is about to be lowered to 10.5%. From previous experience with this developer you know that he has built a developer's profit into his quoted land price. Using this new information and the back-door approach, holding construction and soft costs constant (i.e., use what was computed in part 1's solution), what is the most your friend can afford to offer for the land? (12 points)

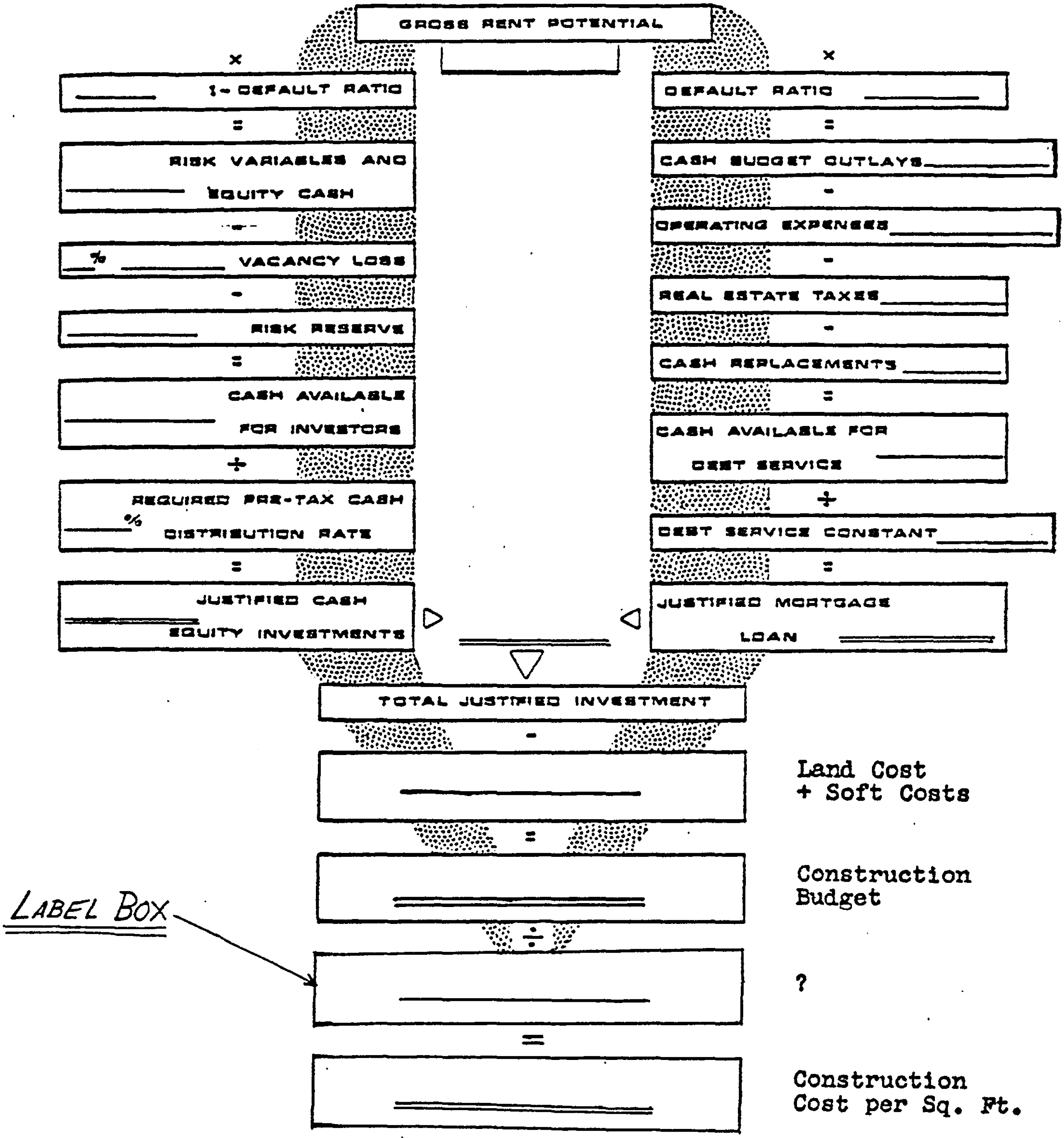
5. Knowing that the developer will not drop below $42,500 per acre and that the justified project value (from part 4) is a good estimate, what would the per square foot construction cost have to drop to in order for the project to work? What then would be the amount of soft costs? (Hint: This time use simple algebra to find the new amount of soft costs.) (6 points)

1. LOAN TO COST RATIO APPROACH



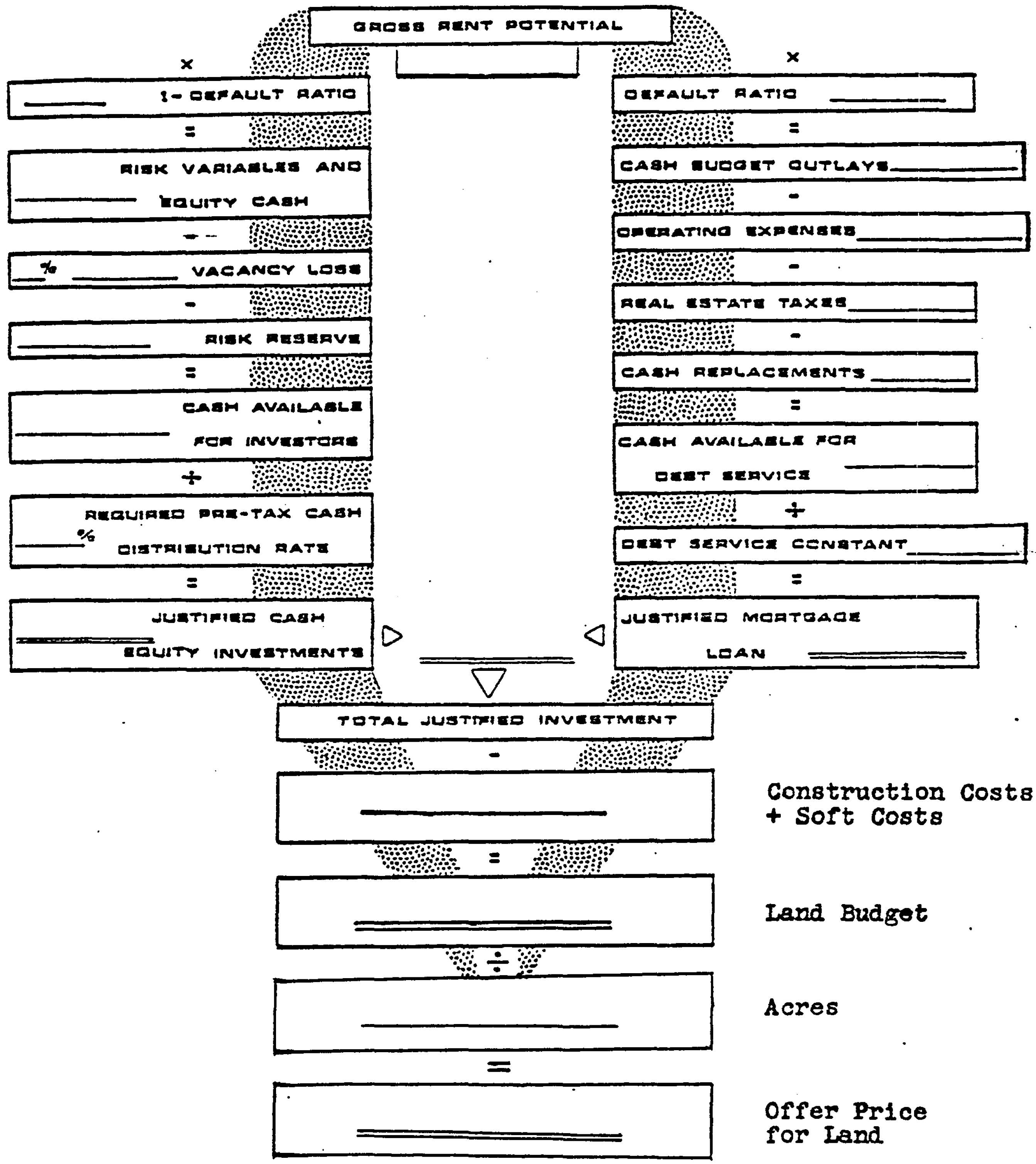
2.

DEFAULT RATIO APPROACH



4.

DEFAULT RATIO APPROACH



THE REAL ESTATE PROCESS
Business 550/705

Due at the beginning of lecture on Monday, April 14, 1986.

TAKE-HOME QUIZ / PROBLEM SET #5

Name ____________
Disc. Sec. ______
Attend ______

	Yr.1	Yr.2	Yr.3	Yr.4
GROSS POTENTIAL INCOME				
LESS VACANCY ALLOWANCE				
EFFECTIVE GROSS INCOME				
LESS REAL ESTATE TAXES				
LESS EXPENSES				
NET OPERATING INCOME				
LESS DEPRECIATION				
LESS INTEREST				
TAXABLE INCOME				
PLUS DEPRECIATION				
LESS PRINCIPAL PAYMENTS				
CASH THROW-OFF				
LESS TAXES				
CASH FROM OPERATIONS				
WORKING CAPITAL LOAN				
DISTRIBUTABLE CASH AFTER TAXES				
TAX SAVINGS ON OTHER INCOME				
SPENDABLE CASH AFTER TAXES				
PRESENT VALUE FACTOR AT ____ %				
PRESENT VALUE OF SCAT				
WORKING CAPITAL LOAN (CUM BAL)				

TAXES DUE AT TIME OF SALE

HOLDING PERIOD	______
TAXABLE BASIS	______
SELLING PRICE	______
DEPRECIATION TAKEN ON IMPROV.	______
DEPRECIATION IF STRAIGHT-LINE	______
TAXPAYER'S INCOME TAX RATE	______

DETERMINATION OF TAXES DUE

TOTAL GAIN SUBJECT TO TAX ______

CAPITAL GAIN:

INCREASE IN PROPERTY VALUE ______

DEPRECIATION IF STRAIGHT-LINE ______

TOTAL GAIN TAXED AT CAPITAL GAIN RATE ______

ORDINARY INCOME (RECAPTURED):

EXCESS DEPRECIATION ______

TAXES DUE COMPUTATION:

CAPITAL GAIN TAX = ______ x ______ = ______

ORDINARY INCOME TAX = ______ x ______ = ______

TOTAL INVESTMENT VALUE

TOTAL P. V. OF SCAT			________
TOTAL SALES PRICE	________		
LESS TAXES ON SALE OF PROPERTY:			
CAPITAL GAIN TAX ________			
ORDINARY INCOME TAX ________			
TOTAL TAXES DUE	________		
LESS MORTGAGE BALANCE	________		
CASH RECEIVED AT TIME OF SALE		________	
PRESENT VALUE FACTOR AT _____%		________	
PRESENT VALUE OF REVERSION			________
TOTAL PRESENT VALUE OF EQUITY INVESTMENT			________
ORIGINAL MORTGAGE BALANCE			________
TOTAL PROJECT VALUE			________

THE REAL ESTATE PROCESS
Business 550/705

TAKE-HOME QUIZ /
PROBLEM SET #6

Due at the beginning of lecture on Monday, May 5, 1986.

Name ______________________
Disc. Sec. ______ Attend ____

The purpose of this problem set is to make the student aware of MRCAP, the Department of Real Estate and Urban Land Economics' computerized after-tax cash flow analysis model, and to perform a financial ratio analysis using the data each student received for Problem Set #5. Examples of how to use CAPFIL (a preliminary MRCAP program) and MRCAP were handed out in the discussion sections. Be sure to attach the computer input and output that is requested securely and in a cleanly edited manner (i.e., use scissors) -- failure to attach or to edit requested information will result in a substantial penalty.

---

1. Financial Leverage Analysis:

   a. Calculate whether your project has positive or negative financial leverage in year 1 according to the traditional measure of financial leverage (i.e., is NOI/Total Investment greater than, equal to, or less than the annualized mortgage constant?). Use your initial data without extraordinary **expenses** in it (note: leave extraordinary expenses out of the remaining analyses as well).

<u>Data Input File</u>

(tape here)

<u>NOI in Year 1</u>

(tape here)

<u>Initial Cost</u>

(tape here)

Financial Leverage Calculatic

Type of Financial Leverage:

NOTE: See 1.b. before tossin
out the rest of your
1.a. computer output.

1. Financial Leverage Analysis (Continued):

b. A more comprehensive definition of financial leverage is the following: If the modified internal rate of return (line 49 for year 8) increases (decreases) when the mortgage loan amount is increased, then your project has positive (negative) financial leverage. (Note: If the MIRR decreases when you decrease the mortgage loan amount, then your project has positive leverage.)

Demonstrate this by either increasing or decreasing the amount of the mortgage loan as needed to <u>maximize</u> the MIRR subject to the following two constraints:

(1) the default ratio in each year cannot exceed 75%, and
(2) you must maintain at least $100,000 in equity.

Briefly discuss what you have done and then explain the impact* of your modifications on:

(1) the total amount of equity required,
(2) the before-tax cash-on-cash return on equity (compare the relative change in the numerator and the denominator),
(3) project risk as measured by the default ratio.

Also, be sure that your attached computer output and write-up prove that you've maximized the project's MIRR subject to the above two constraints.

(*i.e., how have these figures changed and what does each change mean?)

<u>Data Input File</u>

(tape here)

<u>MIRR from part 1.a.</u>

(tape here)

<u>MIRR from part 1.b.</u>

(tape here)

<u>Default Ratio from part 1.a.</u>

(tape here)

<u>Default Ratio from part 1.b.</u>

(tape here)

1. b. (Continued)

Initial Equity from 1.a. | Initial Equity from 1.b.

(tape here) | (tape here)

B/T Cash-on-Cash Return on Equity (Year 1) from 1.a.

(tape here)

B/T Cash-on-Cash Return on Equity (Year 1) from 1.b.

(tape here)

Discussion Write-up:

2. Net Operating Income Analysis:

a. You've just found out that HUD will allow you to increase your first year gross rents by 10 percent and will allow gross rents to increase by 5.0% annually (instead of the prior 2.5%). In addition, local fiscal troubles have caused you to revise your estimate of the annual increase in real estate taxes to 6.0%. Input these changes to your current data input file (i.e., that used in 1.b.) and rerun MRCAP.

Briefly explain the impact of these modifications on the total amount of equity required, the before-tax cash-on-cash return on equity, the MIRR, and the project risk as measured by the default ratio.

<u>Data Input File</u>

(tape here)

<u>Initial Equity from 2.a.</u>

(tape here)

<u>B/T Cash-on-Cash Return on Equity from 2.a.</u>

(tape here)

<u>MIRR from 2.a.</u>

(tape here)

<u>Default Ratio from 2.a.</u>

(tape here)

Discussion Write-up:

2. Net Operating Income Analysis (Continued)

b. If you assume that market value is a function of net operating income and that the next buyer will have the same investment criteria as you, then the "net income to market value ratio" should change very little over the eight-year holding period. If your net income to market value ratio has changed by more than 0.005 from year 1 to year 8 (using your 2. a. results), adjust the appropriate variable to bring this ratio in line. (Note: With respect to the "appropriate" variable, no numbers above net operating income can be changed nor can basic project data (i.e., costs and loan terms) be changed.)

Briefly discuss what you had to do to bring the ratio in line and explain its impact on the total amount of equity required, before-tax cash-on-cash return on equity, MIRR, and project risk as measured by the default ratio.

Data Input File

(tape here)

Initial Equity from 2.b.

(tape here)

B/T Cash-on-Cash Return on Equity from 2.b.

(tape here)

MIRR from 2.b.

(tape here)

Default Ratio from 2.b.

(tape here)

Place your discussion write-up on the back of this sheet.

Net Income to Market Value Ratio from part 2.a.

(tape here)

Net Income to Market Value Ratio from part 2.b.

(tape here)

THE REAL ESTATE PROCESS
Business 550/705

TAKE-HOME QUIZ / PROBLEM SET #6

Due at the beginning of lecture
on Tuesday, August 5, 1986.

Name ____________________

---

1. Enter your Problem Set #5 data inputs into MRGIB's ATCF program. To simplify the task, forget about your extraordinary expenses and add operating expenses and real estate tax together before entering their sum into "Fixed Operating Expenses" (i.e., enter 0's as needed for "Variable Expenses"). For lines that don't apply, such as Rehabilitation Tax Credit, enter "N" or "0" as is appropriate.

   Print out a paper hardcopy of the "INPUT ASSUMPTIONS FOR --", "CASH FLOW REPORT FOR --"; and "SUMMARY OF FINAL SALE OF PROPERTY FOR (hardcopy of the other reports is optional for your own use).

   Using your output, determine whether your project has positive, neutral, or negative financial leverage according to the traditional definition (i.e., compare the OAR to the annualized MC using Year 1 data).

   Also, extract or compute the following amounts and financial ratios:

   (1) the total amount of equity required,
   (2) the before-tax cash-on-cash return on equity, and
   (3) project risk as measured by the default ratio and the debt cover ratio.

2. A more comprehensive definition of financial leverage is the following: if the modified internal rate of return increases (decreases) when the mortgage loan amount is increased, then the project has positive (negative) financial leverage. (Note: If the MIRR decreases when you decrease the mortgage loan amount, then the project has positive leverage.)

   Change your loan amount and evaluate the impact of the change on the project's MIRR to determine whether the project has positive or negative financial leverage according to this contemporary definition.

   Print out a paper hardcopy of the three reports asked for above in part 1.

   Evaluate and explain the impact of the change in the loan amount on the following amounts and financial ratios:

   (1) the total amount of equity required,
   (2) the before-tax cash-on-cash return on equity, and
   (3) project risk as measured by the default ratio and the debt cover ratio.

C

BUS 550 WORKBOOK: FALL 1980

IV. MARKET ATTRIBUTES

IV. Market Attributes

The initial analysis of the physical attributes of the site included a discussion of the linkages, or connections between the site and other establishments in its urban environment. This discussion was primarily an inventory of the connectors, and did not establish the characteristics of the people with whom the site is linked.

These people, in most instances, will form the market for whatever is developed on the site. This segment of the report will be devoted to understanding the characteristics of the people who make up the market for uses developed on our site. We will look first at the delineation of trade areas, then at developing profiles of the population in each area, and finally analyze the supply and nature of competing uses. Our conclusions regarding the market for and marketability of a given use will be the result of this analytical procedure.

A. Alternative Uses

Based on the physical attributes of the site, and a preliminary analysis of the linkages between our site, we will narrow the universe of alternative uses still being considered to the following four:

a.

b.

c.

d. Other: your choice of another alternative.

In your feasibility report, select <u>three</u> of the four uses we have identified and carry through the market attribute analysis as we outline it here.

B. Trade Area Delineation

On page B-1 of the appendix to this workbook, we have provided a map which delineates two different trade areas of tributary areas that <u>might</u> be the source of the people who form the market for a use on our site. These two trade areas are:

<u>The 3-Tract Area</u>: An area consisting of three census tracts centered around our site. These tracts are within a short drive of our site.

<u>The Arterial Trade Area</u>: An area consisting of those census tracts assumed to be the source of most automobile traffic past the site. The arterial trade area is distinct from the 3-tract area.

To a certain extent, these areas have been chosen arbitrarily, within the limitations imposed by the availability and form of the census information. As a result, each of the different alternative uses that you examine may require a different combination of the trade areas that we have defined. As an example, we might expect that a gasoline station would draw most heavily on the arterial trade area, while a fast food restaurant without parking might rely most heavily upon the 3-tract area and its immediate neighborhood.

As part of your analysis, you should identify the trade areas you use, and describe how you selected those which apply to each use.

C. Population Profiles

Having delineated trade areas, and identified which trade areas apply to which potential uses and why, we move on to an analysis of the characteristics of the people who live and work in those trade areas. Our objective is to develop a profile of each readily identifiable sub-group that exists in the trade area. Our source of information will be primarily the census data found in the appendix.

A profile of a group of people characterizes them according to some or all of the following:

a. demographic characteristics: age, sex, family status, marital status

b. income characteristics: income levels--per capital, per family, per unrelated individual

c. housing characteristics: renter, owner, type of unit, rent, age of unit, size of unit

d. employment/education characteristics: education level, student status, employment status

e. transportation characteristics: trip to work by car, foot, etc.

Careful study of the census information should enable you to identify sub-groups within the trade areas. You might begin by finding large demographic groups, such as "single people under 25", then further characterizing them according to income levels, housing characteristics and the like.

Try to describe the "typical resident" of the trade area. Note that where more than one clearly identifiable sub-group exists, you will have more than one such "typical resident".

The population profile permits us to make some assumptions about the lifestyle and spending habits of the people in the trade area. Based on your own experience, you should make some predictions about the spending habits of at least one sub-group--those students living in the 3-tract area.

To summarize: The population profile segment of your report should include descriptions of the typical residents of the trade areas you developed for each alternative use. It should indicate whether there is a match between the profiles of the people in the trade area and a profile of a typical customer for that alternative use.

D. Supply/Demand/Competition Analysis

The objective of this portion of the market attribute analysis is to determine if there are enough people willing to spend enough money at our site to support any of the uses we are still considering for the site. We will carry out this analysis according to the simplified methodology outlined below. Your report should include this analysis for each of the three uses (and their respective trade areas) that you are contemplating.

1. Estimate Spendable Income

   Using per capital income figures, population estimates and a savings rate, estimate spendable income in the three-tract and arterial trade areas.

   Spendable income estimates have been prepared for you, and are presented on page B-16 in the attached appendix.

2. Estimate Available Income by Catagory

   Once we know aggregate disposable income, we can estimate how that income will be spent. For retail goods, estimates of the "Percentage of Disposable Income Spent on Retail Goods" have been developed. Applying these estimates to the spendable income estimated above produces the results shown on page B-17 in the appendix.

   The columns titled "estimated Average Retail Revenue in Millions" show how much money is available to be spent on "Food Stores" and other types of retail uses in each of the trade areas.

   Similar figures can be obtained giving the approximate portion of income that will be spent on housing. These are presented as "Annual Budgets" in table B-23 in the appendix.

3. Adjust Available Income

a. Retail Uses

The figures used to estimate available income by retail category above were for Madison as a whole. It is quite possible that the students in our 3-tract trade area will spend their disposable incomes (modest as they are) differently than will the "average resident" of the city of Madison.

We would therefore like to adjust the percentage of disposable income spent on retail goods to reflect our subjective views of the differences between our potential market and the city as a whole. These adjustments may be subjective, but they must also be reasonable. They should be justified by the information about characteristics and lifestyle that you developed in the population profile segment of the report.

We are outlining a method here that you might use to make your adjustments. Look at it critically, and develop your own adjustments! Those selected here are just an example!

CITY TO MARKET SALES ADJUSTMENTS

Item	Rate	Adjustment	Adjusted* Rate	Revised Available Revenue 3-tract	Revised Available Revenue Arterial (Repeated)
Total retail	65.4%	0	65.4	$63.5M	$ 75.4M
Food	12.8	-	9.6	9.05	14.7
Gen. Merch.	14.8	+	16.7	16.2	17.1
Furn. & Appl.	2.4	--	1.2	1.2	2.8
Auto	10.4	--	5.2	5.0	12.0
Drug	2.0	+	3.9	3.8	2.3
Bldg. Main. & Hard.	2.5	--	1.25	1.21	2.9
Gas	4.3	--	2.15	2.1	4.95
Apparel	3.2	++	6.9	6.7	3.7
Dept. Stores	8.6	+	10.5	10.2	9.9
Eat & Drink	5.1	++	7.0	6.8	5.9M

We adjust all retail categories because we assume that sales lost to one category are transferred to another. We make the adjustments as follows: Identify those categories where spending is expected to be lower than for the city. Each "_" represents a 25% decrease in the "rate". Sum the decreases in percentage points as follows:

Food	3.2
Furniture	1.2
Auto	5.2
Bldg.	1.25
Gas	2.15
Total	13.00

(You should be able to interpret what these adjustments mean in terms of the population being discussed.)

These decreases will be allocated to the categories assumed to have higher levels of retail spending by dividing 13.0 by 7 = 1.86. Each "+" will then mean an upward adjustment of 1.86 percentage points.

b. Residential Uses

Similar adjustments should be made for multifamily housing. The Table on page B-23 shows several different spending patterns. These patterns vary according to family status and income level. From this table, you may obtain an estimate of the percentage of income spent on housing, which you will probably adjust to reflect the characteristics of the people in your trade areas. Any such adjustments will necessarily be subjective.

Base on this adjusted "percentage of income spent on housing", and the per capita and family income figures developed earlier, you should develop an estimate of how much monthly rent the "typical" resident would be able to pay. How does this figure compare with rents currently charged by existing units?

4. Revenue Lost to Competition

a. Retail Uses

Whatever use is developed on our site will not be able to capture more than some relatively small fraction of the revenue available trade areas. How much it will capture is <u>in part</u> a function of how many other similar stores are competing for those dollars. At this point in your anlaysis, you should inventory the competition within your trade areas.

The Yellow Pages of the Madison Telephone Book is one good source for a competition inventory. The Madison City Directory, found in the reference collections of several libraries in Madison, is another source you might consult.

Our competition analysis will operate on the assumption that the competing stores are surviving, and that they have the same characteristics of size and sales volume as those stores shown in table B-18 in the appendix.

Since we know how many competing stores are in our trade area, we can use the revenue requirements shown in table B-19 to estimate how much of the available revenue would be lost to these competing stores.

As an example: If you were considering a liquor store for your site, and you identified 3 competing liquor stores in your trade area, you would be able to estimate that 3 x $438,312 = $1,314,936 was being spent on liquor at these stores.

b. Residential Uses

You should be able to evaluate revenue lost to competition in a similar fashion for residential users. Beginning with an inventory of existing competing residential units, and estimates of average or typical rents in your area, you should be able to estimate how much money is being spent for housing in those units.,

An analysis of competing residential uses can provide additional insight into the supply/demand relationships in the residentail market. The level of vacancy in the existing units gives some indication of the strength of demand for the existing supply of housing: a high vacancy rate suggests that the supply of housing exceeds the demand for it.

5. Go No-Go Decision

A decision as to whether or not there is a market for a given use can now be made. By subtracting the amount of revenue lost to competition from the total amount of revenue available to be spent on a specific type of use, you can determine if there is enough revenue remaining to support the use you are testing.

The revenue available for the store or apartments on your site must at least equal either the required revenue for retail stores shown on the table on page B-19, or the typical apartment rent prevailing in your area.

If the required revenue is there, you have reached a "GO" condition. If the required revenue is lacking, you must conclude that your project is a "NO-GO".

6. Checking your Conclusions

You might check the results of your retail analysis by estimating how many people, spending how much money, will have to walk through the doors of your establishment on any given day in order for it to realize the revenue that you are projecting.

If you projected a yearly revenue of $275,000 for a camera shop that would be open 6 days a week, you are estimating daily sales of $881. If a "typical" camera sale totals $250, you are estimating a little more than 3 such sales every day, all year long. Does that seem to be a reasonable assumption? The response will depend upon the nature of the trade areas, the potential customers and the competition.

E. Merchandising Guidelines

The market attribute analysis should conclude with a discussion of the competitive standard. Those features of competing sites and uses that must be included on our site if it is developed in a given use. You should also speculate on what features might provide your site with a competitive edge, enabling it to capture a larger share of the available revenue.

F. Summary

To review, your Market Attribute Report should cover at least the following points:

1. Description of 3 alternative uses, and why they remain under consideration at the start of the analysis.

2. Delineation of trade areas for each alternative use.

3. Profiles of the population in the trade areas, with descriptions of, broad population characteristics, typical residents' and some assumptions regarding the lifestyle and purchasing patterns of one major sub-group--the student population.

4. Supply/Demand & Competition Analyses, as outlined in the previous section, for each of the three alternative uses.

5. Summary and Conclusions, with specific reference to merchandising techniques suggested by the market attributes.

Appendix B

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	Table 7	- Total Housing Units
	Table 9a	- Total Occupied by the Number of Units in the Structure
	Table 9b	- Total Renter-Occupied by Number of Units in the Structure
B-3	Table 6	- 1970 Tenure Characteristics
B-4	Table 10	- Year Moved into Unit - Total
B-5	Table 10b	- Year Moved into Unit - Owner Occupied
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B-6	Table 13	- Total Population 1960-1974
	Table 36	- Mode of Transportation
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FEASIBILITY WORKBOOK

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INTRODUCTION AND PROJECT OVERVIEW

The primary goal of Business 550 is to help you develop an improved understanding of the real estate process, so that you have a better appreciation of why our cities look and work the way they do. One of the major tools we will use in our efforts to understand the real estate process is the feasibility project.

The feasibility project is an academic exercise that closely parallels the process that a practicing feasibility analyst would use to answer some of the questions posed by his client. In the interests of maximizing its effectiveness as a learning tool, we've simplified some parts of the project, while elaborating other segments. The overall question the project must answer remains unchanged: what is the most profitable use to which we can put our study site, recognizing that our decision must be reached within the context of physical, legal, political, financial and ethical constraints?

Developing an answer to that question will take most of the semester, and should expose you to many facets of the real estate process. In an effort to keep the project scope within limits, each person in the class will prepare an answer to that question, and present it in segments during the semester. Reports will be limited in length. These page limits will require you to exercise all of your organizational skills, so that your presentation is as complete as possible, while it omits any extraneous material.

This feasibility workbook has been put together to help guide you through the feasibility process. The narrative sections of the workbook discuss the analysis you will be making, while the appendices provide you with all of the data you will need. (Those of you who are familiar with this course from past semesters will notice a change here--no more treks to and from the city-county building!) The data have been provided in the appendices so that you will devote most of your efforts to thinking about those data and perfecting your analytical skills. In our analysis of your projects, the volume of data you've assembled won't count nearly as much as your discussion of it.

Appendix originally included "Fundamentals of Real Estate Development

by James A. Graaskamp
ULI Development Component Series

This monograph can be found
in I. E. 1. of The JAG Collection of Teaching Materials

INITIAL SITE VISIT AND REPORT

One of the very first steps in a feasibility analysis is a visit to the site. We would like you to make your initial visit to the site as an interested observer. Walk around the site (not over it, since its private property!) Study the site and its neighbors. Look at the streets and transit systems that serve the site.

After your visit to the site, describe in no more than 3 doublespaced typewritten pages:

1. the physical features of the site
2. the neighborhood
3. the streets and transit systems.

You should be able to complete the assignment using <u>only</u> your own observations. Don't go to the city-county building; don't consult the appendices to this workbook (yet!).

The information that you gather in this first site visit will form the foundation for the analysis of both the site and market attributes, the next two sections of the report.

SITE ATTRIBUTES

The search for a range of suitable uses for a given site begins with a close look at the characteristics of the site itself. This segment of the feasibility process involves making a thorough inventory of the characteristics of the site, analyzing the limitations that these characteristics might impose on potential uses, and drawing some interim conclusions about which uses are most appropriate. In our analysis of site attributes, we will group the site characteristics into four general categories and we'll look at them in more detail below.

A. Physical Attributes

An inventory of the physical attributes of the site is usually compiled from a variety of sources. The primary source of information about the physical features of the site should be the initial site visit. It is imperative that you visit the site, look at it, and think about the things that you see there. You may also collect information about the site from several secondary sources. In this project, most of the secondary information that you will need has been assembled into the Appendices. For your reference, these secondary sources may include the local Register of Deeds, USGS soils maps, utility companies and the like.

A checklist highlighting the information that should be contained in your inventory of physical attributes is given here:

1. Parcel Size
    a. area
    b. number of lots

2. Parcel Shape
    a. number of sides
    b. dimensions
    c. street frontage
    d. access points

3. Topography
    a. average slope of parcel
    b. street grade
    c. sidewalk grade
    e. slope stability
    f. suitability for building

4. Soils
   a. soil type(s)
   b. depth to water table
   c. potential for subsidence
   d. suitability for building
   e. suitability for septic systems

5. Water Resources
   a. streams/ponds
   b. natural drainage patterns
   c. flooding

6. Adjoining Property's Set-Back Lines
   a. front
   b. rear
   c. side

7. Services/Utilities
   a. electricity
   b. gas
   c. water
   d. sanitary sewer
   e. storm sewer
   f. refuse collection

8. Existing Structures
   a. number
   b. dimensions
   c. age/condition

9. Other (at your discretion)

A word of warning that will be repeated from time to time: Consider as much information as possible, and refine it to reach your conclusions. Don't put lots of extraneous material in the body of your report; if it is not immediately pertinent to the point you are trying to make, then leave it out! If you can't bear to leave the information out of your report altogether, try including it in a well-referenced appendix.

The checklist given above is a reminder of all the facts that you might want to consider in your evaluation of the physical features of the site. Feel free to include additional material if it contributes to the analysis. Don't just list the facts, though. At some point in the process, you will want to draw some conclusions about what these things mean; what uses must we eliminate from consideration based on the constraints imposed by these characteristics?

B. Legal-Political Attributes:

While the physical features of the site limit our range of potential uses to some extent, many more constraints are imposed by the various legal and political features of the site. Again, we'll start with an inventory of these features, and analyze the way in which they will limit the uses to which we may put the site. Your inventory might include some or all of these items:

1. Owner's interests (title search)
   a. owner, owner's address
   b. encumbrances: liens
      mortgages
      satisfactions
      restrictive covenants
      easements, etc.

2. Assessed value
   a. land, improvements, total
   b. mill rate
   c. special assessments

3. Zoning
   a. existing and potential zoning classifications
   b. permitted and conditional uses
   c. intensity restrictions: setback or yard requirements
      lot area requirements
      height restrictions
      floor area ratio
      useable open space requirements
      parking and loading requiremets

4. Political constraints

We will spend some time here elaborating on the zoning restrictions which might apply to the site. We are working in Madison, and thus are using the city of Madison zoning ordinance. In most ways, it is a typical ordinance, but you should not assume that the restrictions it imposes will be the same as those imposed by ordinances in different municipalities.

The zoning ordinance itself will provide information concerning permitted use and setback or yard requirements for any given zoning classification. These portions of the code are reasonably straightforward. Less straightforward are the intensity restrictions. As an aid to visualizing the effects of the intensity restrictions, we will construct "building envelopes", by combining all of the intensity restrictions to produce the largest hypothetical "space envelope" into which any building must be fitted in order to be legally built on the site.

Before we illustrate the building envelope calculations, we should reproduce some of the definitions found in the zoning code. (For more details, please consult the code itself.)

> Floor Area Ratio:(FAR): The floor area ratio of the building...on any zoning lot is the floor area of the building...divided by the area of such zoning lot. The FAR requirements...shall determine the maximum floor area allowable for the building....

> Useable Open Space: Useable open space is that part of the ground level of a zoning lot, other than in a required front or corner side yard, which is unoccupied by principal or accessory buildings, service driveways, off-street parking spaces...and is unobstructed to the sky....

Each separate district has its own floor area ratio and useable open space requirements. The open space requirements are typically expressed in terms of required open space per dwelling unit, varying with the size of the dwelling unit.

> Lot Area Requirements: In any given residential district, lot area shall be provided in accordance with certain requirements. To illustrate, R6 requirements are shown:

Type of Dwelling Unit	Minimum Lot Area/Dwelling Unit
Efficiency	300 square feet
One-bedroom	450 square feet
Two-bedroom	600 square feet

Plus an additional 150 square feet of lot area for each additional bedroom in excess of 2 in a dwelling unit.

You are encouraged to consult the copies of the city of Madison zoning ordinance on reserve in the Business School Library before proceeding with the building envelope calculation sample problem below.

Sample Problem: Given the following information, what is the largest apartment building we are permitted to build, if we build only one-bedroom apartments in a 2-story building? What will that building look like?

Lot Dimensions: 110 feet wide by 155 feet deep

Zoning Code Restrictions:
Zoning District: C2
Set-Back Requirements: side yards: 5 feet
back yard: 10 feet
front yard: 20 feet
Lot Area Requirement: 1000 sq. ft. of lot for each one-bedroom apartment
C2 FAR = 3
Parking Requirement: 1/2 parking space must be provided for each one-bedroom apartment
Open Space Requirement: 160 sq.ft. of useable open space required for each one-bedroom apartment

The information given above really isn't quite enough to answer the question. We must make some additional assumptions. We will assume that:

-parking and useable open space may not occupy setback areas.

-useable open space will be provided on the ground--not as roof gardens or balconies.

-the gross leasable areas for the "typical" apartment is:
-efficiency apt: 350 sq. ft.
-1-bedroom apt: 450 sq. ft.
-2-bedroom apt: 600 sq. ft.
-more than two bedrooms: 600 sq. ft. plus 100 sq. ft. for each bedroom in excess of 2.

-the building efficiency ratio is 86%. This means that of the <u>total</u> building area, only 86% is income-generating, rentable space. The rest is "lost" to hallways, storage areas and the like.

-a parking stall will occupy 300 square feet on the ground. This includes the driveway and turning areas as well.

These assumptions are primarily industry standards; they are not prescribed by the zoning ordinance. We have also assumed that we will build only tow stories, while the zoning ordinance would permit three. This assumption was made to simplify the example. For completeness, we should calculate the maximum building size under the three-story option as well.

We have broken the building envelope calculation into several steps:

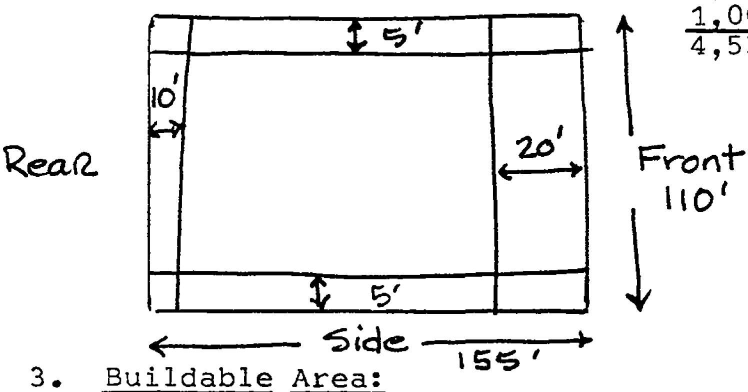
1. <u>Lot Area</u>:

155 ft. x 110 ft. = 17,050 sq. ft.

2. Area Lost to Setbacks:

Side yard: 155 ft. x 5 ft. x 2 = 1,550 sq. ft.
Front yard: (110 ft. - 10 ft.) x 20 ft. = 2,000 sq. ft.
Rear yard: (110 ft. - 10 ft.) x 10 ft. = 1,000 sq. ft.

Total area lost to setbacks: 1,550 sq. ft.
2,000 sq. ft.
1,000 sq. ft.
4,550 sq. ft.



3. Buildable Area:

Buildable area = Lot Area - Area Lost to Setback
= 17,050 sq. ft. - 4,550 sq. ft.
= 12,500 sq. ft.

4. Maximum Allowable Floor Area: (Based on FAR)

FAR = floor area/ lot area
3 = floor area/17,050 sq. ft.

Maximum allowable floor area = 3 x 17,050 sq. ft. = 51,150 sq. ft.

5. Maximum Number of One-bedroom Apartments: (Based on lot area requirements):

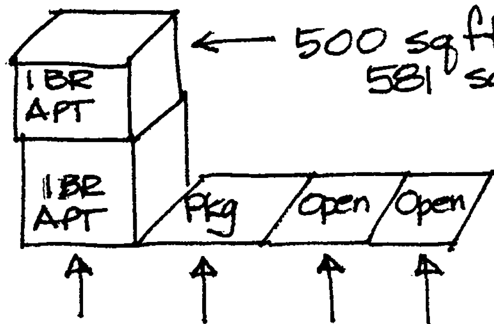
17,050 sq. ft. ~~x~~ ÷ 1,000 sq. ft./one-bedroom apartment = 17 one-bedroom apartments.

6. Standard Allocation Unit:

Construct a Standard Allocation Unit (SAU) based on building height assumptions, parking and open space requirements, building efficiency ratio and industry standards. The SAU summarizes all those requirements, permitting us to maximize the building floor area subject to constraints.

Each SAU consists of 2 one-bedroom apartments, and the parking and open space associated with those apartments. Calculate the gross surface area (or basal area) of the SAU.

6. Standard Allocation Unit:



← 500 sq ft net leasable ÷ .86 = 581 sq ft. gross

581 sq ft gross + 300 sq ft + 160 sq ft + 160 sq ft = 1201 sq ft gross or basal area.

7. Number of SAU's on Lot:

Number of SAU's on Lot = Buildable Area ÷ Square Feet/SAU
= 12,500 sq. ft./1201 sq. ft.
= 10.41 ≅ 10

8. Building Characteristics:

Translate the number of SAU's on the lot into building characteristics, and CHECK your calculations.

a. Number of apartments on lot:

10 SAU x 2 apartments/SAU = 20 apartments on lot.

CHECK against the maximum number or apartments permitted based on the lot area requirements in step 5. Since the maximum number of apartments allowed by the lot area requirements is 17, we may build no more than that, regardless of our calculations in this step.

b. Gross Building Floor Area:

17 apartments x 581 sq. ft. (gross)/apartment = 9877 sq. ft.

CHECK against the maximum allowable floor area calculated in step 4. We are well under the 51,150 sq. ft. maximum calculated there.

c. Number of Stories:

2--assumed at start of calculations.

e. Basal Building Area: (ie. Lot area covered by building)

17 apartments ÷ 2 stories = 8.5, ie. 9 apartment on ground floor.

9 apartments x 581 sq. ft. gross/apartment = 5229 sq. ft. basal bldg. area

f. Parking Spaces:

17 apartments x .5 parking spaces/apartment = 8.5 ie. 9 stalls required by zoning code.

9 spaces x 300 sq. ft./space = 2700 sq. ft. of parking

g. Open Space:

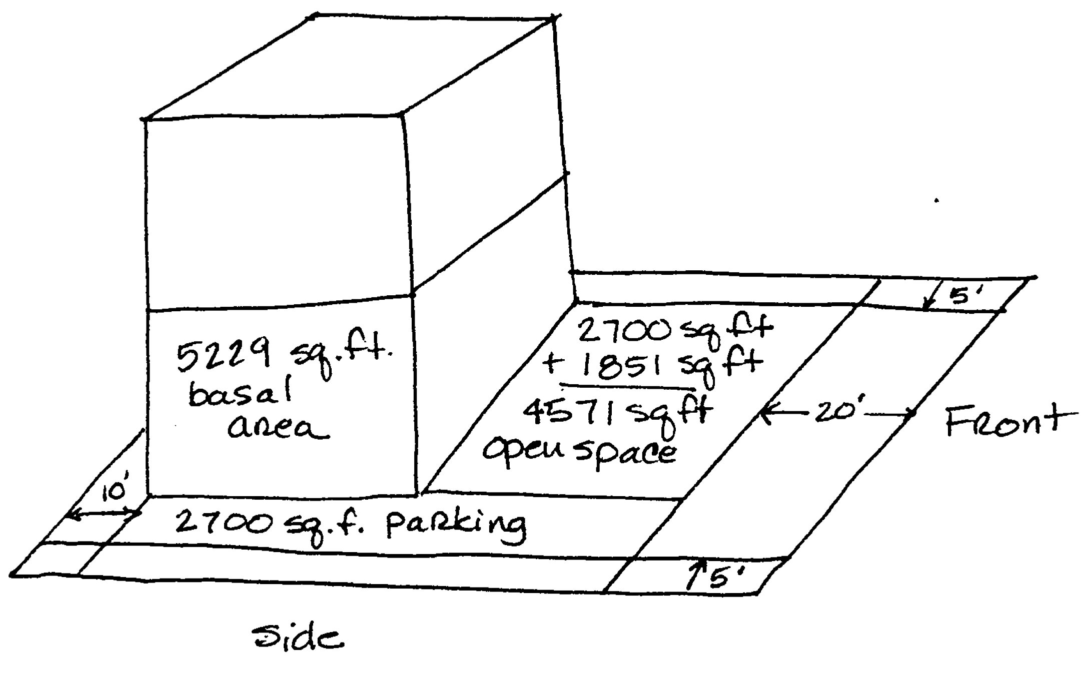
17 apartments x 160 sq. ft./apartment = 2720 sq. ft. open space.

9. CHECK:

Basal Building Area:	5,229 sq. ft.
Parking Area:	2,700
Open Space:	2,720
Total	10,649 sq. ft.

Total must be less than or equal to the buildable area calculated above. Why is the total less than the 12,500 square feet of buildable area we calculated?

The building envelope calculations can be conveniently summarized in a schematic as shown here.



The building envelope calculations should be shown for two or three building types that would be permitted by both the physical characteristics of the site and the zoning constraints. If you later determine that a use for which you did not show building envelope calcuations is indeed viable, you may add those calculations to this section of the final report, or you may introduce them as a "specific building envelope" in a later section of the final report.

Political restrictions on land use must be considered here as well. Local sentiment towards developers and their developments may be either a help or a hindrance, particularly if such things as zoning changes would be requiaed before a project could proceed. Neighborhood associations, the city council and various quasi-political bodies such as school boards may all have some say in how development or redevelopment takes place. You should give some consideration of these factors in your analysis as well.

In addition to the building envelope calculations, you should incorporate a narrative summary of the legal and political constraints imposed on the site in your report.

C ~~X~~. Dynamic Attributes:

We began our analysis of the site's attributes with the very tangible physical features such as soil type, water table and lot size. We moved away from these tangible characteristics when we examined the legal-political features of the site, and now as we look at the dynamic attributes of the site,we move completely into the realm of the intangible. Dynamic attributes are those features of the site which exist as subjective perceptions of the observer or the user of the site.

We are primarily interested in those dynamic attributes which affect the decision-making behaviour of the site's user or observer. An "observer" is really any person or group which interacts with the site and its improvements; an observer might be a regulatory agency, or a customer of a business located on the site.

To a certain degree, the developer of a project retains some control over the dynamic attributes associated with the site. In this step of the feasibility process, we are attempting to inventory the existing dynamic attributes, so that we can take advantage of those which are positive and de-emphasize or change those which are negative.

An inventory of dynamic attributes may include some or all of the items listed here:

1. visual perceptions: views of the site
   views of the approach to the site
   views from the site

2. auditory perceptions: sound levels, quality

3. olfactory perceptions: prevailing winds
   pollution levels

4. psychological perceptions: prestige and status
   historical values
   personal security
   stress of access

Your analysis of the dynamic attributes should attempt to identify as many of them as possible, and to discuss the extent to which these attributes may limit the potential uses of the site.

D. Linkages

With our analysis of linkages, we move out into the surrounding neighborhood and the larger community wich form the context of the site. We seek an understanding of the relationships that exist between the site and its urban environment, and we'll use the concept of "linkage" as a model to explain some of these relationships.

A linkage can be thought of as a relationship between establishments. An establishment is the basic unit of land use, consisting of individuals or groups occupying recognizable places of business, residence, government or assembly. This relationship generally involves the movement of goods or people between the linked establishments. (Ratcliff, Real Estate Analysis, pp. 65-66.) We will look first at the physical manifestations of linkages by looking at the connectors or conduits that permit movement of goods and people between the site and various other establishments throughout the urban area. An inventory of the connections between the site and the rest of the world might include:

1. Transportation Systems
   a. streets, sidewalks, bike lanes
   b. local mass transit systems
   c. rail lines
   d. air transport service

2. Utility Systems
    a. electricity
    b. gas
    c. water
    d. sewer
    e. phone

3. Municipal Services
    a. police
    b. fire
    c. refuse collection

It isn't enough to list those connectors which facilitate the movement of goods and people to and from the site. We must also make some estimate of the quality or strength of those linkages. The strength of a linkage is a function of several factors; the first of these is the cost of moving people or goods. These costs are measured in terms of the time it takes to move people or goods, the aggravation that might be involved and of course, the out-of-pocket moving costs. Linkage strength is also a function of the frequency of the connection, and the importance of the linked establishment to the establishment on the site.

Since evaluating linkage strength requires a knowledge of the establishments at eaither end of the linkage, we must make some assumptions at this stage of the feasibility analysis. Right now, we want some measure of the general adequacy of the linkages for these general types of land use.

Data sources for the linkage analysis are your observations of the site and its surroundings, as well as various public agencies such as the city's Traffic Engineering Department. Most of the information you will need for the linkage analysis has been included in the appendices. We will examine the linked establishments in much greater detail in the Market Attribute section of the feasibility analysis.

E. <u>Compatibility Matrices</u>:

By now, we have collected a large amount of information about our site. The goal of all this is to get some ideas about the restrictions placed upon any development proposed for the site. At this time it would be appropriate to summarize what we have learned, and use this information to produce an objective measure of the suitability of the site for certain general types of land uses.

The compatibility matrix is a method of ranking the important features of the site in terms of their suitability for alternative land use types. Perhaps the best way to explain the compatibility matrix is to provide an illustration. The matrix shown here is an abbreviated one; yours can and should be more complete. (Part of your job is to select those features which are most important.)

There are several ranking schemes that you could use to complete this matrix. You might use a 1 to 5 scale, with 1 meaning that the site features was unsuitable for the proposed use, and 5 meaning that the site feature was completely compatible with the proposed use. If you wished a slightly simpler scheme, a check mark could indicate suitability for the proposed use and a blank space could indicate unsuitability. This matrix has been completed with hypothetical rankings using the first ranking scheme suggested.

Site Features	Proposed Use: Low Rise Commercial	Low Rise Residential	Low Rise Office
Lot Size	2	4	3
Zoning	1	5	3
Traffic Volume	5	2	4
Neighboring Uses	2	5	2
Total	10	16	12

Our goal is to obtain a ranking of the proposed uses according to the information assembled to this point. Your report should indicate <u>why</u> you ranked each of the factors the way you did. The matrix is a summary device, but it can't stand alone. It must be accompanied by a narrative explananation. In the case of our sample matrix above, we must explain the significance of the total scores. According to the totals, the site in question looks best suited to low rise residential development.

SITE ATTRIBUTE EXHIBITS

Page:	Exhibit:
III-14	Assumptions
III-15	Assessment Roll Excerpt
III-16	Plat Map
III-17	Title Search
III-20	Land Contract
III-23	Madison Zoning Code Map + Excerpt
III-39	Land Use Transitions Map
III-40	Madison Land Use Plan and Key
III-45	Traffic Flow Map: Central
III-46	Truck Routes
III-47	Hiway & Street Functional Classification Map and Key
III-49	Bikeway System Map
III-50	Central Area Parking Map
III-51	County Map
III-52	Bus Routes

Retail/Comm – ground floor
Apts: 1-BR upstairs
400 sq ft – 86 net [illegible]

SITE ATTRIBUTE ASSUMPTIONS:

1. Assume: The site is vacant. There are no demolition or other site preparation costs, such as those incurred to remove underground gas tanks.

2. Assume: There are no unpaid special assessments on the parcel.

3. Assume: Water, electricity, natural gas, storm and sanitary sewer serve the site. These services are adequate for any proposed use.

MILL RATE 1980: 24.830
STATE CREDIT : - 3.267

$ 21.563

PARCEL ADDRESS / PARCEL-ZONING-TYPE	OWNER & MAILING ADDRESS	1980 ASSESSMENT	LOT SIZE	BUILDING SQ FEET	EST-YR BUILT	LEGAL DESCRIPTION
1122 REGENT ST 0709-221-1706-5 C2 COMMERCIAL	KLEIN-DICKERT CO INC 1124 REGENT ST. MADISON WI 53715	L 31,500 I 8,500 T 40,000 TAX DUE 1980 843.98	52 FRONTAGE TOTAL SQ FEET 7892	NOT AVAILABLE		LOT 19 BLOCK 15 BROOKS ADD
1128 REGENT ST 0709-221-1707-7 C2 COMMERCIAL	KLEIN-DICKERT CO INC 1124 REGENT ST. MADISON WI 53715	L 31,500 I 91,500 T 123,000 TAX DUE 1980 2,591.43	52 FRONTAGE TOTAL SQ FEET 7892	NOT AVAILABLE		LOT 20 BLOCK 15 BROOKS ADD
1134 REGENT ST 0709-221-1708-9 C2 COMMERCIAL	KLEIN-DICKERT CO INC 1124 REGENT ST. MADISON, WIS. 53715	L 31,500 I 45,500 T 77,000 TAX DUE 1980 1,619.65	52 FRONTAGE TOTAL SQ FEET 7682	NOT AVAILABLE		LOT 21 BLOCK 15 BROOKS ADD
1135 REGENT ST 0709-224-0105-3 C2 COMMERCIAL	CHOLES, STANLEY & GUS 1135 REGENT ST MADISON WI 53715	L 75,100 I 97,900 T 173,000 TAX DUE 1980 3,085.04	175 FRONTAGE TOTAL SQ FEET 18558	NOT AVAILABLE		BLOCK 3 BOWENS SECOND ADD LOTS 3 THRU 7
1201 REGENT ST 0709-224-0201-4 C2 COMMERCIAL	DEVRIES, GORDON C RTE 1 WAUNAKEE WI 53597	L 28,300 I 48,300 T 76,600 TAX DUE 1980 79 1,606.63	86 FRONTAGE TOTAL SQ FEET 5644	NOT AVAILABLE 1,651.73		BLOCK 2 EIGHMY REPLAT OF LOTS 1 THRU 14 BLK 6. EIGHMY-RAMSAY CO. ADD. LOTS 15 THRU 18
1202 REGENT ST 0709-221-1607-9 C2 COMMERCIAL	WELCH, GERALD M 3232 LAKE MENDOTA DRIVE MADISON WI 53705	L 18,900 I 15,100 T 34,000 TAX DUE 1980 720.58	59 FRONTAGE TOTAL SQ FEET 5449	NOT AVAILABLE		COYNE REPLAT OF LOTS 13 THRU 23 BLOCK 14 BROOKS ADD & E 30 FT OF LOT 14 MORHOFF REPLAT, LOT 20 EXC THE W 5 FT AND ALL OF LOT 21
1207 REGENT ST 0709-224-0202-2 C2 COMMERCIAL	FRANCO, SALVADOR 1215 REGENT ST MADISON WI 53715	L 4,900 I 9,100 T 14,000 TAX DUE 1980 286.47	21 FRONTAGE TOTAL SQ FEET 1401	NOT AVAILABLE		LOT 14 BLOCK 2 EIGHMY REPLAT OF LOTS 1 THRU 14 BLK 6. EIGHMY-RAMSAY CO. ADD.

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III-16

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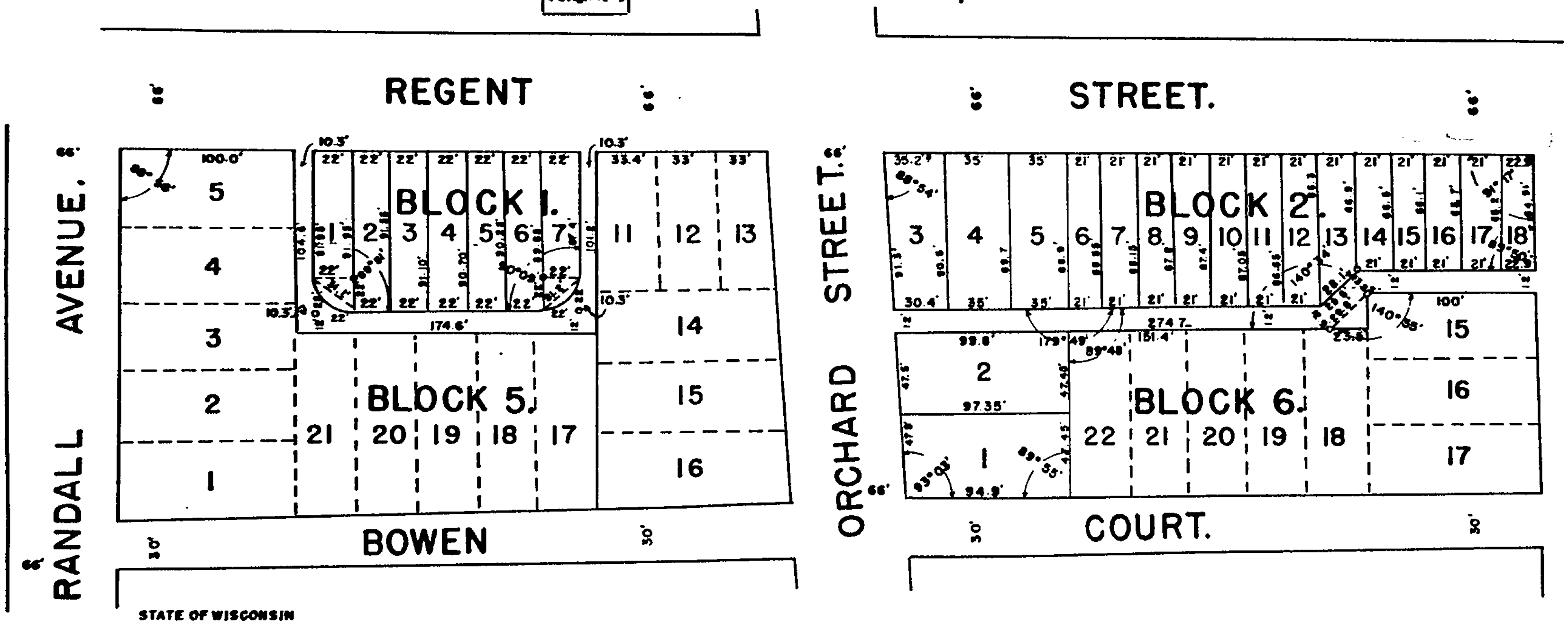
482181

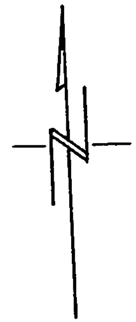
EIGHMY REPLAT

LOTS 6,7,8,9,10, BLOCK 5, AND LOTS 1,2,3,4,5, 6,7,8,9,10,11,12,13,14, BLOCK 6. EIGHMY-RAMSAY COMPANYS ——— ADDITION.

SCALE 50'= 1"

RECORDED NOV. 23, 1927 Mc DODGE, SURVEYOR NOV. 22, 1927





STATE OF WISCONSIN
COUNTY OF DANE.

MC. C. DODGE, BEING DULY SWORN, DEPOSES AND SAYS THAT BY THE ORDER AND UNDER THE DIRECTION OF ALVA EIGHMY, HE HAS SURVEYED AND MAPPED THE FOLLOWING DESCRIBED LAND, SITUATED IN THE CITY OF MADISON, DANE COUNTY, WISCONSIN, VIZ:- LOTS 6, 7,8,9,10, BLOCK 5, AND LOTS 1,2,3,4,5,6,7,8,9,10,11,12,13,14, BLOCK 6, EIGHMY RAMSAY CO'S. ADDITION TO THE CITY OF MADISON, NOW OF RECORD. THAT THE PLAT HERE SHOWN IS A CORRECT REPRESENTATION OF THE EXTERIOR BOUNDARIES OF THE LAND SURVEYED AND OF THE DIVISIONS THEREOF MADE AND THAT IN MAKING SAID SURVEY AND SUBDIVISIONS AND IN MAPPING THE SAME, HE HAS FULLY COMPLIED WITH THE PROVISIONS OF CHAPTER 236, REVISED STATUTES OF WISCONSIN AND ACTS AMENDATORY THEREOF. ALL CORNERS HAVE BEEN MARKED WITH TUBULAR IRON STAKES. THE PLAT IS DRAWN TO A SCALE OF 50' TO ONE INCH.

Mc. C. DODGE, SURVEYOR.

Reproduction of Copy of Original Plat

Furnished by Dane County Title Company

Title Search: 1201 Regent St, Madison

1. Grantor: Jack D. Taylor
   Grantee: Gordon De Vries
   Legal: Lots 15, 16, 17, 18, Block 2 of Eighmy Replat of Lots 6, 7, 8, 9 + 10 Block 5 and Lots 1-14, Block 6, Eighmy-Ramsay Co's. Addition.
   Inst: Land Contract
   Vol. 955 Records P. 401 #1575519
   Date: 6/5/78 recorded 6/6/78
   Notes: 1) Price: $75,000, $7500 down, balance in installments of $610/month, 20 yrs.
   2) Purchaser promises to continue operation as service station, but first floor apartment may be converted to business use

2. Grantor: Johnson Oil Refinery Co.
   Grantee: Jack D. Taylor
   Legal: Lots 17-18, Block 2, Eighmy Replat
   Instrument: Warranty Deed
   Vol. 435 Deeds, P. 317
   Date: 5/19/43 (rec. 6/23/43)
   Notes: 1) Tax stamps $3.85

(3) Grantor: Alva Eighmy + Wife
Electa Eighmy
Grantee: Jack D. Taylor
Legal: Lots 15-16, Block 2, Eighmy Replat
Inst: WD
Vol 406 Deeds P 158
Date: 9/23/40
Notes: 1) in fulfillment of LC Vol 147 Misc P. 374
2) price $3000.

(4) Grantor: Johnson Oil Refinery Co.
Grantee: Jack D. Taylor
Legal: Lots 17-18, Block 2, Eighmy Replat
Inst: LC
Vol. 147 Misc. Page 374
Date: 5/23/40
Notes: Price $3250, $300 down, $25 principal + 4% interest on outstanding balance.

(5) Grantor: Alva Eighmy, Electa Eighmy
Grantee: Jack D. Taylor
Legal: Lots 15-16, Block 2, Eighmy Replat
Inst: L.C.
Vol: 69 Misc, P 178
Date: 5-23-40
Notes: Price $3000, Bal. $40/mo @ 5% interest

⑥ Grantor: Electa Eighmy et al
Grantee: Johnson Oil Refinery Co.
Legal: Lots 17-18, Bl 2 of Eighmy Replat
Inst: WD
Vol: 372 Deeds P. 142
Date: 12/22/33
Notes: 1) Stamps: $3.50
2) in satisf. of L.C. V 104 Misc p.175.

⑦ Grantor: Alva Eighmy et al.
Grantee: Johnson Oil Refinery Co.
Legal: Lots 17-18, Bl 2 of Eighmy Replat
Inst: L.C.
Vol: 104 Misc p.175
Date: 11/21/33
Notes: 1) Price: $3300 — $200 down, $25/month (no interest) + 1¢/gal of gasoline pumped in excess of 2500 gal/mo.
2) subject to buyer getting city permit for service stn.

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DOCUMENT NO

1575519

STATE BAR OF WISCONSIN - FORM 11
LAND CONTRACT - Individual and Corporate
THIS SPACE RESERVED FOR RECORDING DATA

Office of Register of Deeds } ss
Dane County, Wisconsin }
Received for Record June 6
19 78 at 2:20 o'clock P.M.
and recorded in vol. 955
of Records on page 401
Register

RETURN TO
Croak Law Offices
4715 Monona Drive
Madison, Wisconsin 53716

Tax Key # ____
This is not homestead property.

CONTRACT, by and between Jack D. Taylor herein called Vendor, whether one or more, and Gordon C. DeVries herein called Purchaser, whether one or more.

WITNESSETH: That the Vendor, in consideration of the payments to be made and the covenants and agreements by the Purchaser to be performed, as hereinafter set forth, hereby sells and agrees to convey unto the Purchaser, upon the prompt and full performance by the Purchaser of the covenants and agreements of this contract to be by the Purchaser performed, the following described real estate in Dane County, State of Wisconsin:

Lots Fifteen (15), Sixteen (16), Seventeen (17) and Eighteen (18), Block Two (2) of Eighmy Replat of Lots Six, Seven, Eight, Nine and Ten (6, 7, 8, 9 and 10), Block Five (5), and Lots One to Fourteen (1 to 14) inclusive, Block Six (6), Eighmy-Ramsay Company's Addition to the City of Madison.

Real estate taxes for the year 1978 will be prorated between the parties as of July 1, 1978 when the tax bill is received in January, 1979.

together with all buildings, improvements, fixtures and appurtenances, now or hereafter erected thereon, including all screen and storm doors and windows, attached mirrors, fixtures, shades, attached floor covering, hot water heater, furnace, oil tank and light fixtures which shall be a part of the real estate.

Purchase price to include two stoves and two refrigerators presently on the premises.

The Purchaser, in consideration of the covenants and agreements herein made by the Vendor, agrees to purchase the above described premises, and to pay therefor to the Vendor at Madison, Wisconsin, the sum of Seventy Five Thousand ($75,000.00) Dollars, in manner following: $ 7,500.00 at the execution hereof, the receipt whereof is hereby acknowledged, and the balance of $67,500.00, together with interest on such portions thereof as shall remain from time to time unpaid, at the rate of Nine per cent per annum, until paid in full, as follows: Said principal and interest shall be payable in monthly installments of not less than $ 610.00 per month, beginning on the first day of July, 19 78, provided the entire purchase money and interest shall be fully paid within Twenty (20) years from the date hereof.

Purchaser further agrees, unless excused by Vendor, to pay monthly payments sufficient reasonably to anticipate the payment of taxes, special assessments, fire and extended coverage premiums and such other insurance premiums as Vendor may require, and Purchaser agrees to make such payments to the Vendor and hereby authorizes Vendor to apply the same in payment of such items.

Said payments shall be applied first to interest on the unpaid balance at the rate herein specified and then to principal. Any amount may be prepaid without premium or fee upon principal at any time, and interest shall be calculated at all times on the unpaid balance on the daily rate basis at 1/360 of the annual rate.

In the event of any prepayment, this contract shall not be treated as in default with respect to payment so long as the unpaid balance of principal, and interest (and in such case accruing interest from month to month shall be treated as unpaid principal) is less than the amount that said indebtedness would have been had the monthly payments been made as first specified above, provided that monthly payments shall be continued in the event of credit of any proceeds of insurance or condemnation, the condemned premises being thereafter excluded herefrom.

~~The Purchaser acknowledges that he is satisfied with the title as shown by the abstract or title insurance commitment submitted to him for examination, the Vendor agrees to deliver the abstract or title insurance policy to the Purchaser after the full purchase price hereunder shall have been paid. The Purchaser agrees to pay the cost of later continuations of abstract or title insurance.~~

(OR) The Vendor shall furnish the Purchaser thirty days prior to the date of ultimate closing, and the Purchaser shall accept as a sufficient showing of title, either (1) a title insurance commitment for an owner's policy of title insurance in the sum of the purchase price, the Purchaser to be named as the assured, to be written by a title insurance company, and guaranteeing the Vendor's title in the condition called for by this agreement, or (2) a merchantable abstract showing the Vendor's title in the condition called for by this agreement. If an abstract is furnished, the Purchaser shall notify the Vendor, in writing, of any objections to title within ten (10) days after receipt of such abstract, and the Vendor shall then have a reasonable time within which to rectify the title or furnish a title policy as above described.

The Purchaser shall be entitled to take possession of said premises on July 1, 1978. In case possession is to be obtained by the Vendor, he shall have a reasonable time after such date in which to remove any occupant. The Purchaser shall be entitled to remain in possession as long as he performs all covenants and agreements herein mentioned on his part to be performed and no longer.

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The Purchaser covenants and agrees as follows: VOL 955 PAGE 402

1. To pay before they become delinquent all taxes and assessments, now or hereafter assessed or levied against and on the real estate described in this contract and to deliver to the Vendor receipts evidencing due payment thereof.

2. To keep said premises insured for fire and extended coverage for at least the sum of $67,500.00, to pay the premiums thereon when due, and to comply with coinsurance provisions, if any, in insurance companies approved by the Vendor with loss payable to the Vendor as interest may appear, and all policies covering said premises shall be deposited with and held by the Vendor.

3. To keep the premises in good condition and repair.

4. To keep the premises free from liens superior to the lien of this contract, or the rights of the Vendor in the premises.

5. Not to commit waste nor suffer waste to be committed.

6. Not to do any act which shall impair the value thereof.

In case any such taxes or assessments remain unpaid after they become delinquent, or in case of failure to keep the premises so insured, the approved policies deposited, or the insurance premiums paid, or to keep the same in good condition and repair, free from liens and waste, the Vendor may cure such defaults, and all sums so paid shall immediately be repaid to the Vendor and shall, unless so repaid, be added to and deemed part of the purchase price, and bear interest at the rate aforesaid.

The Vendor hereby agrees that in case the aforesaid purchase price with the interest and other moneys shall be fully paid and all the conditions herein provided shall be fully performed at the times and in the manner above specified, he will on demand, thereafter cause to be executed and delivered to the Purchaser, a good and sufficient Warranty Deed, in fee simple, of the premises above described, free and clear of all legal liens and encumbrances, except any liens or encumbrances created by the act or default of the Purchaser, and except: ____________

The Purchaser hereby covenants and agrees that time shall be deemed to be of the essence of this contract and in case of default in the payment of any principal or interest when the same shall become due, or in the performance of any of the conditions, covenants, or promises by the Purchaser herein to be kept or performed, and such default shall continue for a period of 60 days, then the Vendor may, at his option, declare the contract at an end, all rights of the Purchaser under this agreement cancelled, and the amounts paid by the Purchaser hereunder forfeited, the same to remain the Vendor's property as rental of said premises and as liquidated damages for the failure completely to fulfill this agreement, and the Vendor shall forthwith and without notice have the right of re-entry, or, at the option of the Vendor and without notice to the Purchaser, notice being hereby expressly waived, the whole amount of unpaid principal shall be deemed to have become due and payable, in case such option shall be exercised, the unpaid principal and interest together with all sums which may be or have been paid by the Vendor as herein authorized with interest on such disbursements at the rate aforesaid shall be collectible in a suit at law, or by foreclosure of this contract in the same manner as if the whole of said unpaid principal had been due at the time when any such default occurred, and the indebtedness shall embrace, with said unpaid principal and interest, all the sums so disbursed with interest as aforesaid.

In case of legal proceedings in enforcement of any remedy hereunder, whether abated or not, all expenses, including reasonable attorney's fees, shall be added to the principal, become due as incurred, and in case of judgment shall be included therein.

Upon the commencement or during the pendency of any action of foreclosure of this contract, the court may appoint a receiver of the premises, including homestead interest, and may empower the receiver to collect the rents, issues, and profits of said premises during the pendency of such action, and may order such rents, issues, and profits when so collected, to be held and applied as the court shall, from time to time, direct.

All terms, conditions, covenants, warranties and promises herein shall be binding upon and inure to the benefit of the heirs, legal representatives, successors and assigns of the vendor and the purchaser: If not an owner of the property the spouse of the vendor for a valuable consideration joins herein to release homestead rights in the subject property and agrees to join in the execution of the deed to be made in fulfillment hereof.

Executed at Madison, Wisconsin, this 5th day of June, 1978.

SIGNED AND SEALED IN PRESENCE OF

Jack D. Taylor (SEAL)
Jack D. Taylor

Gordon C. DeVries (SEAL)
Gordon C. DeVries

(SEAL)

(SEAL)

AUTHENTICATION

Signatures of Jack D. Taylor and Gordon C. DeVries

authenticated this 5th day of June, 1978

Philip J. Croak
Philip J. Croak

Title: Member State Bar of Wisconsin or Other Party Authorized under Sec. 706.06 viz. ________

STATE OF WISCONSIN } ss.
________ County.

Personally came before me, this ________ day of ________, 19__,
the above named ________

to me known to be the person___ who executed the foregoing instrument and acknowledged the same.

This instrument was drafted by

Attorney Philip J. Croak

Notary Public ________ County, Wis.

The use of witnesses is optional.

My Commission (Expires) (Is) ________

Names of persons signing in any capacity should be typed or printed below their signatures.

FURNISHED BY Dane County Title Company

LAND CONTRACT SUPPLEMENT

As and for a supplement and part of the Land Contract between Jack D. Taylor, seller, and Gordon C. DeVries, purchaser, dated June 5, 1978, the purchaser agrees as follows:

1. That the purchaser will continue to operate the business, during the term of this Land Contract, as a service station.

2. That no alteration or destruction of the apartments on the premises shall be made without written consent of the seller, except that the purchaser may convert the first floor apartment to his proposed business use.

3. That in the event the purchaser defaults on his payments for a period of sixty (60) days, the seller shall have a right of immediate possession without the necessity of a foreclosure action.

4. Purchaser agrees that in the event of default in payments owing on the Land Contract he will restore the first floor apartment to its present condition.

5. That purchaser shall carry sufficient public liability insurance to cover the use of the premises.

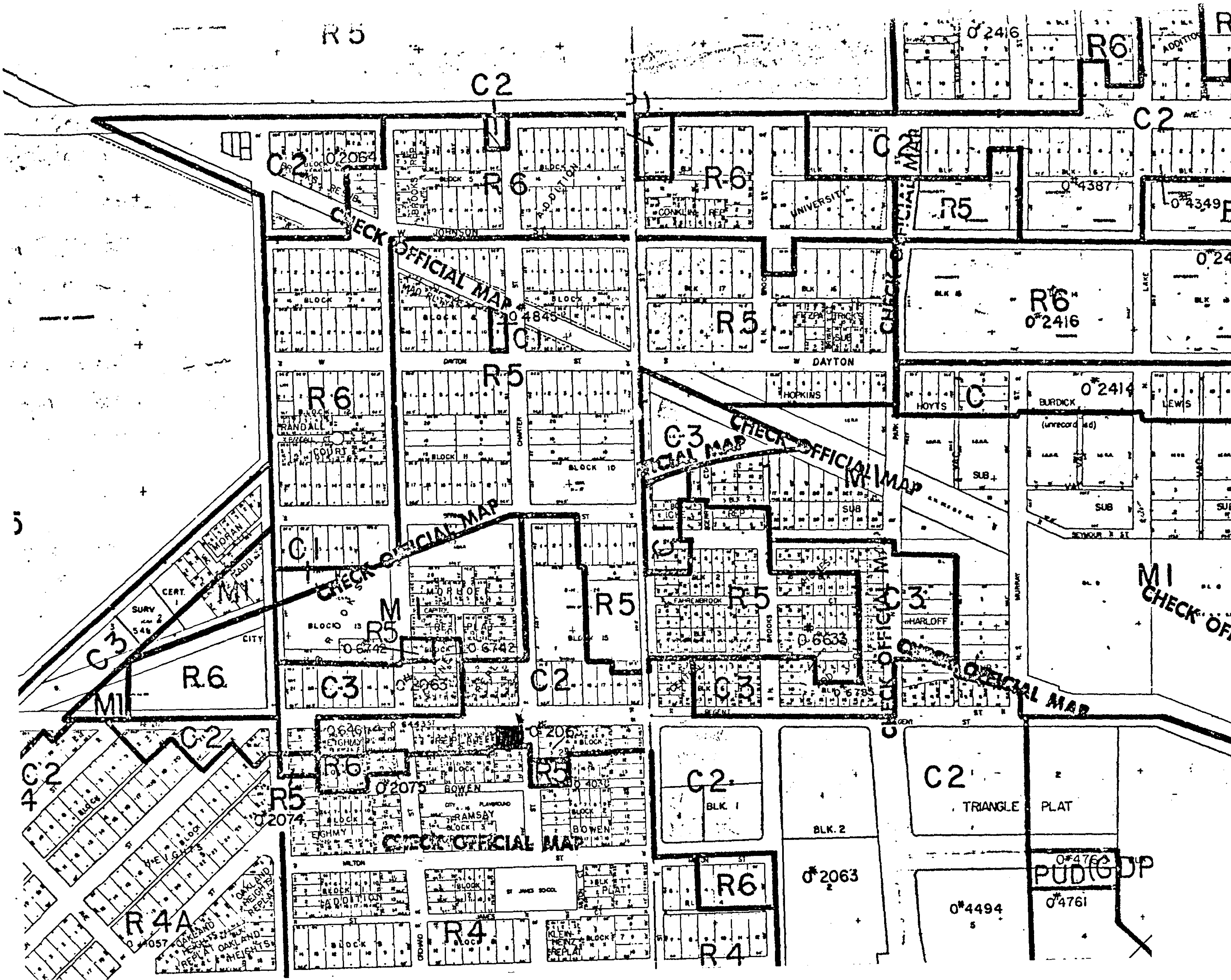
Dated this 5th day of June, 1978.

Jack D. Taylor
Jack D. Taylor

Gordon C. DeVries
Gordon C. DeVries

VOL 955 PAGE 403

Office of Register of Deeds } ss.
Dane County, Wisconsin }
Recorded June 6 1978
At 2 20 o'clock PM
Harold K. Hill, Register


R5
C2
R6
C2
R6
CHECK OFFICIAL MAP
JOHNSON
R5
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0*2064
0*4845
DAYTON
R6
RANDALL
COURT
BLOCK 10
R5
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HOPKINS
HOYTS
BURDICK
LEWIS
C3
M1
SUB
SEYMOUR ST
C1
MORAN
M1
R5
FAHRENBROOK
HARLOFF
C3
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C3
R6
C2
C3
0*2063
M1
C2
REGENT ST
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R5
0*2075
R5
0*2074
BOWEN
RAMSAY
EIGHMY
C2
BLK. 1
BLK. 2
TRIANGLE PLAT
MILTON ST
ST JAMES SCHOOL
R6
0*2063
PUD(GDP
0*4763
0*4761
0*4494
R4A
OAKLAND HEIGHTS REPLAT
R4
KLEINHEINZ REPLAT
R4

28.09 COMMERCIAL DISTRICTS.

(1) General Requirements.

(a) Permitted Uses. Permitted uses of land or buildings, as herein listed, shall be restricted to the districts indicated and under the conditions specified. No building or tract of land shall be devoted to any use other than a use permitted herein in the zoning district in which such building, structure or tract of land shall be located, with the following exceptions:

1. Uses lawfully established on the effective date of this ordinance; and
2. Conditional uses allowed in accordance with the provisions of 28.09(1)(b) hereunder.

Uses lawfully established on the effective date of this ordinance and rendered nonconforming by the provisions thereof, shall be subject to those regulations of Section 28.05 governing nonconforming uses.

(b) Conditional Uses. Conditional uses, as herein listed, may be allowed in the districts indicated, subject to the issuance of conditional use permits in accordance with the provisions of Section 28.12(10).

(c) Lot Area Requirements. Lot areas shall be provided in accordance with the regulations herein indicated. In addition, the following regulations shall be complied with:

1. No residential use shall be established or hereafter maintained on a lot recorded after the effective date of this ordinance, which is of less area than prescribed herein for such use in the zoning district in which it is to be located.
2. For any lot of record which is less than fifty (50) feet in width or less than six thousand (6,000) square feet in area on the effective date of this ordinance and located in any commercial district, the lot area requirements as established in the R4 district shall apply.
3. No existing residential building shall be converted so as to conflict with or further conflict with the lot area per dwelling unit requirements of the district in which such building is located.

(d) Height Regulations. Maximum height regulations as set forth in the C1 district shall apply to all buildings or structures in such district.

(e) Floor Area Ratio. Maximum floor area ratio as set forth in the C2, C3 and C4 districts shall apply to all buildings or structures in such districts. However, in the C2 and C3 districts located within the central area, the maximum floor area ratio shall be not more than 4.0, or not more than 5.0 when such districts adjoin the C4 district and are within two hundred (200) feet of such C4 district and are continuous as a commercial district.

(f) Yard Requirements. Yards shall be provided in accordance with the regulations herein indicated and shall be unobstructed from the ground level to the sky, except as allowed in Section 28.04(6)(e). All additions to a principal building, such as attached garages, shall comply with the yard requirements of the principal building.

(g) Usable Open Space Requirements. Usable open space shall be provided on each lot, devoted in whole or in part to any residential use, as set forth in each zoning district. Such usable open space provided on the ground level shall be in a compact area of no less than two hundred (200) square feet and having no dimension less than ten (10) feet and having no slope grade greater than ten percent (10%). In calculating the usable open space requirements in the C1, C2 and C3 districts, there may be credited, up to a maximum of fifty percent (50%) of the required open space area, the area of any balconies having a minimum dimension of four feet six inches (4'6"), and on the roof, any open space area having a minimum dimension of fifteen (15) feet and being free of any obstructions and improved and available for safe and convenient use to all occupants of the building, and in the C4 district, there may be credited to the required open space area, the area of up to one hundred percent (100%) of the required open space area in any of the abovementioned balconies and open space on the roof. Also in the C4 district, interior activity spaces such as swimming pools, fitness rooms, etc., which may be used by all residents of the building, may be credited to the required open space. (Am. by Ord. 6052, 11-29-77)

(h) (R. by Ord. 5831, 5-6-77)

(i) Off-Street Parking And Loading. In the C1, C2 and C3 districts, off-street parking and loading facilities shall be provided in accordance with applicable regulations herein set forth in Section 28.11, provided however, in the central area, there shall be no specific requirements for off-street parking. In the C4 district, there shall be no specific requirements for off-street parking and loading facilities.

(2) C1 Limited Commercial District.

(a) Statement Of Purpose. The C1 limited commercial district is established to accommodate the shopping needs of residents residing in adjacent residential areas. Within this district, which is located in close proximity to residential areas, are permitted those uses which are necessary to satisfy the daily or frequent shopping needs of the neighborhood consumer. Such uses include the retailing of convenience goods and the furnishing of certain personal services. Also permitted within this district are certain types of offices. Within this district, a limitation is imposed on the size of establishments to prevent the generation of large volumes of vehicular and pedestrian traffic.

(b) General Regulations. Uses permitted in the C1 district are subject to the following conditions:
1. Business uses are not permitted on any floor above the ground floor except in those buildings where dwelling units and lodging rooms are not established.
2. All business establishments shall be retail or service establishments which deal directly with the customers. All goods produced on the premises shall be sold at retail on the premises where produced unless approved as a conditional use. (Am. by Ord. 6113, 1-26-78)
3. All business, servicing or processing, except for off-street parking, off-street loading, display of merchandise such as garden, lawn and recreational supplies and equipment for sale approved as a conditional use by the Plan Commission, shall be conducted within completely enclosed buildings. (Am. by Ord. 4310, 8-29-73)
4. Establishments of the "drive-in" type are not permitted, except in the case of automobile service stations.
5. Business establishments are restricted to a maximum gross floor area of ten thousand (10,000) square feet each, exclusive of any floor area devoted to off-street parking or loading facilities, except that food stores, containing two (2) or more uses, and offices as herein permitted below, may have a maximum floor area of not more than twenty-three thousand (23,000) square feet. (Am. by Ord. 5125, 9-3-75)
6. Parking of trucks as an accessory use, when used in the conduct of a permitted business listed hereinafter, shall be limited to vehicles of not over one and one-half (1 1/2) tons capacity when located within one hundred fifty (150) feet of a residence district boundary line.

(c) Permitted Uses. The following uses are permitted in the C1 district:
1. Accessory uses, including but not limited to the following:
   a. Signs as regulated in this section.
   b. Temporary buildings for construction purposes, for a period not to exceed the duration of such construction.
2. Art and school supply stores.
3. Barbershops.
4. Beauty parlors.
5. Bedding sales but not including furniture stores, provided that the zoning lot shall either be located on a heavy traffic route system or on a collector street with a right-of-way width not less than eighty (80) feet, and further provided that in no case shall the total floor area exceed three thousand (3,000) square feet.
6. Bicycle sales, rental and repair establishments.
7. Book, magazine and stationery stores.
8. Candy and ice cream stores.
9. Churches.
11. Drugstores.
12. Dry cleaning and laundry establishments employing not more than eight (8) persons.
13. Dwelling units and lodging units located above ground floor not exceeding fifty percent (50%) of the total building floor area. (R. & Recr. by Ord. 4499, 3-6-74)
14. Fire stations.

15. Florist shops and conservatories employing not more than five (5) persons.
16. Food stores--grocery stores, meat stores, fish markets, bakeries employing not more than eight (8) persons, and delicatessens.
17. Gift shops.
18. Hardware stores.
19. Hobby shops.
20. Libraries, municipally owned and operated.
21. Liquor stores, packaged goods only.
22. Medical, dental and optical clinics, including accessory laboratories.
23. Nursery schools.
24. Offices for professional persons, for insurance or real estate organizations, and for nonprofit civic, fraternal, governmental research, labor, political, religious and service organizations or associations.
25. Outpatient housing facilities.
26. Paint and wallpaper store, provided it is located in a shopping center containing eight (8) or more retail businesses.
27. Parks and playgrounds.
28. Pet shops, including boarding of dogs, cats and other household pets when conducted as an incidental use and in an enclosed building.
29. Photography studios, including the development of films and pictures when conducted as part of the retail business on the premises.
30. Post offices.
31. Recreational buildings and community centers, not operated for profit.
32. Restaurants, except adult entertainment taverns. (Am. by Ord. 6101, 1-6-78)
33. Schools--elementary, junior high or high.
34. Shoe and hat repair stores.
35. Toy shops.
36. Variety stores.
37. Wearing apparel shops.
38. Banks and financial institutions including drive-up service windows provided that the zoning lot shall be part of a contiguous Commercial Zoned District with an area larger than five (5) acres; provided that the zoning lot shall have direct vehicular access to either the heavy traffic route system or a collector street via a driveway approach where the Traffic Engineer has determined traffic problems will not be created in the street and further provided that in no case shall the total floor area exceed five thousand (5,000) square feet. (Cr. by Ord. 4456, 2-1-74)
39. Community living arrangements provided:
    a. That the loss of any state license or permit by a community living arrangement be an automatic revocation of that facility's use permit.
    b. That the applicant disclose in writing the capacity of the community living arrangement.
    c. That the community living arrangement be located above ground floor.

(Sec. 28.09(2)(c)39. Cr. by Ord. 5636, 11-3-76)

40. Camera and photographic supply stores. (Cr. by Ord. 5638, 11-3-76)
41. Reserved For Future Use.
42. Travel bureaus and transportation ticket offices, provided that the zoning lot is located on a heavy traffic route system or on a collector street with a right-of-way width not less than eighty (80) feet, and further provided that in no case shall the total floor area exceed one thousand five hundred (1,500) square feet. (Cr. by Ord. 6076, 1-6-78)
43. Art galleries. (Cr. by Ord. 6111, 1-26-78)
44. Reserved For Future Use.
45. Sporting goods stores, including the sale of live bait, provided that in no case shall the total floor area exceed three thousand (3,000) square feet, and further provided that hours of operation be limited to the hours between 7:00 a.m. and 9:00 p.m. unless approved as a conditional use. (Cr. by Ord. 6261, 5-24-78)
46. Small home appliances, sales and service, not including stoves, refrigerators, freezers, washers or dryers, provided that the zoning lot shall either be located on a heavy traffic route system or on a collector street with a right-of-way width not less than eighty (80) feet, and further provided that in no case shall the total floor area exceed three thousand (3,000) square feet. (Cr. by Ord. 6866, 12-28-79)

(d) Conditional Uses. The following conditional uses may be allowed in the C1 district subject to the provisions of Section 28.12(10):

1. Automobile laundries, provided:
   a. That the zoning lot shall be located within a C1 district which, as one district or in combination with other commercial or manufacturing districts, extends continuously for at least five hundred (500) feet on one side of a street.
   b. That the hours of operation shall be limited to the hours between 7:00 a.m. and 9:00 p.m.
2. Automobile service stations for the retail sale and dispensing of fuel, lubricants, tires, batteries, accessories and supplies, including installation and minor services customarily incidental thereto, and facilities for chassis and gear lubrication and for washing of motor vehicles only if enclosed in a building, provided that the provisions set forth in 1.a. above shall apply.
3. Structures in which dwelling units occupy more than fifty percent (50%) of the total building floor area. (R. & Recr. by Ord. 4498, 3-6-74)
4. Greenhouses and nurseries, provided that such establishments shall be located on a major highway and further provided that adequate screening shall be provided on the premises.
5. Hotels and motels, provided that the zoning lot shall be not less than one (1) acre.
6. Outdoor eating areas of restaurants. (Am. by Ord. 5198, 10-31-75)
7. Parking facilities, open and accessory, for the storage of private passenger automobiles only, when located elsewhere than on the same zoning lot as the principal use served, subject to the applicable provisions of Section 28.11.
8. Parking facilities, accessory and located outside of the central area, subject to the applicable provisions of Section 28.11.
   a. Accessory off-street parking facilities for a residential building where the proposed total number of spaces will exceed that

required by this ordinance for such use or for an equivalent new use by more than fifty percent (50%) or four (4) spaces, whichever number is greater.

b. Accessory off-street parking facilities for any building, other than a residential building, where the proposed total number of spaces will exceed that required by this ordinance for such use or for an equivalent new use by more than one hundred percent (100%) or fifteen (15) spaces, whichever number is greater.

9. Parking facilities, accessory and located within the central area, where the number of parking spaces in such facilities exceeds the requirement set forth in Section 28.11(3)(b) for similar uses.
10. Parking lots, garages and structures, nonaccessory and publicly owned and operated, for the storage of private passenger automobiles only, subject to the applicable provisions of Section 28.11.
11. Printing and publishing establishments, including newspaper, letter press, business cards, mimeographing and other similar job printing service, provided that there shall be not more than five (5) employees, and further provided that the hours of operation shall be limited to the hours between 7:00 a.m. and 9:00 p.m.
12. Public service signs.
13. Public utility and public service uses as follows:
    a. Electric substations.
    b. Gas regulator stations, mixing stations and gate stations.
    c. Radio and television towers.
    d. Railroad rights-of-way, but not including railroad yards and shops, freight and service buildings, or rights-of-way for switch, lead, spur or team tracks.
    e. Sewerage system lift stations.
    f. Telephone exchanges, microwave relay towers and telephone transmission equipment buildings.
    g. Water pumping stations and water reservoirs.
14. Radio and television studios and stations, provided that the zoning lot shall be not less than one and one-half (1 1/2) acres.
15. Temporary parking lots for a total period not to exceed three (3) years, provided such lot complies with the provisions of Section 10.08(6)(d), driveway and parking facility ordinance.
16. Undertaking establishments and funeral parlors, provided that the zoning lot shall be not less than one (1) acre and further provided that where such zoning lot abuts a church site, the combined areas of both zoning lots shall be not less than one and one-half (1 1/2) acres regardless of the zoning district of the church site.
17. Banks and financial institutions including drive-up service windows provided that the zoning lot shall have direct vehicular access to either the heavy traffic routes system or a collector street via a driveway approach where the Traffic Engineer has determined traffic problems will not be created in the street and further provided that in no case shall the total floor area exceed five thousand (5,000) square feet. (Cr. by Ord. 4457, 2-1-74)
18. Furniture stores provided that the zoning lot shall either be located on an arterial street or on a collector street with a right-of-way not less than eighty (80) feet and further provided that in no case shall the total floor area exceed five thousand (5,000) square feet. (Cr. by Ord. 4647, 8-2-74)

19. Business offices, machine sales and services establishments provided that the zoning lot shall be located on an arterial street with a right-of-way not less than eighty (80) feet and further provided that in no case shall the total floor area exceed five thousand (5,000) square feet. (Am. by Ord. 5252, 12-24-75)
20. Parking facilities, nonaccessory and publicly or privately owned and operated for parking of private passenger automobiles only, subject to the provisions of Section 28.11 and limited to those areas paved as of January 1, 1977, or those owned by the City Parking Utility as of January 1, 1977. (Cr. by Ord. 5946, 8-15-77)
21. Upholstery shops, provided that the zoning lot shall be located on an arterial highway or collector street and further provided that in no case shall the total floor area exceed five thousand (5,000) square feet. (Cr. by Ord. 5801, 3-28-77)
22. Artisan workshops, including production for sale off the premises, provided that the Plan Commission shall find:
    a. That the specific activities proposed, at that location, are consistent with the recommendations of the adopted Land Use Plan for the City; and
    b. That the specific activities proposed will comply with the provisions of Section 28.04(17), with particular consideration given to the potential effects of heat producing equipment, power driven tools, and operations involving pounding or hammering; and
    c. That the specific activities and hours of operation proposed will create no traffic or other impact detrimental to the purposes of the zoning district or the use and enjoyment of surrounding properties.

(Sec. 28.09(2)(d)22. Cr. by Ord. 6113, 1-26-78)

23. Live bait stores, where hours of operation exceed those permitted under Section 28.09(2)(c). (Cr. by Ord. 6261, 5-24-78)

(e) <u>Lot Area Requirements</u>. In the C1 district, lot areas shall be provided in accordance with the following requirements:

1. Dwelling units.

Minimum Lot Area Per Dwelling Unit	Type of Dwelling Unit
700 square feet	Efficiency
1,000 square feet	One bedroom
1,300 square feet	Two bedroom

plus an additional three hundred (300) square feet of lot area for each additional bedroom in excess of two (2) in a dwelling unit.

2. Lodging rooms--minimum lot area of four hundred (400) square feet per lodging room.

(f) <u>Height Regulations</u>. In the C1 district, no building or structure shall exceed three (3) stories nor forty (40) feet in height.

C-2

(g) Yard Requirements. In the C1 district, minimum yards shall be provided as follows:

1. A yard shall be provided where the extension of a front or side lot line abutting a street coincides with a front lot line of an adjacent lot located in a residence district. Such yard shall be equal in depth to the minimum front yard required by this ordinance on such adjacent residential lot. Such yard shall be provided along such front or side lot line abutting a street for a distance of at least fifty (50) feet, including the width of any intervening alley, from such residential lot.
2. A yard shall be provided where a side lot line coincides with an alley right-of-way line or a side or rear lot line in an adjacent residence district. Such yard along such side lot line shall be equal in dimension to the minimum side yard which would be required under this ordinance for a residential use opposite such alley right-of-way line or on the adjacent residential lot.
3. A yard shall be provided where a rear lot line coincides with an alley right-of-way line or a side lot line or rear lot line in an adjacent district. Such yard along such such rear lot line shall be twenty (20) feet in depth for buildings not exceeding one story in height, and thirty (30) feet for buildings exceeding one (1) story in height.
4. For residential uses, there shall be provided side and rear yards as established in the R5 district regulations. For residential uses located above the ground floor, such yards shall begin at a level no higher than the level of the finished floor of the lowest residential unit.

(h) Usable Open Space Requirements. In the C1 district, there shall be provided a usable open space of not less than one hundred sixty (160) square feet for each lodging room, efficiency unit or one bedroom unit, plus an additional one hundred sixty (160) square feet for each additional bedroom in excess of one in a dwelling unit.

(i) (R. by Ord. 5831, 5-6-77)

(3) C2 General Commercial District.

(a) Statement Of Purpose. The C2 general commercial district is established to accommodate the shopping needs of a much larger consumer population and area of residency than that served by the C1 limited commercial district. Within this district, which is located in relative proximity to residential areas and to major thoroughfares, is permitted a wider range of uses than in the C1 limited commercial district. Uses permitted in this district include not only the retailing of convenience goods and the furnishing of certain personal services, but also the retailing of durable and fashion goods and the furnishing of other types of services. Also permitted are all types of office uses. Within this district, there is no limitation on the size of establishments as provided in the C1 limited commercial district.

(b) General Regulations. Uses permitted in the C2 district are subject to the following conditions:

1. All goods produced on the premises shall be sold at retail on the premises where produced unless approved as a conditional use. (Am. by Ord. 5982, 9-30-77)

2. All business, servicing or processing, except for off-street parking, off-street loading, display and sale of farm produce and nursery stock, display of merchandise such as garden, lawn and recreation supplies and equipment for sale to the public, establishments of the drive-in type and outdoor eating areas of restaurants approved as a conditional use by the Plan Commission, shall be conducted within completely enclosed buildings. (Am. by Ord. 7019, 6-27-80)
3. Parking of trucks as an accessory use, when used in the conduct of a permitted business listed hereinafter, shall be limited to vehicles of not over one and one-half (1 1/2) tons capacity when located within one hundred fifty (150) feet of a residence district boundary line.

(c) Permitted Uses. The following uses are permitted in the C2 district:

1. Accessory uses.
2. Any use permitted in the C1 district.
3. Amusement establishments, including archery ranges, bowling alleys, dance halls, golf driving ranges, gymnasiums, pool halls, swimming pools, skating rinks and other similar indoor amusement facilities.
4. Antique shops.
5. Art galleries and museums.
6. Auction rooms.
7. Automobile accessory stores.
8. Banks and financial institutions.
9. Blueprinting and photostating establishments.
10. Business machine sales and service establishments.
11. (R. by Ord. 5638, 11-3-76)
12. Carpet and rug stores.
13. Catering establishments.
14. China and glassware stores.
15. Clothing and costume rental stores.
16. Coin and philatelic stores.
17. Convalescent homes and nursing homes, provided that the zoning lot shall be not less than one-half (1/2) acre and further provided that the side and rear yards as established in the R5 district are provided. Provided also that the intended use abuts on one side either:
    a. A residential zoning district; or
    b. A substantially permanent residential building in the commercial district.
18. Department stores.
19. Dry goods stores.
20. Employment agencies.
21. Exterminating shops.
22. Floor covering stores (linoleum and tile).
23. Florist shops and conservatories with no limitation on number of employees.
24. Fraternal, philanthropic and eleemosynary uses.
25. Furniture stores.
26. Furrier shops, including the incidental storage and conditioning of furs.
27. Hospitals and sanitariums.
28. Hotels and motels.
29. Household appliance stores, including radio and television sales and service.

30. Interior decorating shops, including upholstering and making of draperies, slipcovers and other similar articles when conducted as part of the retail operation and secondary to the principal use.
31. Jewelry stores, including watch repair.
32. Laboratories--research, development and testing.
33. Leather goods and luggage stores.
34. Loan offices.
35. Locksmith shops.
36. Meat markets, including sale of meat and meat products to restaurants, hotels, clubs and other similar establishments when such sale is conducted as part of the retail business on the premises.
37. Musical instrument sales and repair.
38. Offices, business and professional.
39. Office supply stores.
40. Optical sales.
41. Orthopedic and medical appliance and supply stores.
42. Paint and wallpaper stores.
43. Phonograph, record and sheet music stores.
44. (R. by Ord. 7006, 6-6-80)
45. Picture framing.
46. Printing, publishing and bookbinding establishments.
47. Radio and television studios and stations.
48. Recording studios.
49. Schools--music, dance, business or trade.
50. Secondhand stores and rummage shops.
51. Sewing machine sales and service, household appliances only.
52. Sporting goods stores.
53. Tailor shops.
54. Taverns, except adult entertainment taverns. (Am. by Ord. 6101, 1-6-78)
55. Taxidermists.
56. Telegraph offices.
57. Theaters, indoor.
58. Ticket agencies, amusement.
59. Tobacco shops.
60. Travel bureaus and transportation ticket offices.
61. Typewriter and adding machine sales and service establishments.
62. Undertaking establishments and funeral parlors.
63. Upholstery shops.
64. Water softener sales and service.
65. Film developing and processing. (Cr. by Ord. 6226, 5-3-78)
66. Wholesale magazine distribution agencies, provided the hours of operation are limited to 7:00 a.m. to 7:00 p.m., and further provided that none of the magazines handled by such agencies fall within the definition of materials handled by an adult book store as defined in Sec. 28.03(2). (Cr. by Ord. 6876, 1-17-80)
67. Outdoor display and sale of farm produce and nursery stock. (Cr. by Ord. 7020, 6-27-80)

(d) Conditional Uses. The following conditional uses may be allowed in the C2 district subject to the provisions of Section 28.12(10).
  1. Any use allowed as a conditional use in the C1 district unless permitted in (c) above.
  2. (R. by Ord. 5831, 5-6-77)

3. Automobile laundries, provided that the Plan Commission shall first obtain a report and recommendations from the Traffic Engineer on traffic matters.
4. Boat showrooms, including accessory sales, and repairs of boats, motors, parts and equipment, provided that the Plan Commission shall find:
   a. That adequate off-street parking exists on the site.
   b. That all repair of boats, motors, parts and equipment, and all sales and storage of boats, motors, parts and equipment, shall be conducted and displayed within completely enclosed buildings.
   c. That any such use shall be located not less than one hundred twenty (120) feet from any residence district boundary line.
5. Contractors or construction offices and shops and display rooms, such as building, cement, electrical, heating, ventilating and air conditioning, masonry, painting, plumbing, refrigeration and roofing, provided that all parking (other than automobiles), loading, display of merchandise and parking or storage of equipment and supplies shall be conducted within completely enclosed buildings.
6. Garages for repair and servicing of motor vehicles of not over one and one-half (1 1/2) tons capacity, but not including body repairs, painting or motor rebuilding, providing that the Plan Commission shall find:
   a. That adequate off-street parking exists on the site for vehicles awaiting repairs, servicing or pickup.
   b. That all other business and servicing shall be conducted within completely enclosed buildings.
   c. That no permanent or temporary storage of wrecked vehicles or rental vehicles shall occur on the premises unless completely screened from view or within an enclosed building.
7. Storage and warehousing establishments, provided such gross floor area shall not exceed ten thousand (10,000) square feet, and further provided that the Plan Commission shall first obtain a report and recommendations from the Traffic Engineer on traffic matters.
8. Planned development-hospital facility, provided that the total site area shall be not less than one and one-half (1 1/2) acres and further provided that the site may consist of two (2) or more zoning lots separated only by a public right-of-way where authorized by the Plan Commission.
9. Drive-in establishments.
10. Bus terminals and bus turnaround areas, provided direct vehicular access is to a major traffic route and further provided the location is not in conflict with adopted plans.
11. Small machine shop, provided that no individual machine used in the shop exceeds one thousand two hundred (1,200) pounds, that no welding, forging or casting is conducted on site, that there shall be not more than five (5) shop employees, that the hours of operation shall be limited to the hours between 7:00 a.m. and 9:00 p.m., and that finished products shall not exceed twenty-five (25) pounds in weight.

12. Business community parking lot for operable passenger automobiles of persons employed full time within the immediate neighborhood, provided:
    a. That such parking lot shall be located outside the central area.
    b. That no building shall be located on such lot.
    c. That at least eighty percent (80%) of the parking spaces located on such lot shall be leased on a monthly basis to persons employed full time in buildings within one thousand (1,000) feet walking distance from such parking lot.
    d. That the site shall not abut residentially zoned property.
    e. That the Traffic Engineer shall, prior to the approval of such lot, submit a report and recommendations regarding traffic and parking needs and conditions within the area.
    f. That such lot contains a setback area which will be planted and landscaped and which conforms to screening regulations.
13. Trailer rental, for use with private passenger motor vehicles. (Cr. by Ord. 4755, 10-24-74)
14. Automobile rental agencies provided direct vehicular access is to the heavy traffic route system. (Cr. by Ord. 5092, 7-29-75)
15. Sales of motorcycles, provided that the Plan Commission shall find:
    a. That adequate off-street parking exists for motorcycles and automobiles.
    b. That all sales and service be conducted within completely enclosed buildings.
    c. That screening, landscaping, lighting and signs are appropriate to the location.

(Sec. 28.09(3)(d)15. Cr. by Ord. 5515, 6-25-76)

16. Automobile sales establishments in abandoned automobile service station sites provided that the Plan Commission shall find:
    a. That there is adequate screening and landscaping, including between the site and residential uses.
    b. That no permanent or temporary storage of vehicles in disrepair shall occur on the premises unless within a completely enclosed building.
    c. That the site fronts on either a street designated as an arterial street or on a frontage road adjacent to a designated arterial street.
    d. That illumination of the site does not adversely affect adjacent properties.
    e. That signs shall conform to the size limitation of the R5 residential district if the site is opposite or adjoining residential property.
    f. That the hours of operation shall be limited to 8:00 a.m. to 8:00 p.m.

(Sec. 28.09(3)(d)16. Cr. by Ord. 5533, 7-13-76)

17. Adult entertainment establishments, subject to the following conditions:
    a. All exterior windows in any premises occupied by such establishment shall be blackened to the extent necessary to make them opaque.
    b. No such establishment shall be located within five hundred (500) lineal feet of a church, or a private or public elementary, secondary or vocational school, or a public park, or within five hundred (500) lineal feet of any residence district.

c. Such establishment may have only one (1) nonflashing business sign, which sign may only indicate the name of the business and identify it as an adult entertainment establishment.

(Sec. 28.09(3)(d)17. Cr. by Ord. 5711, 12-28-76)

18. Attendant or metered automobile parking facilities solely for the short term (3 hours or less) use of patrons and other visitors of retail, service, office, cultural and recreational uses in the vicinity of the State Street Mall and Capitol Concourse provided:
    a. That such lot is within three hundred (300) feet of the limits of the C4 Central Commercial District, and
    b. That such lot contains a setback area which will be planted and landscaped and which conforms to screening regulations, and
    c. That the Traffic Engineer shall, prior to the approval of such facility, submit a report and recommendation regarding traffic and parking conditions within the area, and
    d. That such lot, at its location, does not defeat the adopted objectives and policies of the City nor the purposes of the zoning district, and
    e. That no residential building shall be located on such lot.

    (Sec. 28.09(3)(d)18. Cr. by Ord. 5905, 7-7-77)

19. Bakeries with more than eight (8) employees or selling at other than retail provided:
    a. That adequate off-street parking and loading exists on the site.
    b. That the hours of operation shall be established after consideration of the occupants of adjacent properties.

(Cr. by Ord. 5982, 9-30-77)

20. Model homes or garage displays. (Cr. by Ord. 6971, 4-30-80)
21. Physical culture and health services, reducing salons, masseurs and public baths, subject to the following conditions:
    a. The identity, including officers and agent of any corporation and all partners in a partnership, of the owner of the building and any lessee of the portion of the building so used shall be filed with the Zoning Administrator. A copy of any lease involved shall be filed with the Zoning Administrator. Changes in any of the above information shall be reported within ten (10) days of the change to the Zoning Administrator.
    b. The person seeking the conditional use permit shall provide, in writing, a full and detailed description of the proposed business as part of the application and shall update such description as changes occur.
    c. The intimate parts, as that term is defined in Sec. 939.22(19), Wis. Stats., of employees shall be covered with opaque material at all times.
    d. For public baths only, no employee shall be present with any patron in any hot tub, sauna, steam room or whirlpool except in an emergency. The occupant shall permit inspection of facilities by the City Health Division during regular business hours.
    e. The occupant shall not permit the violation of any law relating to commercial sexual activity.
    f. Failure of compliance with any of these conditions or operation of the business in a manner other than as most recently described may be grounds for revocation of the conditional use permit.

(Cr. by Ord. 7006, 6-6-80)

(e) Lot Area Requirements. In the C2 district, the lot area requirements of the C1 district shall apply.

(f) Floor Area Ratio. In the C2 district, the floor area ratio shall not exceed 3.0.

(g) Yard Requirements. In the C2 district, minimum yards shall be provided as follows:

1. A yard shall be provided where the extension of a front or side lot line abutting a street coincides with a front lot line of an adjacent lot located in a residence district. Such yard shall be equal in depth to the minimum front yard required by this ordinance on such adjacent residential lot. Such yard shall be provided along such front or side lot abutting a street for a distance of at least twenty-five (25) feet, including the width of any intervening alley, from such residential lot.
2. A yard shall be provided where a side lot line coincides with an alley right-of-way line or a side or rear lot line in an adjacent residence district. Such yard along such side lot line shall be equal in dimension to the minimum side yard which would be required under this ordinance for a residential use opposite such alley right-of-way line or on the adjacent residential lot.
3. A yard shall be provided where a rear lot line coincides with an alley right-of-way line or a side lot line or rear lot line in an adjacent district. Such yard along such rear lot line shall ~~be ten (10) feet in~~ depth for buildings not exceeding one story in height, and thirty (30) feet for buildings exceeding one story in height.
4. For residential uses, there shall be provided side and rear yards as established in the R5 district regulations. For residential uses located above the ground floor, such yards shall begin at a level no higher than the level of the finished floor of the lowest residential unit.

(h) Usable Open Space Requirements. In the C2 district, the usable open space requirements of the C1 district shall apply.

(i) (R. by Ord. 5831, 5-6-77)

→ END C2

→ R4 LOT AREA REQUIREMENTS

(d) Lot Area Requirements. In the R4 district, there shall be provided not less than two thousand (2,000) square feet of lot area per dwelling unit. However, where the average number of bedrooms per dwelling unit in the building exceeds two (2), an additional five hundred (500) square feet of lot area shall be provided for each bedroom in excess of an average of two (2) bedrooms per dwelling unit.

SUMMARY OF ZONING CODE PARKING REQUIREMENTS

ie from 28.11

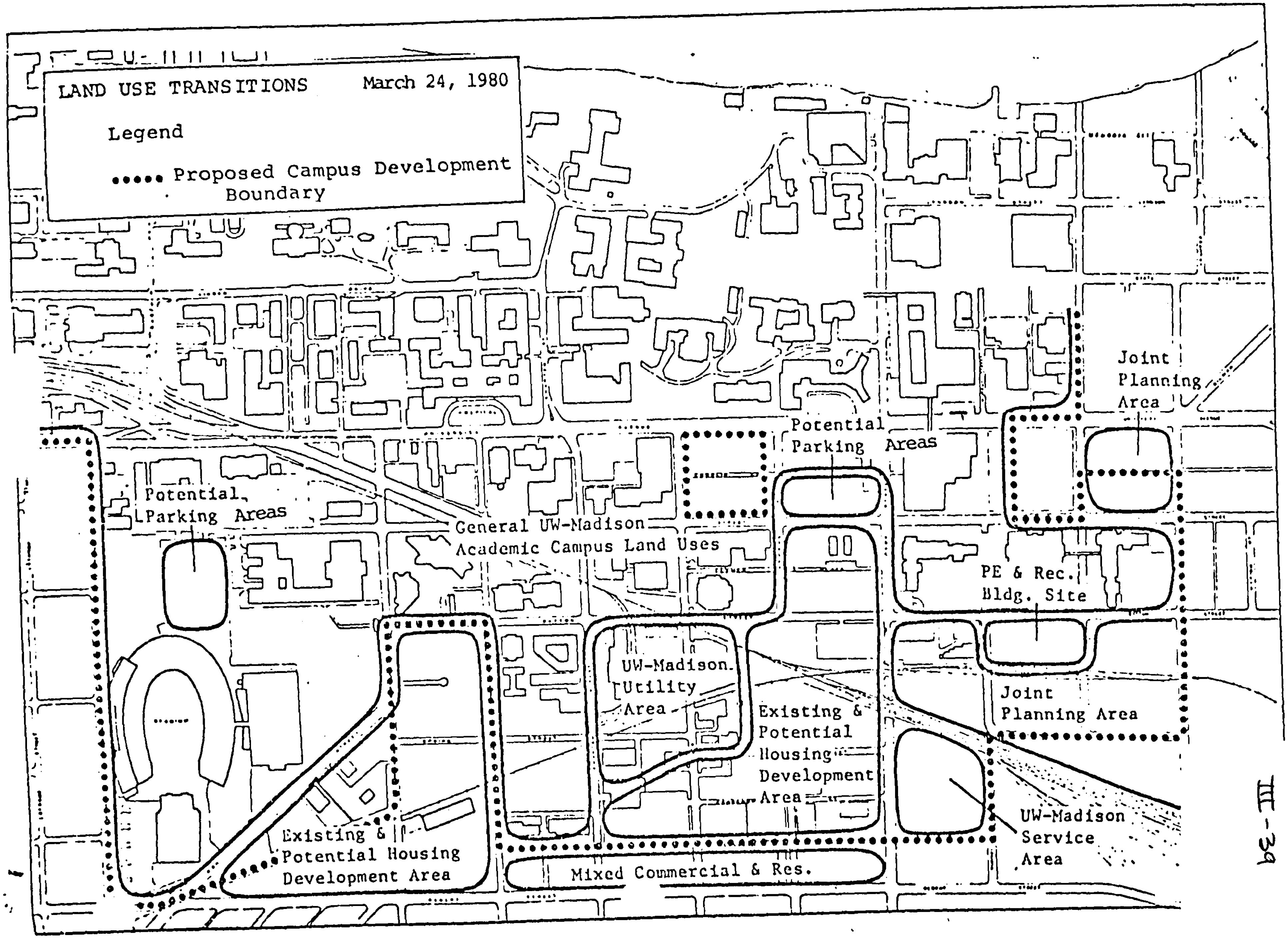
ZONING CODE **RESIDENTIAL** Sec. 28.11(3)(1)1.a.

REQUIRED OFF-STREET PARKING FACILITIES

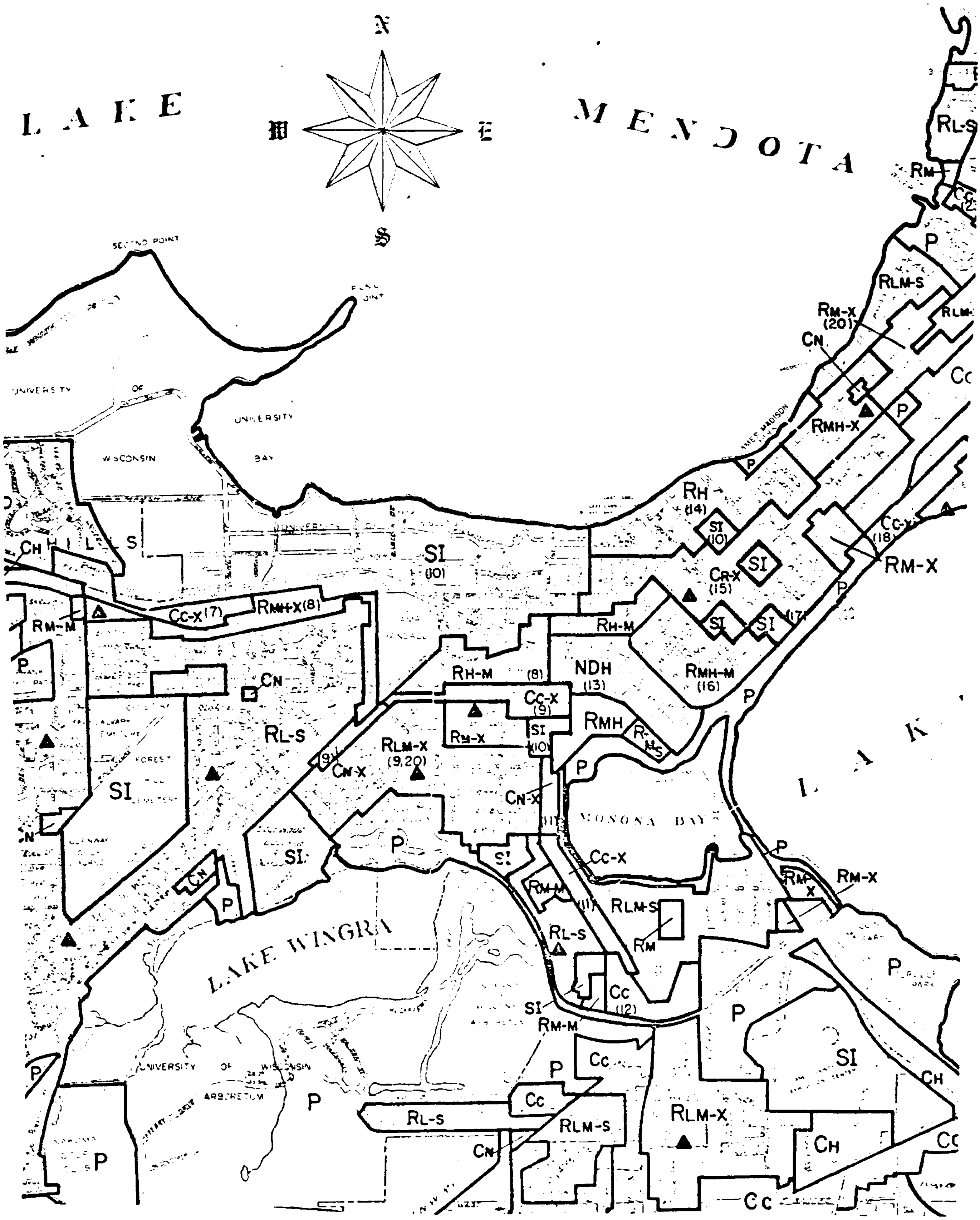
	Number Of Required Parking Spaces Per Lodging Room Or Dwelling Unit				
Zoning Districts	Lodging Room	Efficiency Unit	One Bedroom Unit	Two Bedroom Unit	Three Or More Bed-room Unit
Conservancy, Agriculture, R1, R2, R3, R4, R4A, R4L	1.00	1.00	1.25	1.25	1.25
R5, C1, C2, C3	.50	.75	1.00	1.00	1.00
R6	.33	.50	.75	1.00	1.00

GENERAL OFF-STREET PKG. REQUIREMENTS

1. Bowling Alleys: 5 spaces/lane
2. Churches: 1 per 10 seats
3. Amusement establishments: parking equal to 10% of capacity
4. Commercial office: 1 space for each 300 square feet
5. Hotels: 1 space for every 3 sleeping rooms
6. Motels: 1 space for each sleeping room
7. Retail and medical/dental offices: 1 space for each 300 square feet of gross floor area.


LAND USE TRANSITIONS March 24, 1980
Legend
Proposed Campus Development Boundary
Joint Planning Area
Potential Parking Areas
Potential Parking Areas
General UW-Madison Academic Campus Land Uses
PE & Rec. Bldg. Site
UW-Madison Utility Area
Existing & Potential Housing Development Area
Joint Planning Area
UW-Madison Service Area
Existing & Potential Housing Development Area
Mixed Commercial & Res.

MADISON LAND USE PLAN - MAY 1980



MADISON LAND USE PLAN - MAY '80

LEGEND

RESIDENTIAL DISTRICTS

RL LOW DENSITY (less than 8 units/acre)
RLM LOW-MEDIUM DENSITY (8-15 units/acre)
RM MEDIUM DENSITY (16-25 units/acre)
RMH MEDIUM-HIGH DENSITY (26-40 units/acre)
RH HIGH DENSITY (41-60 units/acre)

-S SINGLE-UNIT DISTRICT
-X MIXED HOUSING TYPES DISTRICT
-M MULTI-UNIT HOUSING DISTRICT

In addition, the residential districts are labeled with a suffix letter which indicates the recommended mixture of housing types.

ND **NEIGHBORHOOD DESIGN DISTRICTS**

density suffixes may be used with the neighborhood design districts.

COMMERCIAL DISTRICTS

CN NEIGHBORHOOD COMMERCIAL
CC COMMUNITY COMMERCIAL
CR REGIONAL COMMERCIAL
CH HIGHWAY COMMERCIAL
CC-X MIXED-USE DISTRICT (suffix "x")

I **INDUSTRIAL DISTRICTS**

SI **SPECIAL INSTITUTIONAL DISTRICTS**

P **PARKS, RECREATION, OPEN SPACE, CONSERVANCY**

OTHER SYMBOLS USED ON MAPS

— — — URBAN SERVICE LINE
▲ OTHER PARKS AND RECREATION FACILITIES

LAND USE PLAN for MADISON, WISCONSIN

Major Assumptions and Recommendations

ASSUMPTIONS

1. Energy costs will continue to increase.
2. Increased cost of construction will lead people to consider rehabilitation of existing structures or building smaller new homes to meet their shelter needs.
3. People in the Madison area will become more aware and place more emphasis on modes of transportation and patterns of land use that are more energy efficient.
4. People may not have as much extra money as they do today and will look for ways to trim their housing and transportation budgets.

MAJOR RECOMMENDATIONS

1. Transportation
   a. Expand mass transit service and usage, in part by concentrating major commercial and office development in the Central Business District and developing higher residential densities close to major transit routes.
   b. Encourage a "park and ride" program to enable people to park their cars at the city's edge and take express busses to the downtown area.
   c. Develop convenience shopping and local activity centers within walking distance of people's homes.
   d. Discourage low-occupancy automobile commuter traffic in the downtown area.
   e. Divert non-local automobile traffic from residential areas.
2. Inner-city residential areas
   a. Prepare detailed neighborhood plans designed to preserve and enhance the existing neighborhood character, provide a variety of housing opportunities, create a stable investment climate, and clarify procedures for obtaining city approval for new development.
   b. Implement the neighborhood conservation program to coordinate housing and building code enforcement, rehabilitation loans and grants, and integrate transportation and land use plans.
   c. Encourage higher density residential development above retail establishments on the State Street Mall and Capitol Concourse.
   d. Encourage the reuse of underutilized railroad property for high density residential use.
   e. Encourage construction of larger dwelling units.
   f. Establish criteria to preserve environmental and historical sites, and ensure that new development is compatible with neighborhood and community objectives, and that new development adds to the visual appearance, safety, and recreational space of the neighborhood.

3. Residential areas that are being newly developed

Neighborhood development plans for undeveloped areas would insure a variety of housing types, street system which discourages non-local traffic and provides for mass transit service, the creation of a walkway and bike-path system, preservation of environmentally or historically significant sites, adequate public and private recreational space, neighborhoods would be designed so as to minimize urban sprawl, and to encourage innovative methods of treating storm water run-off, minimize the percentage of land use for streets, etc.

4. Commercial areas

a. Concentrate major commercial facilities in the Central Business District, and near the Hilldale, East Towne, and West Towne shopping centers.

b. Prohibit the development of additional ribbon-strip commercial facilities.

c. Permit single convenience shopping facilities within residential neighborhoods.

d. Continue to revitalize the Central Business District.

e. Establish standards for the size, traffic and pedestrian circulation, noise, lighting and screening of different types of commercial areas.

5. Industrial uses

a. Encourage new industries compatible with the city's environmental and economic and social objectives.

b. Support the development of industrial parks.

6. Institutional uses

a. Require major institutions to coordinate their planning with that of the city.

b. Create a new zoning classification for institutions to insure that a change of use would require city approval.

7. Solar Energy Systems

a. Encourage the use of solar energy systems.

b. Establish certain regulations which would provide for the construction of solar energy systems, including any provisions for solar access to collectors.

c. Encourage the development of land subdivisions which would provide for solar access by orienting streets in an East-West direction and the long axis of lots in a North-South direction, by establishing building setback lines, by establishing solar access easements, and by other methods insuring solar access to collectors.

B. NOTES ON THE PLAN MAP

Generally, the statement of purpose districts shown on the Plan Map support and are consistent with the objectives and policies recommended in the Plan Report. In some cases, however, the recommended statement of purpose districts shown on the Plan Map do not reflect a land use pattern consistent with the land use and development policies in the Plan Report. This occasional difference between stated land use policies and the recommendations made on the Plan Maps is primarily a consequence of the need to recognize certain established uses.

There are several sections of the city where established land uses exist that are in conflict with many of the recommended land use policies, including large apartment complexes located far from either activity centers or transit routes, office buildings located in the center of residential areas, large low-density residential neighborhoods with virtually no multi-unit or higher density housing opportunities available, and industrial uses right next to homes. There are also vacant lands which, because of the pattern established by prior development, can only reasonably be used for activities which ideally ought to occur some place else. And there are occasional parcels of land so poorly located that they are not really good locations for urban use.

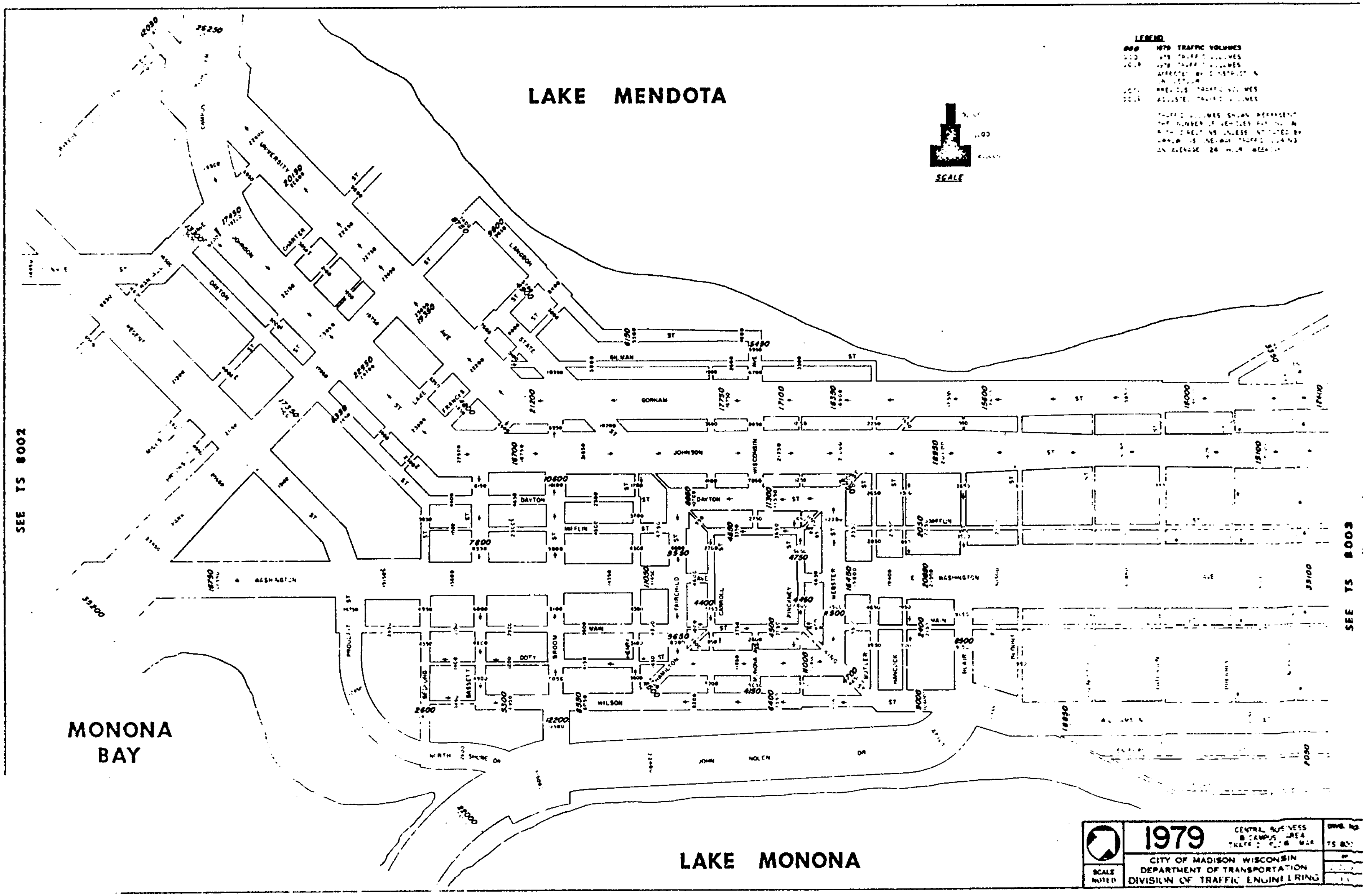
If the Land Use Plan is to be a useful guide to daily decision-making rather than idealized picture of "what might have been," the specific land use policies recommended for each geographic area should have at least some possibility of being implemented. Therefore, the recommended land uses shown on the Plan Map indicate a change in use only if there is a reasonable possibility of the change occurring during the planning period.

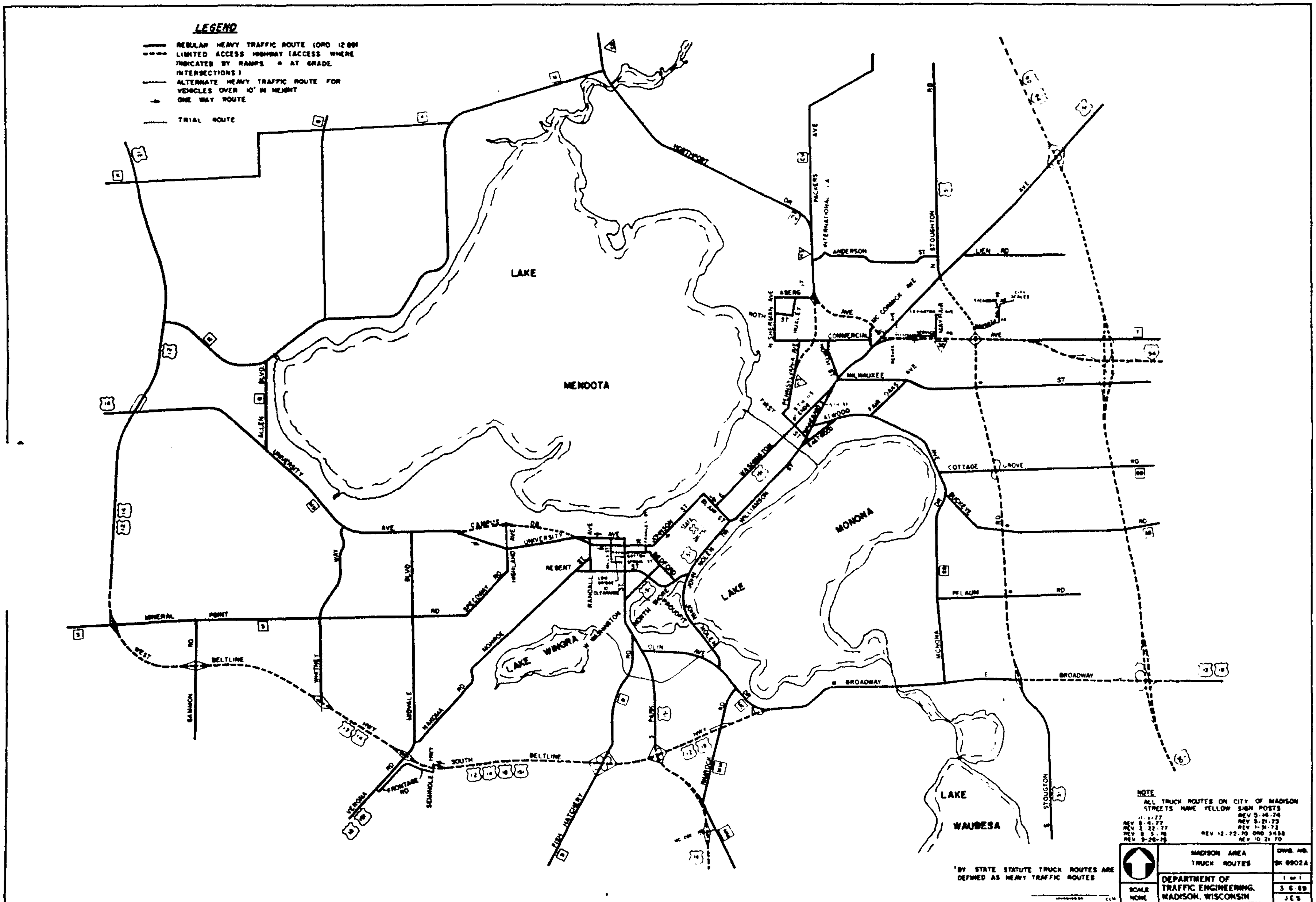
Additional comments on particular recommendations are contained in the following notes, which are keyed to the numbers in parenthesis on the maps.

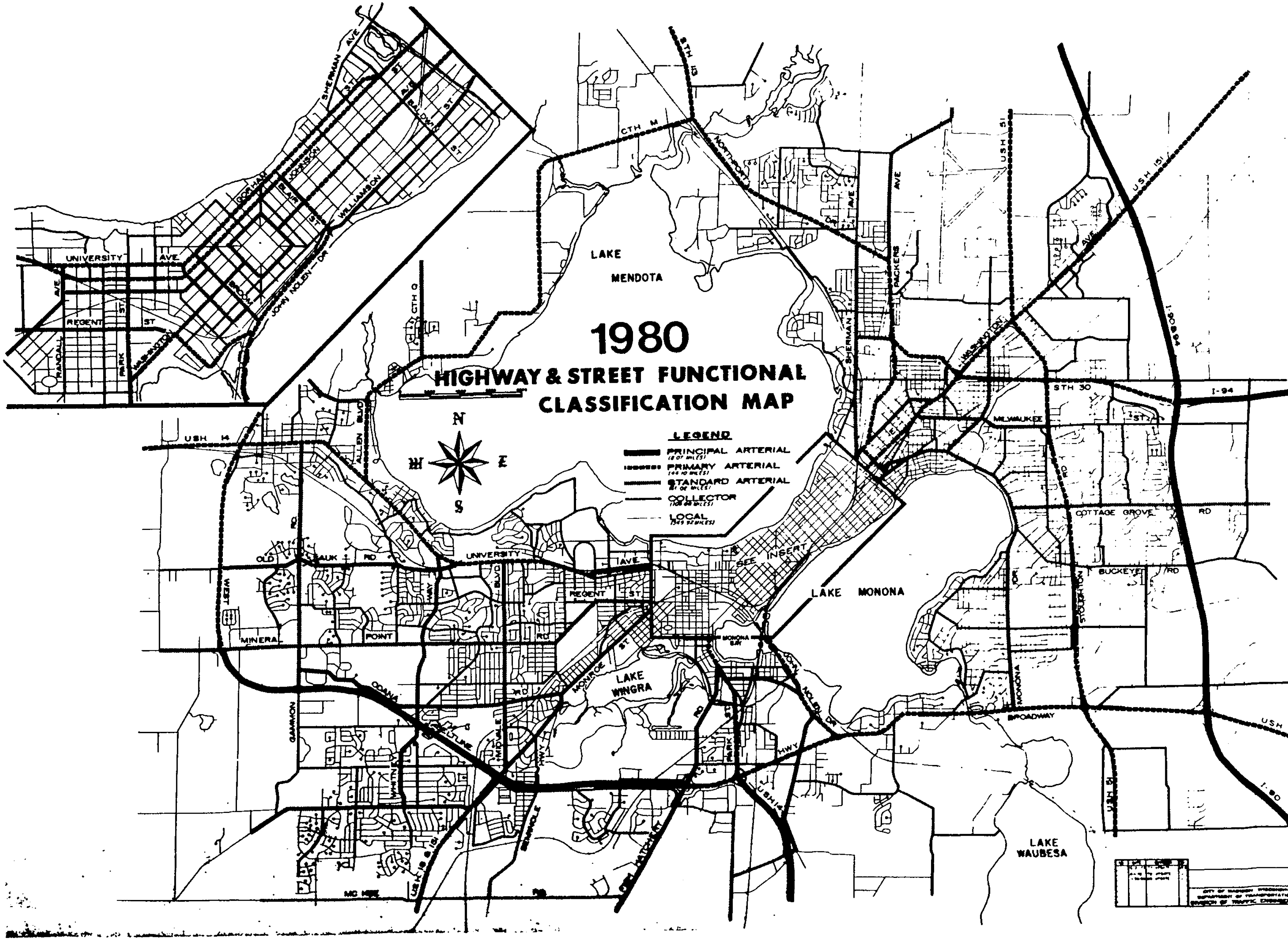
9. It is recommended that intensive commercial and high density residential uses be developed along Regent Street, and that commercial ground floor uses have residences built above them on Regent and Monroe Streets. This recommendation, coupled with the higher densities proposed in notes 8 and 13, should reduce the pressure for new higher residential density development in the Regent, Monroe and Vilas Park neighborhoods.

e. Mixed-Use District

This designation (indicated with a suffix "x") identifies certain areas located close to relatively high density residential neighborhoods where a mixture of residential and commercial uses within one structure should be encouraged under Planned Unit Development (PUD) controls. The commercial uses and residential densities appropriate in a mixed-use district will depend upon the objectives being sought in the area and the characteristics of adjacent commercial and residential districts.


LAKE MENDOTA
LAKE MONONA
MONONA BAY
SEE TS 8002
SEE TS 8003
LEGEND
1979 TRAFFIC VOLUMES
SCALE
1979
CITY OF MADISON WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRAFFIC ENGINEERING
UNIVERSITY
JOHNSON
GORHAM
LANGDON
GILMAN
STATE
DAYTON
MIFFLIN
WASHINGTON
MAIN
DOTY
WILSON
JOHN NOLEN DR


LEGEND
REGULAR HEAVY TRAFFIC ROUTE (ORD 12 891
LIMITED ACCESS HIGHWAY (ACCESS WHERE INDICATED BY RAMPS ◆ AT GRADE INTERSECTIONS)
ALTERNATE HEAVY TRAFFIC ROUTE FOR VEHICLES OVER 10' IN HEIGHT
ONE WAY ROUTE
TRIAL ROUTE
LAKE MENDOTA
LAKE MONONA
LAKE WINGRA
LAKE WAUBESA
NORTHPORT DR
PACKERS AVE
INTERNATIONAL LA
N STOUGHTON RD
ANDERSON ST
LIEN RD
MC CORMICK AVE
ROTH ST
ABERG AVE
N SHERMAN AVE
COMMERCIAL AVE
MILWAUKEE ST
FAIR OAKS AVE
ATWOOD AVE
EAST WASHINGTON AVE
WILLIAMSON ST
COTTAGE GROVE RD
BUCKEYE RD
PFLAUM RD
MONONA DR
BROADWAY
STOUGTON RD
ALLEN BLVD
UNIVERSITY AVE
CAMPUS DR
HIGHLAND AVE
REGENT ST
JOHNSON ST
GORHAM ST
BLAIR ST
BEDFORD
RANDALL
SPEEDWAY RD
MIDVALE BLVD
WHITNEY WAY
MINERAL POINT RD
GAMMON RD
WEST BELTLINE HWY
SOUTH BELTLINE HWY
MONROE ST
NAKOMA RD
VERONA RD
FRONTAGE RD
SEMINOLE HWY
FISH HATCHERY RD
PARK ST
RIMROCK RD
JOHN NOLEN DR
OLIN AVE
NORTH SHORE
PROUDFIT ST
NOTE
ALL TRUCK ROUTES ON CITY OF MADISON STREETS HAVE YELLOW SIGN POSTS
11-1-77
REV 8-4-77
REV 2-22-77
REV 8-5-76
REV 9-26-75
REV 5-16-74
REV 8-21-73
REV 1-31-72
REV 12-22-70 ORD 3438
REV 10-21-70
*BY STATE STATUTE TRUCK ROUTES ARE DEFINED AS HEAVY TRAFFIC ROUTES
SCALE NONE
MADISON AREA TRUCK ROUTES
DEPARTMENT OF TRAFFIC ENGINEERING, MADISON, WISCONSIN
DWG. NO. SK 6902A
1 of 1
3-6-69
JES



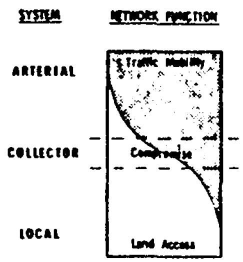
1980
HIGHWAY & STREET FUNCTIONAL
CLASSIFICATION MAP
LEGEND
PRINCIPAL ARTERIAL
PRIMARY ARTERIAL
STANDARD ARTERIAL
COLLECTOR
LOCAL
N
S
E
W
LAKE
MENDOTA
LAKE MONONA
LAKE
WINGRA
LAKE
WAUBESA
SEE INSERT
UNIVERSITY
AVE
REGENT
ST
SHERMAN AVE
GORHAN
JOHNSON
BLAIR
ST
WILLIAMSON
JOHN NOLEN DR
BALDWIN
WASHINGTON
RANDALL
PARK
USH 14
CTH M
STH 113
CTH Q
NORTHPORT DR
PACKERS AVE
USH 51
USH 151
I-90&94
STH 30
I-94
MILWAUKEE
ST
COTTAGE GROVE
RD
BUCKEYE
RD
STOUGHTON
RD
MONONA
BROADWAY
USH 18
I-90
WEST
MINERAL
POINT
RD
OLD SAUK RD
ALLEN BLVD
GAMMON
WHITNEY
MIDVALE
BLVD
SEMINOLE
HWY
MONROE
ST
PARK
ST
JOHN NOLEN DR
MONONA BAY
USH 14
FISH HATCHERY
HWY
USH 12 & 18
MC KEE
RD

Functional Classification

Functional classification is the process by which street and roadways are grouped into classes according to the character of service they are intended to provide, ranging from a high degree of travel mobility (arterials) to land access functions (local roads). Expressed another way, the basic principle of functional classification is that streets and roadways have two prime purposes: (1) to move vehicles and (2) to serve access to adjacent land. The Highway Functional Classification System serves as a framework for planning land uses which are compatible with certain highway classes.

The movement of vehicles for the mobility function is accomplished by those streets commonly classified as arterials. The land access function is performed by those streets commonly referred to as locals. A compromise function is carried out by a third classification of streets--collectors: streets which serve the conflicting demands of both local and through traffic since they principally provide the connection between the other classifications. (These three uses of highways are from the basic classification scheme as most widely accepted by transportation planners--Figure 1.)

Figure 1



Another measure used in determining the functional classification of the highway system is the level of service it provides. The level of service describes the speed and other highway operating characteristics which a given volume of traffic can be accommodated on a highway facility or system. The level of service increases in proportion to increases in safe operating speeds and other related operating characteristics, e.g., the amount of access control. Because the level of service defines the degree of mobility, it ranges from a high level to a low level between the arterial and local street systems. The location and level of service of each facility as part of a functional system must be consistent with the other parts of that system. Similarly, the characteristics of each system as part of the total network will affect the spacing and level of service of all other systems.

Arterials

The traffic mobility highways classified as arterials are those which provide rapid movement of
concentrated volumes of traffic over
relatively long distances.

Arterials are in general those streets which provide the more direct and unrestricted routing between large activity centers. Since arterials provide for movement between rather than within activity areas, they should be located in widely spaced corridors and in areas of concentrated travel desires. arterials should have high capacity design, access control commensurate with traffic volume or operational requirements and directness in continuity of routing. Since such routes can be expected to carry an ever-increasing proportion of long distance travel, they should be given primary concern in any highway planning effort and provision should be made for both protection and expansion of their capacities to move traffic rapidly and safely.

Arterials have been subclassified into the following three categories based on the size of or the amount of activity in the area which they serve:

Principal Arterial--Serves the major intra-metropolitan corridors connecting major communities within an urbanized area and provides the highest level of urban mobility within a continuous system under a high degree of access control.

Primary Arterial--Serves inter-community trips within the urban area and provides a high level of urban mobility with little variation in operating conditions forming a continuous system within the urban area.

Standard Arterial--Serves long trips within an urban area, provides good mobility and is continuous when combined with the principal and primary system.

Collectors

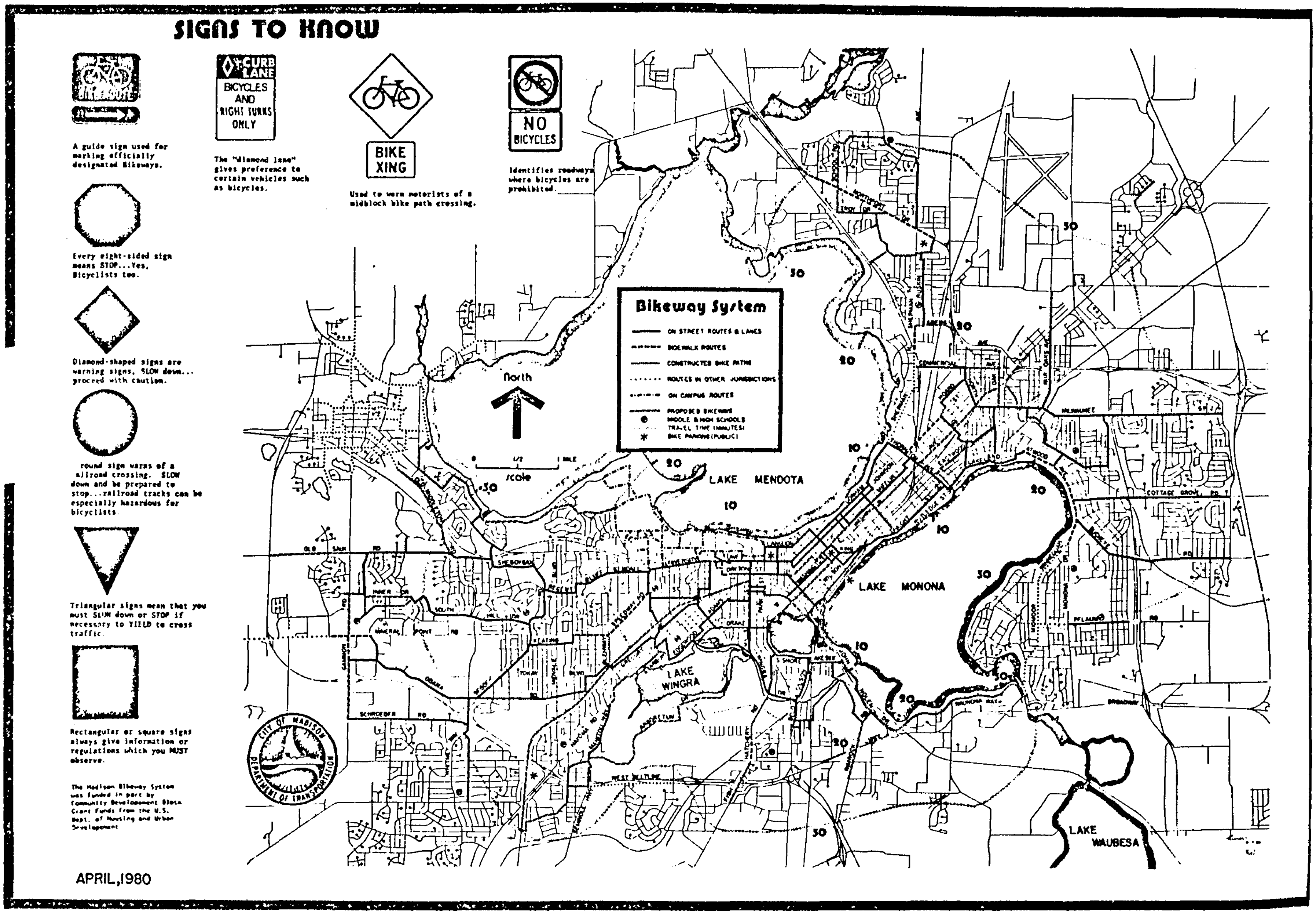
Collectors are dual purpose highways which are subclassified into two groups:

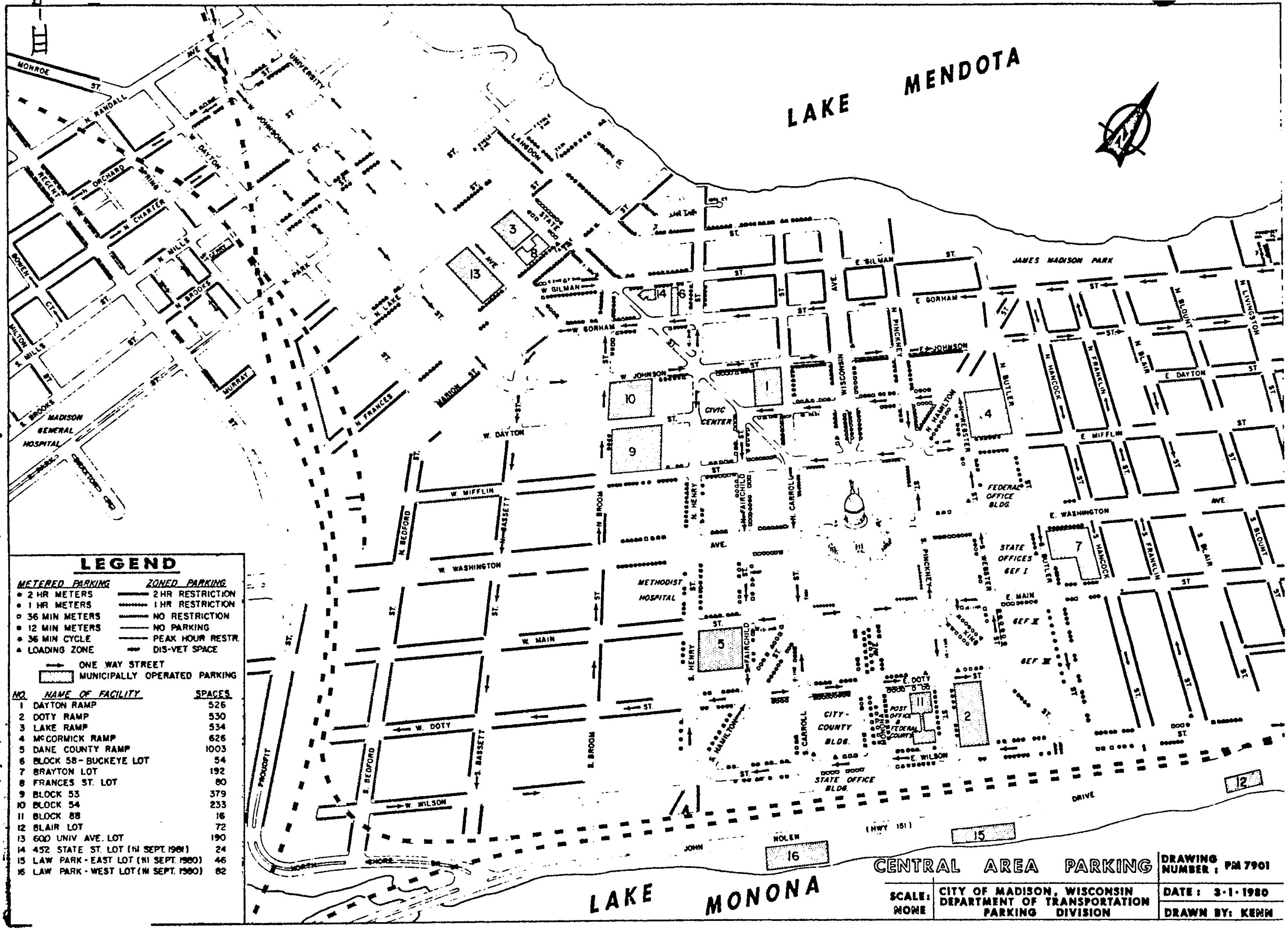
Connector--Serves intermediate to long trips within an urban area, providing service to traffic generators which for some reason are not adequately served by an arterial and as a semi-arterial provides fair mobility with considerable variations in the level of service.

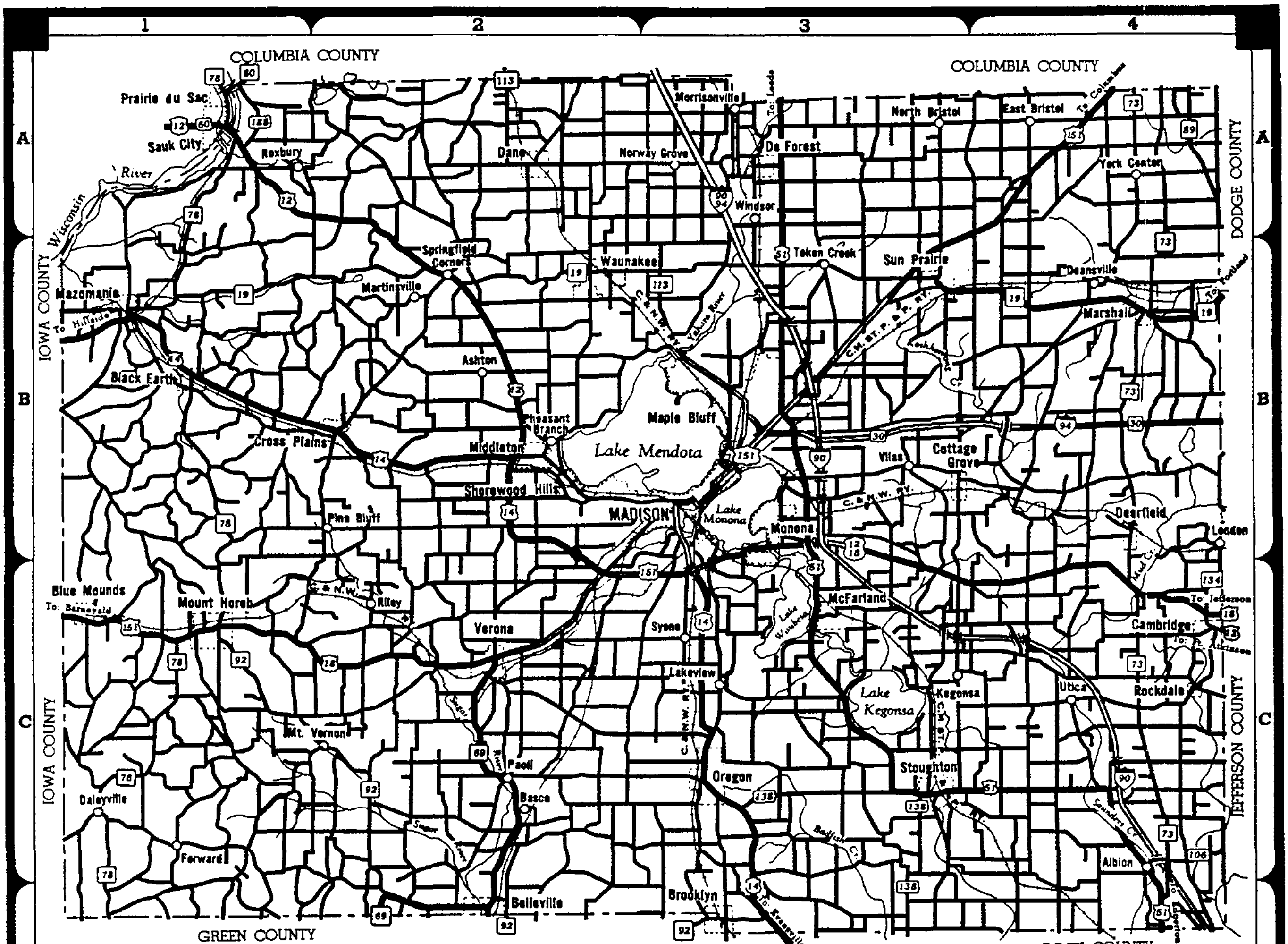
Distributor--Collects and distributes traffic to and from local streets and adjacent lands within an urban neighborhood area and forms a generally continuous pattern when combined with arterial and collector systems while providing low level mobility for medium length trips.

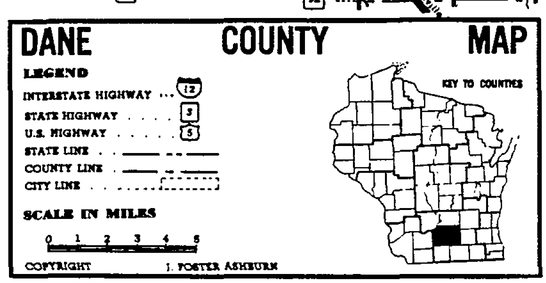
Locals

The local or land service streets are the most easily classified. These streets are designed for low speeds and volumes and are to provide access from low generation land activities to the collector and arterial system.


SIGNS TO KNOW
CURB LANE
BICYCLES AND RIGHT TURNS ONLY
BIKE XING
NO BICYCLES
A guide sign used for marking officially designated Bikeways.
The "diamond lane" gives preference to certain vehicles such as bicycles.
Used to warn motorists of a midblock bike path crossing.
Identifies roadways where bicycles are prohibited.
Every eight-sided sign means STOP...Yes, Bicyclists too.
Diamond-shaped signs are warning signs. SLOW down... proceed with caution.
round sign warns of a ailroad crossing. SLOW down and be prepared to stop...railroad tracks can be especially hazardous for bicyclists.
Triangular signs mean that you must SLOW down or STOP if necessary to YIELD to cross traffic.
Rectangular or square signs always give information or regulations which you MUST observe.
The Madison Bikeway System was funded in part by Community Development Block Grant Funds from the U.S. Dept. of Housing and Urban Development
Bikeway System
ON STREET ROUTES & LANES
SIDEWALK ROUTES
CONSTRUCTED BIKE PATHS
ROUTES IN OTHER JURISDICTIONS
ON CAMPUS ROUTES
PROPOSED BIKEWAYS
MIDDLE & HIGH SCHOOLS
TRAVEL TIME (MINUTES)
BIKE PARKING (PUBLIC)
North
0
1/2
1 MILE
scale
LAKE MENDOTA
LAKE MONONA
LAKE WINGRA
LAKE WAUBESA
CITY OF MADISON
DEPARTMENT OF TRANSPORTATION
APRIL, 1980

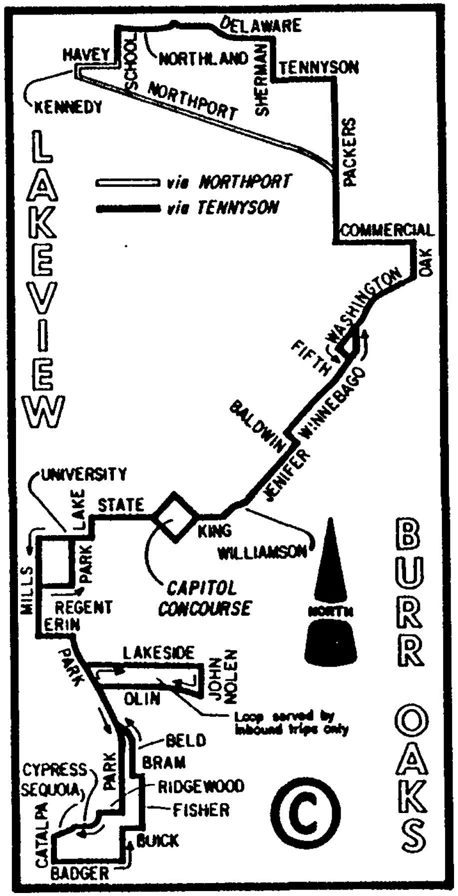

LAKE MENDOTA
LAKE MONONA
JAMES MADISON PARK
MADISON GENERAL HOSPITAL
METHODIST HOSPITAL
CIVIC CENTER
FEDERAL OFFICE BLDG.
STATE OFFICES GEF I
GEF II
GEF III
CITY-COUNTY BLDG.
STATE OFFICE BLDG.
POST OFFICE & FEDERAL COURTS
JOHN NOLEN DRIVE
(HWY 151)
LEGEND
METERED PARKING
• 2 HR METERS
• 1 HR METERS
○ 36 MIN METERS
▪ 12 MIN METERS
✱ 36 MIN CYCLE
▲ LOADING ZONE
ZONED PARKING
2 HR RESTRICTION
1 HR RESTRICTION
NO RESTRICTION
NO PARKING
PEAK HOUR RESTR.
DIS-VET SPACE
ONE WAY STREET
MUNICIPALLY OPERATED PARKING
NO. NAME OF FACILITY SPACES
1 DAYTON RAMP 526
2 DOTY RAMP 530
3 LAKE RAMP 534
4 McCORMICK RAMP 626
5 DANE COUNTY RAMP 1003
6 BLOCK 58 - BUCKEYE LOT 54
7 BRAYTON LOT 192
8 FRANCES ST. LOT 80
9 BLOCK 53 379
10 BLOCK 54 233
11 BLOCK 88 16
12 BLAIR LOT 72
13 600 UNIV AVE. LOT 190
14 452 STATE ST. LOT (N1 SEPT. 1981) 24
15 LAW PARK - EAST LOT (N1 SEPT. 1980) 46
16 LAW PARK - WEST LOT (N1 SEPT. 1980) 82
CENTRAL AREA PARKING
DRAWING NUMBER: PM 7901
SCALE: NONE
CITY OF MADISON, WISCONSIN
DEPARTMENT OF TRANSPORTATION
PARKING DIVISION
DATE: 3-1-1980
DRAWN BY: KENN



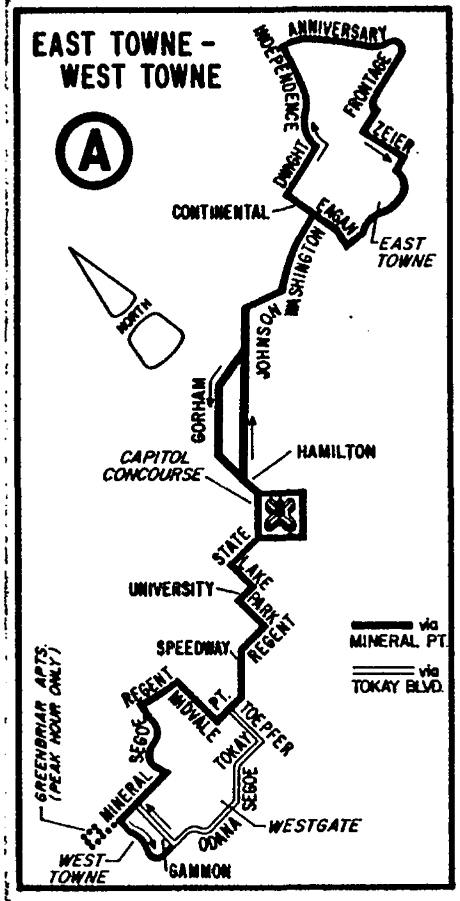


Albion......... C-4
Ashton......... B-2
Basco.......... C-2
Belleville...... D-2
Black Earth.... B-1
Blue Mounds.... C-1
Brooklyn....... D-3
Cambridge......C-4
Cottage Grove...B-3
Cross Plains....B-2
Daleyville...... C-1
Dane...........A-2
Deansville.......B-4
Deerfield.......B-4
De Forrest..... A-3
East Bristol.... A-4
Forward........C-1
Kegonsa........C-3
Lakeview.......C-3
London.........B-4
McFarland......C-3
Madison......B-2, 3
Maple Bluff..... B-3
Marshall....... B-4
Martinsville.... B-2
Mazomanie..... B-1
Middleton...... B-2
Monona.........B-3
Morrisonville...A-3
Mount Horeb....C-1
Mount Vernon...C-2
North Bristol... A-3
Norway Grove...A-3
Oregon.........C-3
Paoli...........C-2
Pheasant Branch B-2
Pine Bluff...... B-2
Prairie du Sac.. A-1
Riley...........C-2
Rockdale........C-4
Roxbury.........A-1
Sauk City.......A-1
Shorewood Hills B-2
Springfield Corners B-2
Stoughton.......C-3
Sun Prairie.....B-3
Token Creek....B-3
Utica...........C-4
Verona.........C-2
Vilas...........B-3
Waunakee.......B-2
Windsor........A-3
York Center.... A-4

LAKEVIEW
BURR OAKS



EAST TOWNE
WEST TOWNE



BUS 550 WORKBOOK:

IV. MARKET ATTRIBUTES

IV. Market Attributes

The initial analysis of the physical attributes of the site included a discussion of the linkages, or connections between the site and other establishments in its urban environment. This discussion was primarily an inventory of the connectors, and did not establish the characteristics of the people with whom the site is linked.

These people, in most instances, will form the market for whatever is developed on the site. This segment of the report will be devoted to understanding the characteristics of the people who make up the market for uses developed on our site. We will look first at the delineation of trade areas, then at developing profiles of the population in each area, and finally analyze the supply and nature of competing uses. Our conclusions regarding the market for and marketability of a given use will be the result of this analytical procedure.

A. Alternative Uses

Based on the physical attributes of the site, and a preliminary analysis of the linkages between our site, we will narrow the universe of alternative uses still being considered to the following four:

a. residential

b. wheels

c. eating/drinking

d. Other: your choice of another alternative.

In your feasibility report, select <u>three</u> of the four uses we have identified and carry through the market attribute analysis as we outline it here.

B. Trade Area Delineation

On page A-1 of the appendix to this workbook, we have provided a map which delineates two different trade areas of tributary areas that <u>might</u> be the source of the people who form the market for a use on our site. These two trade areas are:

<u>The 3-Tract Area</u>: An area consisting of three census tracts centered around our site. These tracts are within a short drive of our site.

<u>The Arterial Trade Area</u>: An area consisting of those census tracts assumed to be the source of most automobile traffic past the site. The arterial trade area is distinct from the 3-tract area.

To a certain extent, these areas have been chosen arbitrarily, within the limitations imposed by the availability and form of the census information. As a result, each of the different alternative uses that you examine may require a different combination of the trade areas that we have defined. As an example, we might expect that a gasoline station would draw most heavily on the arterial trade area, while a fast food restaurant without parking might rely most heavily upon the 3-tract area and its immediate neighborhood.

As part of your analysis, you should identify the trade areas you use, and describe how you selected those which apply to each use.

C. Population Profiles

Having delineated trade areas, and identified which trade areas apply to which potential uses and <u>why</u>, we move on to an analysis of the characteristics of the people who live and work in those trade areas. Our objective is to develop a profile of each readily identifiable sub-group that exists in the trade area. Our source of information will be primarily the census data found in the appendix.

A profile of a group of people characterizes them according to some or all of the following:

a. demographic characteristics: age, sex, family status, marital status

b. income characteristics: income levels--per capital, per family, per unrelated individual

c. housing characteristics: renter, owner, type of unit, rent, age of unit, size of unit

d. employment/education characteristics: education level, student status, employment status

e. transportation characteristics: trip to work by car, foot, etc.

Careful study of the census information should enable you to identify sub-groups within the trade areas. You might begin by finding large demographic groups, such as "single people under 25", then further characterizing them according to income levels, housing characteristics and the like.

Try to describe the "typical resident" of the trade area. Note that where more than one clearly identifiable sub-group exists, you will have more than one such "typical resident".

The population profile permits us to make some assumptions about the lifestyle and spending habits of the people in the trade area. Based on your own experience, you should make some predictions about the spending habits of at least one sub-group--those students living in the 3-tract area.

To summarize: The population profile segment of your report should include descriptions of the typical residents of the trade areas you developed for each alternative use. It should indicate whether there is a match between the profiles of the people in the trade area and a profile of a typical customer for that alternative use.

D. Supply/Demand/Competition Analysis

The objective of this portion of the market attribute analysis is to determine if there are enough people willing to spend enough money at our site to support any of the uses we are still considering for the site. We will carry out this analysis according to the simplified methodology outlined below. Your report should include this analysis for each of the three uses (and their respective trade areas) that you are contemplating.

1. Estimate Spendable Income

   Using per capital income figures, population estimates and a savings rate, estimate spendable income in the three-tract and arterial trade areas.

   Spendable income estimates have been prepared for you, and are presented on page A-13 in the attached appendix.

2. Estimate Available Income by Catagory

   Once we know aggregate disposable income, we can estimate how that income will be spent. For retail goods, estimates of the "Percentage of Disposable Income Spent on Retail Goods" have been developed. Applying these estimates to the spendable income estimated above produces the results shown on page A-14 in the appendix.

   The columns titled "estimated Average Retail Revenue in Millions" show how much money is available to be spent on "Food Stores" and other types of retail uses in each of the trade areas.

   Similar figures can be obtained giving the approximate portion of income that will be spent on housing. These are presented as "Annual Budgets" in table A-20 in the appendix.

3. Adjust Available Income

a. Retail Uses

The figures used to estimate available income by retail category above were for Madison as a whole. It is quite possible that the students in our 3-tract trade area will spend their disposable incomes (modest as they are) differently than will the "average resident" of the city of Madison.

We would therefore like to adjust the percentage of disposable income spent on retail goods to reflect our subjective views of the differences between our potential market and the city as a whole. These adjustments may be subjective, but they must also be reasonable. They should be justified by the information about characteristics and lifestyle that you developed in the population profile segment of the report.

We are outlining a method here that you might use to make your adjustments. Look at it critically, and develop your own adjustments! Those selected here are just an example!

CITY TO MARKET SALES ADJUSTMENTS

Item	Rate	Adjustment	Adjusted Rate	Revised Available Revenue 3-tract	Arterial (Repeated)
Total retail	65.4%	0	65.4	$63.5M	$ 75.4M
Food	12.8	-	9.6	9.05	14.7
Gen. Merch.	14.8	+	16.7	16.2	17.1
Furn. & Appl.	2.4	--	1.2	1.2	2.8
Auto	10.4	--	5.2	5.0	12.0
Drug	2.0	+	3.9	3.8	2.3
Bldg. Main. & Hard.	2.5	--	1.25	1.21	2.9
Gas	4.3	--	2.15	2.1	4.95
Apparel	3.2	++	6.9	6.7	3.7
Dept. Stores	8.6	+	10.5	10.2	9.9
Eat & Drink	5.1	++	7.0	6.8	5.9M

We adjust all retail categories because we assume that sales lost to one category are transferred to another. We make the adjustments as follows: Identify those categories where spending is expected to be lower than for the city. Each "-" represents a 25% decrease in the "rate". Sum the decreases in percentage points as follows:

Food	3.2	(25% of 12.8%)
Furniture	1.2	
Auto	5.2	
Bldg.	1.25	
Gas	2.15	
Total	13.00	

(You should be able to interpret what these adjustments mean in terms of the population being discussed.)

These decreases will be allocated to the categories assumed to have higher levels of retail spending by dividing 13.0 by 7 = 1.86. Each "+" will then mean an upward adjustment of 1.86 percentage points (this method is used because a given % decrease in a large-dollar category would translate into a larger % increase in a small-dollar category, and vice versa).

b. Residential Uses

Similar adjustments should be made for multifamily housing. The Table on page A-20 shows several different spending patterns. These patterns vary according to family status and income level. From this table, you may obtain an estimate of the percentage of income spent on housing, which you will probably adjust to reflect the characteristics of the people in your trade areas. Any such adjustments will necessarily be subjective.

Base on this adjusted "percentage of income spent on housing", and the per capita and family income figures developed earlier, you should develop an estimate of how much monthly rent the "typical" resident would be able to pay. How does this figure compare with rents currently charged by existing units?

4. Revenue Lost to Competition

a. Retail Uses

Whatever use is developed on our site will not be able to capture more than some relatively small fraction of the revenue available trade areas. How much it will capture is in part a function of how many other similar stores are competing for those dollars. At this point in your analysis, you should inventory the competition within your trade areas.

The Yellow Pages of the Madison Telephone Book is one good source for a competition inventory. The Madison City Directory, found in the reference collections of several libraries in Madison, is another source you might consult.

Our competition analysis will operate on the assumption that the competing stores are surviving, and that they have the same characteristics of size and sales volume as those stores shown in table A-15 in the appendix.

Since we know how many competing stores are in our trade area, we can use the revenue requirements shown in table A-16 to estimate how much of the available revenue would be lost to these competing stores.

As an example: If you were considering a liquor store for your site, and you identified 3 competing liquor stores in your trade area, you would be able to estimate that 3 x $401,899 = $1,205,697 was being spent on liquor at these stores.

b. Residential Uses

You should be able to evaluate revenue lost to competition in a similar fashion for residential users. Beginning with an inventory of existing competing residential units, and estimates of average or typical rents in your area, you should be able to estimate how much money is being spent for housing in those units.

An analysis of competing residential uses can provide additional insight into the supply/demand relationships in the residentail market. The level of vacancy in the existing units gives some indication of the strength of demand for the existing supply of housing: a high vacancy rate suggests that the supply of housing exceeds the demand for it.

5. Go No-Go Decision

A decision as to whether or not there is a market for a given use can now be made. By subtracting the amount of revenue lost to competition from the total amount of revenue available to be spent on a specific type of use, you can determine if there is enough revenue remaining to support the use you are testing.

The revenue available for the store or apartments on your site must at least equal either the required revenue for retail stores shown on the table on page A-16, or the typical apartment rent prevailing in your area.

If the required revenue is there, you have reached a "GO" condition. If the required revenue is lacking, you must conclude that your project is a "NO-GO" or justify it by other means.

6. Checking your Conclusions

You might check the results of your retail analysis by estimating how many people, spending how much money, will have to walk through the doors of your establishment on any given day in order for it to realize the revenue that you are projecting.

If you projected a yearly revenue of $275,000 for a camera shop that would be open 6 days a week, you are estimating daily sales of $881. If a "typical" camera sale totals $250, you are estimating a little more than 3 such sales every day, all year long. Does that seem to be a reasonable assumption? The response will depend upon the nature of the trade areas, the potential customers and the competition.

E. Merchandising Guidelines

The market attribute analysis should conclude with a discussion of the competitive standard. Those features of competing sites and uses that must be included on our site if it is developed in a given use. You should also speculate on what features might provide your site with a competitive edge, enabling it to capture a larger share of the available revenue.

F. Summary

To review, your Market Attribute Report should cover at least the following points:

1. Description of 3 alternative uses, and why they remain under consideration at the start of the analysis.

2. Delineation of trade areas for each alternative use.

3. Profiles of the population in the trade areas, with descriptions of, broad population characteristics, typical residents and some assumptions regarding the lifestyle and purchasing patterns of one major sub-group--the student population.

4. Supply/Demand & Competition Analyses, as outlined in the previous section, for each of the three alternative uses.

5. Summary and Conclusions, with specific reference to merchandising techniques suggested by the market attributes.

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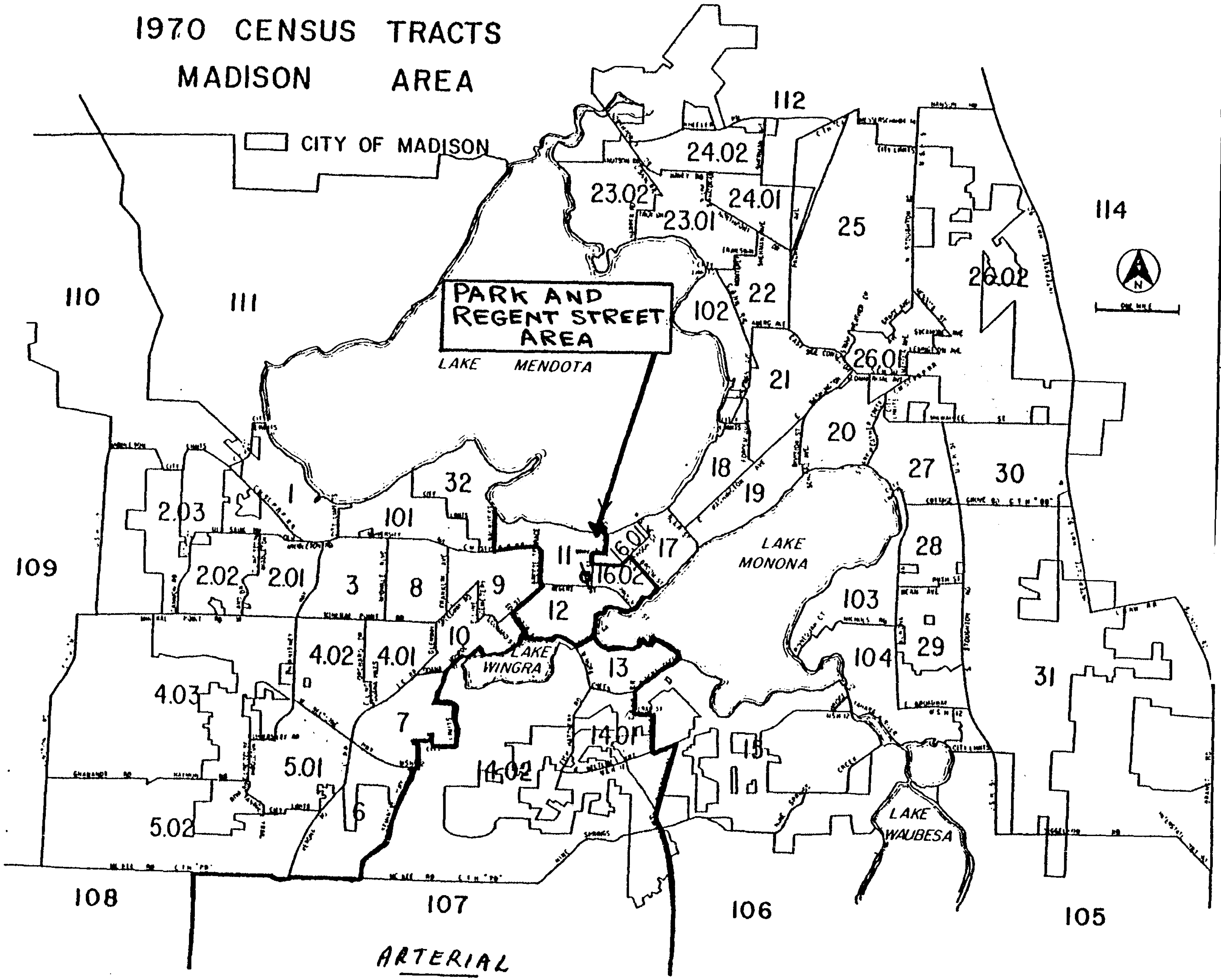
1970 CENSUS TRACTS
MADISON AREA



IV
A-1

Variables	City of Madison	Market Area	Census Tract 900	1100	1200	ARTERIAL

Table 5

HOUSING CHARACTERISTICS

Aggregate Gross Rent (5,393,1)(19,5873,14)

Variables	City of Madison	Market Area	900	1100	1200	ARTERIAL
Total Rent	4,277,430	1,269,415	213,969	132,124	211,668	711,654
Total Renter Occupied Units	28,004	7,880	1,353	1,014	1,352	4,161
Average Monthly Rent	153	161	158	130	157	171

Table 7

Total All Units of Housing (7,473,1)

Variables	City of Madison	Market Area	900	1100	1200	ARTERIAL
Total	66,604	20,265	2,882	1,132	2,314	13,937

Table 9a

Total Occupied by Unit Type (9,1153,8)

Variables	City of Madison	Market Area	900	1100	1200	ARTERIAL
Total	66430	19,725	2,827	1,076	2,276	13,546
1 unit, detached	52%	62%	54%	8%	39%	72%
1 unit, attached	-0-	0	0	0	0	0
2	9%	6	6	4	25	2
3-4	9%	9	9	11	17	7
5-9	8%	6	9	12	6	5
10-19	7%	5	5	20	8	4
20-49	6%	5	7	24	5	3
50 & over	4%	7	10	21	1	6

9

Variables	Madison Area	Total Area	1100	1200	1602	Arterial

Table 9b (9,1297,8)

Renter Occupied by Unit Type

Total	30165	3705	1029	1363	1313	3501
1 unit, detached	15%	10%	5%	14%	9%	10%
1 unit, attached	1	0	0	0	1	2
2	15	19	3	31	20	9
3-4	17	20	12	24	22	17
5-9	16	11	12	9	12	12
10-19	13	13	21	13	7	19
20-49	14	18	25	9	21	27
50 and over	10	10	22	1	9	5

Table 6

1970 Tenure Characteristics (61,5569,1) (65,5601,1) (36,9097,4)

Variable	Madison Area	Total Area				
Count of all persons	173258	19,182	6538	6451	6193	15,346
100% housing count	56858	4,936	1132	2314	1490	6,005
Owner occupied units	27094	1,101	47	913	141	2,114
Renter occupied units	28004	3,673	1014	1352	1307	3,449
Percent Renter Occupied	50.8%	74.4%	89.6%	58.4%	87.7%	57.4%

TABLE 10

YEAR MOVED INTO UNIT *

Table 10a

Total Occupied (10,1945,7)

VARIABLES	MADISON TOTAL	MARKET AREA TOTAL	1100	1200	9 1602	Arterial
Total	64264	4812	1082	2276	1454	5599
1969-1970	33%	52%	72%	37%	61%	41%
1968	12	12	13	13	10	3
1967	7	5	4	6	3	7
1965-1966	10	7	4	8	7	11
1960-1964	14	4	1	6	4	12
1950-1959	14	8	1	12	6	8
1949 & earlier	10	12	5	19	8	8

*Assume that the data shown above represents the years 1980-1959 and earlier - that is, add 10 years to each Variables line which will effectively make this table current.

Table 10b

Owner Occupied (10,2001,7)

VARIABLES	MADISON TOTAL	MARKET AREA TOTAL	1100	1200	1602 9	Arterial
Total	32893	1103	49	913	141	2106
1969-1970	10%	3%	0%	4%	0%	12%
1968	9%	7	0	8	0	8
1967	7%	4	0	4	0	6
1965-1966	13%	5	0	6	0	16
1960-1964	20%	10	14	11	0	19
1950-1959	24%	22	0	22	29	19
1949 & earlier	17%	49	86	44	71	19

Table 10c

Renter Occupied (10,2057,7)

Total	300087	3709	1033	1363	1313	3493
1969-1970	57%	67%	76%	60%	68%	59%
1968	15%	14	14	16	11	16
1967	7%	5	4	7	3	8
1965-1966	8%	7	4	9	8	7
1960-1964	7%	3	1	3	5	7
1950-1959	4%	3	1	4	4	1
1949 & earlier	2%	1	1	2	2	1

POPULATION CHARACTERISTICS

Table 13

Total Population, All Persons

Year	Madison Total	Area Total	11.00	12.00	16.02	Arterial
1960	126,706	15,347	7528	7819	- -	4860
1964	157,844	19,599	7518	6920	5161	6044
1970	171,769	19,182	6538	6451	6193	8893
1974	168,671	18,665	5769	6386	6510	7391

Table 36

Mode of Transportation to Work (36, 3401, 9)

9

~~13.00~~ ~~14.00~~
~~14.02~~ ~~107~~

		Madison Total	Area Total	11.00	12.00	16.02	Arterial
	Total	86826	8147	2481	3010	2656	7253
1.	Private Auto, drive	58%	21%	11%	36%	15%	67%
2.	Private Auto, passenger	11%	6	4	6	7	14
3.	Bus or Street Car	8%	8	4	12	7	7
4.	Taxi Cab	-0-	1	0	1	3	1
5.	Walked only	14%	54	71	32	61	5
6.	Other means	2%	7	4	11	3	3
7.	Worked at home	2%	4	7	3	4	3

Table 19b (19,5873,15)
(Housing Variable)
Count of Renter Occupied Units by Monthly Contract Rent

VARIABLE	MADISON TOTAL	TOTAL OF MARKET AREA CENSUS TRACTS	11.00	12.00	9 16.02	~~13.00 14.0 14.02 107~~ Arterial
With Cash Rent	n= 30,983	n= 1378	n=257	n=626	n=495	n=1765
Less than $30	1%	11%	11%	11%	12%	9%
$30 - 39	2	30	39	16	41	12
$40 - 49	2	33	19	36	37	32
$50 - 59	2	2	8	1	2	8
$60 - 69	3	0	0	1	0	0
$70 - 79	4	14	12	26	1	19
$80 - 89	7	1	2	1	0	1
$90 - 99	12	0	0	0	0	1
$100 - 119	28	0	0	0	0	3
$120 - 149	26	3	0	4	3	3
$150 - 199	7	2	6	1	1	2
$200 - 249	3	1	0	2	0	0
$250 - 299	1	1	2	1	1	4
$300 or more	2	1	2	1	1	6
No Cash Rent	0	0	0	0	0	0

Table 54

Population by Labor Force Status
(54-4505-9)

Table 54a

Male

VARIABLES	CITY OF MADISON	TOTAL AREA	CENSUS TRACT 11.00	12.00	9 ~~16.02~~	13.00 14.01 14.02 107 Arterial
Total Male Population over 16	69,235	9310	3341	2672	3297	5521
Types:						
1. In Armed Forces	0%	0%	0%	0%	1%	0%
In Labor Force						
2. Employed	72%	45	34	61	42	77
3. Unemployed	2%	2	1	4	2	3
Not in Labor Force (under 65)						
4. Inmate	1%	0	0	0	0	0
5. Enrolled in School	16%	47	62	25	50	11
6. Other	3%	3	1	4	3	3
65 and Over						
7. Inmate	0%	0	0	0	0	0
8. Enrolled in School	0%	0	0	0	0	0
9. Other	5%	3	0	6	2	5

Population by Labor Force Status

Table 54b:
Female (54,4577,9)

VARIABLES		TOTAL AREA	CENSUS TRACT 11.00	12.00	~~16.02~~ 9	~~13.00 14.01 14.02 107~~ Arterial
Total Female Population over 16	77,414	8826	3149	2896	2781	5929
1. In Armed Forces	0%	0%	0%	0%	0%	0%
Civilian Labor Force						
2. Employed	51	50	47	52	51	56
3. Unemployed	1	2	2	1	3	1
Not in Labor Force						
4. Inmate	1	0	0	0	0	0
5. Enrolled in School	12	34	48	15	37	6
6. Other	26	7	1	17	4	26
65 and Over						
7. Inmate	1	0	0	0	0	1
8. Enrolled in School	0	0	0	0	0	0
9. Other	9	7	2	15	4	10

Table 67

Population by Industry

Table 67a

Total Male (67, 6761, 7)

VARIABLES	MADISON TOTAL	TOTAL AREA	CENSUS TRACT 11.00	12.00	9 16.02	13.00 14.01 14.02 107 Arterial
Total	49711	4137	1129	1623	1385	4099
1. Employee Private Co.	57%	40%	33%	50%	34%	56%
2. Employee Own Corp.	2	1	0	2	0	2
3. Fed. Gov't. Worker	4	3	0	5	4	5
4. State Gov't. Worker	25	49	62	34	56	28
5. Local Gov't. Worker	6	3	2	4	3	6
6. Self-Employed Worker	5	4	1	6	3	4
7. Unpaid Family Worker	0	0	1	0	0	0

Table 67b

Population by Industry
Total Female (67, 6873, 7)

VARIABLES	MADISON TOTAL	TOTAL AREA	CENSUS TRACT 11.00	12.00	9 ~~16.02~~	13.00 14.01 14.02 107 Arterial
Total	38998	4417	1469	1520	1428	3314
1. Employee Private Co.	56%	42%	28%	56%	42%	61%
2. Employee Own Corp.	0	0	0	0	0	0
3. Fed. Gov't. Worker	3	3	1	2	4	3
4. State Gov't. Worker	29	50	67	35	48	25
5. Local Gov't. Worker	9	4	3	4	5	9
6. Self-Employed Worker	1	1	0	2	1	2
7. Unpaid Family Worker	0	0	0	1	0	0

TOTAL MARKET AREAS

Table 76a

Family Income (75,7665,15)

VARIABLES	MADISON TOTAL *	MARKET AREA TOTAL	11.00	12.00	~~16.02~~ 9	~~13.00 14.0~~ ~~14.02 107~~ Arterial
Total Family Population	45317	1576	159	1123	294	4051
Less Than 1,000	2%	3%	6%	3%	3%	2%
1,000 - 4,999	11	25	31	24	32	13
5,000 - 9,999	27	29	40	28	33	34
10,000 - 14,999	31	23	11	25	20	32
15,000 - 24,999	22	14	8	16	9	15
25,000 - 49,999	6	3	3	4	0	3
50,000 and over	1	1	0	1	3	0

Table 76b

Income of Unrelated Individuals (76,7785,15)

VARIABLES	MADISON TOTAL	MARKET AREA TOTAL	11.00	12.00	~~16.02~~ 9	Arterial
Total Unrelated Individual Population	42443	14,528	6146	2893	5489	2588
Less than 1,000	27%	37%	38%	26%	41%	9%
1,000 - 4,999	53	56	58	58	52	52
5,000 - 9,999	15	5	3	11	6	30
10,000 - 14,999	3	1	0	2	1	7
15,000 - 24,999	1	0	0	2	0	1
25,000 - 49,999	0	0	0	0	0	1
50,000 and over	0	0	0	0	0	0

*Number of families

Table 110

CROSS TABULATIONS, INCOME AND AGE

ALL TRACTS COMBINED
HOUSING TAPE

INCOME	TOTAL FAMILY & INDIV.	2425,8 HUSBAND--WIFE FAMILY AGE 00-29	2489,8 30-44	2553,8 45-64	2617,8 65+	2681,8 OTHER FAMILY	2745,8 PRIMARY INDIVIDUAL
LT $2,000		6%	4%	2%	8%	8%	44%
2,000-2,999		14	0	3	5	6	18
3,000-4,999		17	7	6	29	25	20
5,000-6,999		17	7	3	18	16	9
7,000-9,999		26	7	6	19	22	6
10,000-14,999		17	41	37	8	13	3
15,000-24,999		3	29	30	12	6	1
25,000 +		0	4	14	2	4	0
Totals		510	228	322	259	279	3214

Table 142

CROSS TABULATIONS, INCOME AND TENURE

ALL TRACTS COMBINED
HOUSING TAPE

INCOME	4265,8 TOTAL OCCUPIED	4393,8 OWNER OCCUPIED	4521,8 RENTER OCCUPIED
L.T. $2,000	9%	4%	12%
2,000-2,999	5	2	7
3,000-4,999	12	8	14
5,000-6,999	14	9	17
7,000-9,999	21	18	22
10,000-14,999	25	34	20
15,000-24,999	12	18	8
25,000 +	3	6	1
Totals	5539	2075	3464

Estimate Spendable Income for Each Trade Area

Use per capita income levels by census tract (page A-17 following) to create an estimate of total income (population estimates from page A-17).

Three Tract Income Calculation: 1970-1980 estimated income growth factor = 2.5*

Tract	1970 Income per Capita		1980 Income per Capita		Estimated 1980 Population		Estimated Total Revenue
9	$ 4,796	x 2.5 =	$ 11,990	X	7,500	=	89.9 M
11	2,878		7,195		5,769	=	41.5 M
12	3,477		8,693		6,386	=	55.5 M
					Total Personal Income	=	$186.5 M

Total Arterial Income Calculation

These calculations were done in the same fashion as above but for tracts 2.01, 2.02, 3, 4.01, 4.02, 4.03, 5.01, 5.02, 6, 7, 8, 10.

Estimated 1980 Total Income: $596.9 M

Adjustments To Income

Total income must be reduced by the level of savings to approximate spendable or disposable income. We assume a 6% savings rate.

	3-tract	Arterial
Total Income (1980)	$186.5 M	$596.9 M
Minus savings	11.2 M	35.8 M
Total Disposable Income	$175.3 M	561.1 M

*Source: Wisconsin Statistical Abstract, table H-9, September 1979 Edition (1977-80 estimated).

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SALES AND RENT STATISTICS BY RETAIL ACTIVITY

RETAIL ACTIVITY TYPE	MEDIAN SALES PER SQUARE FEET	MEDIAN GROSS LEASE AREA	MEDIAN CHARGES PER SQUARE FEET
	(1)	(2)	(4)
Art Gallery	$ 50	$ 1,119	$ 4.87
Auto-Tire, Bat. & Acc.	51	3,100	3.63
Bakeries	64	1,554	4.69
Barber Shops	37	640	4.12
Beauty Shops	48	1,200	4.16
Bicycle Shop	50	1,600	4.34
Books & Stationary	53	1,600	5.01
Bowling Lanes	20	21,799	1.68
Camera Shops	85	768	4.41
Candy Store	102	653	5.84
Card & Gift	40	1,810	4.14
Cocktail Lounge	43	1,848	4.16
Delicatessen	66	1,260	4.65
Department Store	44	13,824	1.77
Discount Store	37	7,771	1.90
Drive-In Grocery	121	2,408	4.19
Drug Store	78	4,900	3.05
Dry Cleaning	33	1,600	3.81
Florist & Garden	18	1,100	5.00
Furniture	43	3,200	3.25
Hardware	35	6,000	2.83
Ice Cream	89	1,160	4.98
Jewelry	61	970	4.67
Laundry	17	1,500	3.57
Liquor Store	131	2,300	4.49
Apparel Store	85	1,536	5.53
Shoe Store	48	2,400	3.20
Movie Theatres	34	9,598	4.06
Radio/TV/HIFI	98	2,000	4.04
Paint & Wallpaper	32	2,172	4.12
Record Shops	71	1,500	5.24
Restaurant With Liquor	76	3,600	5.27
Sporting Goods	66	1,800	5.15
Supermarket	179	22,648	2.62
Fast Food	96	1,410	6.17

SOURCE: Dollars and Cents of Shopping Centers, The Urban Land Institute 1978 (1977 data for neighborhood shopping centers).

REQUIRED GROSS REVENUE ESTIMATES

RETAIL ACTIVITY TYPE	1977 REVENUE ESTIMATE (1)x(2)	x CPI* = ADJUST	1980 REVENUE ESTIMATE
Art Gallery	$ 55,950		$ 74,631
Auto-Tire, Batt. & Acc.	158,100		210,887
Bakeries	99,456		132,663
Barber Shops	23,680		31,586
Beauty Shop	57,600		76,832
Bicycle Shop	80,000		106,711
Books & Stationary	84,800		113,113
Bowling Lanes	435,980		581,547
Camera Shop	65,280		87,076
Candy Store	66,606		88,845
Card & Gift	72,400		96,573
Cocktail Lounge	79,464		105,996
Delicatessen	83,160		110,926
Department Store	608,256		811,343
Discount Store	287,527		383,528
Drive-In Grocery	291,368		388,651
Drug Store	382,200		509,811
Dry Cleaning	52,800		70,429
Florist & Garden	19,800		26,411
Furniture	137,600		183,542
Hardware	210,000		280,116
Ice Cream	103,240		137,710
Jewelry	59,170		78,926
Laundry	25,500		34,014
Liquor Store	301,300		401,899
Apparel Store	130,560		174,152
Shoe Store	115,200		153,663
Movie Theatres	326,332		435,289
Radio/TV/HIFI	196,000		261,441
Paint & Wallpaper	69,504		92,710
Record Shop	106,500		142,059
Restaurant with Liquor	273,600		364,951
Sporting Goods	118,800		158,465
Supermarket	4,053,992		5,407,556
Fast Food	135,360		180,555

*The CPI for 1977 was 181.5 and for 1980 is expected to be 242.1. The multiplier is therefore 242.1/181.5 = 1.334

CENSUS TRACT	1970 MEAN FAMILY INCOME	1970 MEAN INCOME UNRELATED INDIVIDUALS	1970 PER CAPITA* INCOME	1970 MEDIAN EDUCATION (YEARS)	1970 MEDIAN VALUE OWNER OCCUPIED UNITS	1970 MEDIAN CROSS RENT-RENTER OCCUPIED UNITS	1974# TOTAL POPULATION
2.01	$ 17,006	$ 5,475	4,940	14.5	$ 24,500	$ 167	2,982
2.02	22,714	8,913	7,332	16.4	50,000+	171	2,683
3	16,848	6,036	6,173	16.0	31,500	171	4,901
4.01	17,218	5,246	5,232	13.8	26,100	180	4,135
4.02	16,996	7,345	6,066	14.0	28,300	174	3,380
4.03	15,740	6,223	4,981	16.0	31,400	233	4,250
5.01	16,827	7,306	5,833	14.2	29,100	170	5,723
5.02	13,370	5,184	4,607	13.1	26,200	219	2,016
6	9,947	4,478	3,914	12.7	17,200	145	2,399
7	17,976	6,738	6,365	15.2	30,200	183	3,728
8	15,883	5,813	5,903	14.7	22,200	158	4,291
9	15,906	3,745	4,796	15.6	23,600	153	7,500
10	13,526	2,917	3,775	13.3	19,700	173	2,564
11	8,075	1,614	2,878	17.0	18,500	120	5,769
12	11,125	2,788	3,477	12.9	20,100	143	6,386
Madison	12,779	3,015	3,726	12.8	22,100	135	?

*Calculated as a weighted average of family and unrelated individual incomes (mean family income/persons per household averaged with mean income for unrelated individuals)

#Please note that these figures are for 1974, not 1970.

EMPLOYMENT CHARACTERISTICS

	EMPLOYMENT COVERED BY UNEMPLOYMENT COMPENSATION Jan. 1975					
	WISCONSIN		MILWAUKEE SMSA		DANE CO.	
INDUSTRIAL GROUP	%	Average Weekly Wage	%	Average Weekly Wage		
1. Agriculture, For., & Fish.	0.3	150	0.1	150	0.7	165
2. Mining	0.1	230	0.0	256	0.0	243
3. Construction	3.2	243	2.9	280	4.1	246
4. Manufacturing	32.3	222	34.9	242	13.1	245
5. Transp., Comm., Utilities	4.5	210	4.7	234	4.0	214
6. Wholesale Trade	4.5	236	5.2	254	4.1	245
7. Retail Trade	18.4	104	17.2	108	18.8	101
8. Finance, Ins., Real Estate	4.6	171	5.6	185	6.9	163
9. Services	15.5	129	16.9	142	16.7	139
10. All Government	16.5	185	12.5	181	31.5	216
	99.9	178	100.0	192	99.9	184

MADISON DATA (SMSA)
(MISCELLANEOUS)

YEAR	PRIVATE HOUSING UNITS	UW ENROLLMENT	CONSUMER PRICE INDEX	PERCENT UNEMPLOYMENT
1971	4845	33,943	121.3	5.9
1972	4461	34,866	125.3	5.6
1973	3593	35,931	133.1	4.9
1974	2598	36,915	147.7	5.6
1975	2468	38,545	161.2	8.5
1976	3367	37,924	170.5	7.7
1977	3878	39,022	181.5	7.0
1978		39,430	195.4	6.0
1979		40,000	216.2	6.4
*1980		40,418	242.1	
*1981		40,822	266.4	
*1982		41,231	287.7	
*1983		40,822	310.7	

*Predicted

ANNUAL BUDGETS: Milwaukee 1975

Family of Four

	Low Budget	Medium Budget	Higher Budget
Total Budget	$9,729	$16,923	$23,719
Food: Home	24.7%	18.3%	15.4%
Away	3.7%	3.5%	3.9%
Shelter: Renter	15.4%	11.6%	10.7%
Owner	--	22.2%	17.9%
Furnishings	4.5%	4.7%	6.1%
Transportation	--	7.8%	6.5%
Clothing	8.9%	7.6%	7.6%
Personal Care	2.75%	2.13%	2.03%
Medical Care	7.9%	4.7%	3.37%

Retired Couple

	Low Budget	Medium Budget	Higher Budget
Total Budget	$4,553	$6,590	$9,764
Food: Home	27.4%	24.0%	19.68%
Away	1.9%	3.0%	3.7%
Shelter: Renter	27.2%	23.6%	21.75%
Owner	26.0%	22.5%	22.0%
Furnishings	8.2%	12.5%	14.15%
Transportation	7.64%	9.5%	10.7%
Clothing	5.0%	5.93%	6.16%
Personal Care	8.8%	8.8%	2.7%
Medical Care	11.86%	8.2%	5.58%

Regent Street - 1981

Clarification of Market Comparables Study

In determining the rental prices for residential and commercial property in the Regent Street area, the following sources were utilized:

1. Current Renters
2. Building Owners or Managers
3. Area Realtors
4. Area Property Managers

Apartment comparables were accumulated by selecting existing apartments with a similar distance from the central University of Wisconsin Campus. This selection was made in an attempt to limit the rent distortion due to locational advantages arising from proximity to campus.

Many of the industrial properties in the immediate Regent Street area are presently owner occupied. Therefore, some industrial rental figures are based on sites in the Park-Belt Line vicinity which should not introduce distortion as industrial usage is not highly location sensitive within a general city area.

With location and accessibility identical between the two service stations under investigation, the wide spread between rental figures might be attributable to franchising arrangements. The low rental payment by the Shell establishment may be accompanied by a larger percentage of gasoline sales to the franchisor.

DATA BASE

APARTMENT USAGE

Apartment Complex/ Address	Condition	Efficiency	One Bedroom	Two Bedroom
Regent 1402 Regent	Good	$237/mo.		$434/mo.
University Courts 2302 University	Good	209	$285/mo.	510
Allen House 2130 University	Average	210	246	
Dayton Square 415 W. Johnson	Good	214.50	275 (ranch) 286 (town house)	
Saxony 305 Frances	Average	147		360
Bayview (Subsidized-Not Considered In Analysis) 305 Bay View				209
Greenbush 104 S. Brooks	Good	130	250	355
Stoddard Arms 1323 W. Dayton	Good		295	295
Plaza Apts. 725 W. Washington	Good	205	245	300

COMMERCIAL USAGE - INDUSTRIAL

	$ sq. ft./yr.
1. Menard Brokerage & Development 9000 sq. ft. building average condition (Belt-Line Area)	$1.95-2.25 + utils.
5000 sq. ft. building new condition (Belt-Line Area)	$2.35 + utils.
Industrial Land Lots (Fish Hatchery-Belt-Line Area)	$1.50-2.20
2. 9 North Brooks 9000 sq. ft. Building sold by owner for $130,000 annual capitalization rate 10% $\frac{\$13{,}000 \text{ rent}}{9000 \text{ sq. ft.}} = \$1.44$ sq. ft./yr.	$1.44
3. Opitz Realty A. 16,800 sq. ft. warehouse, 800 sq. ft. office	$1.85
B. 5,808 sq. ft. warehouse, 815 sq. ft. office	$1.97

COMMERCIAL USAGE - RETAIL		$ sq. ft./yr.
1. Badger Medical Supply 702 S. Park		$4.00
2. Rutabaga (Boating Supplies) 820 S. Park		5.65
3. Instant Printing 1115 S. Park		6.27
4. Vacant Retail Location 1214 S. Park		6.08
5. Modern Business Machines 406 S. Park		4.05
6. Motorless Motion 1002 Regent		3.00
7. Park Regent Medical		
1 S. Park	Pharmacy	11.00
	Optical Shop	10.35

COMMERCIAL USAGE - GASOLINE STATION	$ sq. ft./yr.
1. Hansen's Standard Service 939 S. Park	.61
2. Bill's Park Street Shell 950 S. Park	.26

COMMERCIAL USAGE - OFFICE SPACE		$ sq. ft./yr.
1. Regent Mills Professional Building		$8.10
2. Moude Realty Inc. Park/Regent Area		7.00-7.75
3. Jerome J. Muling & Associate Average Rental Range		7.00-7.40
4. Madison Medical 20 S. Park		10.74
5. 1274 Park		6.40
6. University Square		4.00-13.00
7. Executive Management Inc. Estimated Ranges Based On Condition		
	Fair	7.50-8.10
	Good	8.25-9.00
	Excellent	9.75-10.75

IV

A-24

P - poor
A - average
G - good

Apartment Rentals

ADDRESSES	Monthly Rental	Building Type	Condition
EFFICIENCIES			
219 N. Brooks	$250	House	A
431 W. Johnson	$200	House	A
534 W. Mifflin	$209	Apartment	A
ONE BEDROOM			
104 S. Brooks	$250	Apartment	G
929 S. Brooks	$240	Apartment	A
1301 Spring	$230	Apartment	A
519 W. State	$235	Apartment	A
TWO BEDROOM			
104 S. Brooks	$355	Apartment	G
929 Fahrenbrook	$360	House	A
445 W. Johnson	$339	House	A
536 W. Mifflin	$350	House	A
934 W. Dayton	$380	Apartment	G
1301 Spring	$350	Apartment	A
THREE BEDROOM			
909 College	$262.50	House	P
915 College	$425	House	A
816 Regent	$390	House	P
536 W. Mifflin	$470	House	A
524 W. Johnson	$500	House	A
FOUR BEDROOM			
506 S. Brooks	$625	House	A
21 N. Mills	$570	Apartment	G
934 W. Dayton	$650	Apartment	G
543 W. Washington	$600	House	A
FIVE BEDROOM			
408 W. Washington	$520	House	A
141 E. Johnson	$710	House	A
SIX BEDROOM			
918 Regent	$835	House	G

V. Financial Attributes

This section of the feasibility workbook discusses the final set of screens or filters that we will use to evaluate potential uses for our site. In this section, we will apply the discounted cash flow model, creating profitability indices and analyzing various measures of both profitability and risk.

We will describe a framework for the analysis of each of the alternative uses remaining under consideration after the market analysis.

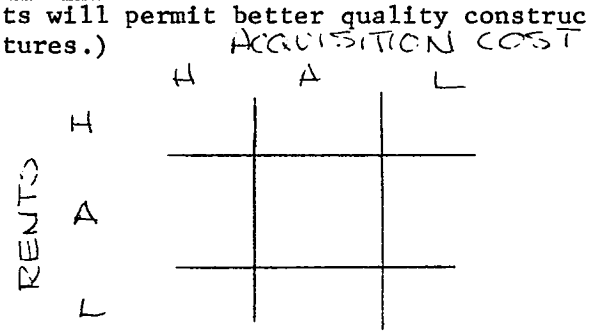
A. Building Dimensions

The first step in the financial analysis requires an estimate of the size of each of the buildings you are considering. The building size may be used with per-square-foot costs and rents to derive estimates of total construction costs and total rents.

If you have not already done so, construct the specific building envelopes you will need to arrive at the building size for each of your alternative uses.

B. Profitability Indices

1. Within any given potential use, there are wide ranges of potential rents and costs. For each use, you should evaluate the likelihood of achieving each of three rent levels, when different construction or acquisition costs are used. In other words, identify which cells in the grid below (representing combinations of High, Average and Low Costs and Rents) are most likely, based on your understanding of site and market attributes. Explain your selections. (We are assuming that higher construction costs will permit better quality construction with more amenities and features.)



2. A profitability index can be calculated for each cell in the grid above. The program 550GRID, as presented in lecture and discussion, helps you with the computations required to complete the profitability grid for each use. Calculate profitability indices for those cells you selected as most likely above. Discuss the results of your profitability index calculations. (Sample programs are attached.)

BUS 550/705 HOW TO USE THE WITS COMPUTER FALL 80

Terminals are located in Rooms 2 and B-5 Commerce. Use a terminal with 8-1/2 inch wide paper.

1. Turn on terminal--turn switch on.

2. Check the 'Ready' light on the blue box next to your terminal.

   a. If 'Ready' light is on, type:

      HELLO account,number ← You enter your account number. Your response is underlined.
      Password: ← You enter your password (It will not print.)

   b. If 'Ready' light is not on, then flip switch under 'Ready' light up. The computer responds:

      RSTS V06B-02 MACC**WITS Job 6 KB12 11-Nov-80 9:17
      #150,100 ← You enter your account number
      Password: ← You enter your password--it doesn't print.

3. ALWAYS enter a carriage return when you are finished typing a line.

4. To erase a character, use DELETE. DO NOT use backspace.

5. To Sign Off:

```
Ready

BYE
Confirm: Y
```

Options for 'Confirm:' are:

```
?    This help message
Y    Log me out
N    Don't log me out
I    Individual file deletion
       K to delete
       CR to save
F    Fast logout
```

6. Special Keys: Hit the letter key while holding 'CTRL' down.

   'CTRL' U = To erase an entire line you have typed.

   'CTRL' S = To stop what the computer is printing.

   'CTRL' Q = To resume printing.

   'CTRL' C = To stop what you are doing; gives you a "Ready".

BUS 550GRID

This program will create a data file to compute cumulative
present value of a project under varying income and cost
of construction/acquisition conditions.

You will use these present values to calculate profitability
indices which are helpful in ranking projects as well as
identifying situations where a project is unlikely to be
financially viable.

Follow the instructions --

Enter your last name -- ? GURD

Enter code for property type --

1 = Residential
2 = Office
3 = Retail
4 = Mixed/Other

Code -- ? 3

Enter gross square footage of building? 10000

Enter High Estimate of Year 1 Gross Income? 75000

Enter Average Estimate of Year 1 Gross Income? 72000

Enter Low Estimate of Year 1 Gross Income? 70000

Enter cost of land? 50000

Enter square footage of parking? 3200 0

****

HIGH COSTS
==========

LAND	$50000
BUILDING	$220000
PARKING	$6400
	$276400

AVG COSTS
==========

LAND	$50000
BUILDING	$170000
PARKING	$6400
	$226400

LOW COSTS
==========

LAND	$50000
BUILDING	$150000
PARKING	$6400
	$206400

****

	HIGH COSTS	AVERAGE COSTS	LOW COSTS
HIGH RENTS	(1) 276400	(2) 226400	(3) 206400
AVERAGE RENTS	(4) 276400	(5) 226400	(6) 206400
LOW RENTS.	(7) 276400	(8) 226400	(9) 206400

dont calculate only on those cells you've selected

Your data file has been created -- it is called GURD.550

Next -- run MRCAP by typing: BUS MRCAP

When it asks what data file to use type: GURD.550

When it asks how many lines to print ... type: 1

When it asks which line to print ... type: 39

SO LONG: IT'S BEEN REAL....ESTATE
Stop at line 975

```
BUS MRCAP
~~ENTER~~ INPUT FILE NAME
*GURD.550

ENTER THE NUMBER OF LINES TO BE PRINTED -- MAX. IS 10
SEPERATED BY COMMAS -- MAX. IS TEN VALUES

1
     ENTER LINE NUMBERS

39

         CASH FLOW ANALYSIS
         ==================                          1981     1982     1983     1985
(1)      39  AFTER TAX PRESENT VALUE              250869.  257127.  262225.  268774.

         CASH FLOW ANALYSIS
         ==================                          1981     1982     1983     1985
(2)      39  AFTER TAX PRESENT VALUE              240779.  243879.  246434.  250161.

         CASH FLOW ANALYSIS
         ==================                          1981     1982     1983     1985
(3)      39  AFTER TAX PRESENT VALUE              235913.  238244.  240118.  242716.

         CASH FLOW ANALYSIS
         ==================                          1981     1982     1983     1985
(4)      39  AFTER TAX PRESENT VALUE              232837.  239515.  245096.  253440.

         CASH FLOW ANALYSIS
         ==================                          1981     1982     1983     1985
(5)      39  AFTER TAX PRESENT VALUE              224605.  227948.  230723.  234827.

         CASH FLOW ANALYSIS
(6)      ==================                          1981     1982     1983     1985
         39  AFTER TAX PRESENT VALUE              219739.  222312.  224406.  227382.

         CASH FLOW ANALYSIS
(7)      ==================                          1981     1982     1983     1985
         39  AFTER TAX PRESENT VALUE              220815.  227773.  233608.  242470.

         CASH FLOW ANALYSIS
(8)      ==================                          1981     1982     1983     1985
         39  AFTER TAX PRESENT VALUE              212872.  217249.  220248.  224605.

         CASH FLOW ANALYSIS
(9)      ==================                          1981     1982     1983     1985
         39  AFTER TAX PRESENT VALUE              208956.  211692.  213932.  217160.
STOP --

Ready

BYE
Confirm: ?
Options for 'Confirm:' are:
 ?       This help message
 Y       Log me out
 N       Don't log me out
 I       Individual file deletion
          K to delete
          <CR> to save
 F       Fast logout
Confirm: Y
Saved all disk files; 672 blocks in use, 328 free
Job 31 User 150,82 logged off KB30 at 07-Nov-80 15:41
System RSTS V7.0-07 MACC*WITS*A
```

after year ranking

TV for each cell.

C. MRCAP Analysis

As a result of the analysis of your profitability index grids, you should be able to select the three best alternatives for further study. These three alternatives may be three alternative uses, or may include variations (in terms of costs and rent levels) of the same use.

You should further study the financial feasibility of these alternatives using PREPCAP and MRCAP as shown in the example on the following pages.

BUS PREPCAP

This program will create a data file which used with BUS MRCAP will make a series of cash flow runs to reflect alternative financing strategies with respect to ONE of your COST/RENT situations (i.e. one box in your Cost/Rent Grid).

The first run is a complete run on the normative situation which is -- 75% L/V , 30yr MTG Term (all runs use 11% interest) This is so you can see what all the output looks like. Note that it really is just a standard cash flow analysis except for a few extra whistles and bells.

Having printed out the first run BUS MRCAP will then stop and ask you the questions listed below the line of asterisks coming up in a minute or so.

The machine will then print out 9 condensed cash flow analyses. You will use these runs in evaluating the various financing alternatives.

These runs are as follows:

```
1. 50% L/V    :  all
2. 75% L/V    :  20yr
3. 90% L/V    :  Mtg Terms

4. 50% L/V    :  all
5. 75% L/V    :  30yr
6. 90% L/V    :  Mtg Terms

7. 50% L/V    :  all
8. 75% L/V    :  35yr
9. 90% L/V    :  Mtg Terms
```

check w/FG. re. how this works...

Follow the instructions --

Enter your last name -- ? GURD

Enter code for property type --

```
1 = Residential
2 = Office
3 = Retail
4 = Mixed/Other

Code -- ? 3
```

Enter Project Title (20 character max) ? RETAIL - AVG/AVG

Enter gross square footage of building? 10000

Enter Estimate of Year 1 Gross Income? 72000

Enter cost of Building? 170000

Enter cost of land? 50000

Enter cost of parking? 6400

from 550GRID.

****

Your data file has been created -- it is called - GURD.CAP

Next -- run MRCAP by typing: BUS MRCAP

When it asks what data file to use type: GURD.CAP

When it asks which line to print ... type: 5,7,10,14,16,17,18,38,39,42

SO LONG -- IT'S BEEN REAL....ESTATE
Stop at line 975

Ready

RRCAP INPUT FORM

version 1979

GENERAL DATA

Page 1.

1, ________ Project Title , ________ User Name

10, ________ Starting Year , ________ Data Sets , ________ Classification , ________ % Guard Yr. 1 , ________ Holding Period , ________ Units/Year

40, ________ Fixed Income , ________ 2 , ________ 3 , ________ 4 , ________ 5

60, ________ Vacancy Rate , ________ 2 , ________ 3 , ________ 4 , ________ 5

70, ________ Real Estate tax , ________ 2 , ________ 3 , ________ 4 , ________ 5

80, ________ Fixed Expenses , ________ 2 , ________ 3 , ________ 4 , ________ 5

100, ________ Discount Rate , ________ Income Tax Rate , ________ Reinvestment Rate , ________ Income Tax Type

101, ________ Extraordinary Exp. , ________ Project Growth Rate , ________ Project Growth Type

102, ________ Working Capital Loan , ________ Ownership Form , ________ Resale Cost Rate , ________ Charge New Capital

NOTES:

1. Classification
   0 = Subsidized Housing
   1 = Non-Subsidized
2. Income Tax Type
   0 = Non-Classified
   1 = Individual
   2 = Married Filling Seperatly
   3 = Married Filling Jointly
3. Ownership Form
   1 = Individual
   2 = Corporation
4. Charge New Capital
   0 = Use Reserves First THEN Cash Flow
   1 = Use Cash Flow First THEN Reserves

Page 2.

200, 1, ________ Title (20 character maximum)

201, 1, ________ Original Cost , ________ % Depreciable , ________ Depreciation Method

202, 1, ________ Starting Year , ________ Useful Life , ________ Switching

---

200, 2, ________ Title (20 character maximum)

201, 2, ________ Original Cost , ________ % Depreciable , ________ Depreciation Method

202, 2, ________ Starting Year , ________ Useful Life , ________ Switching

---

version 1979

MORTGAGE DATA

300, 1, ________ Title (20 character maximum)

301, 1, ________ Principal Amount , ________ Annual Interest , ________ Payment Per Period , ________ Term In Years

302, 1, ________ Payments Per Year , ________ Year Payments Begin , ________ Year Payments End , ________ Refinanced By Mtg. #

CODES FOR DEPRECIATION METHOD

0 = No Depreciation
1 = Sum Of Years Digits
2 = Straight Line
3 = 125% Declining Balance
4 = 150% Declining Balance
5 = 200% Declining Balance
6 = Reverse Sum Of Years Digits
9 = Equity Modification
"-" value = remove equity
"+" value = add equity

Page 3.

400, ---- , ---- , ---- , ---- , ---- , ---- , ---- , ---- , ---- , ----
1 2 3 4 5 6 7 8 9 10

REPORT FIELD IDENTIFIERS

FIELD #	REPORT TITLE	FIELD #	REPORT TITLE
1.	SUMMARY OF INCOME & EXPENSE	6.	AFTER TAX RATIOS
2.	COMPONENT SUMMARY	7.	MODIFIED INTERNAL RATE OF RETURN
3.	CASH FLOW	8.	MORTGAGE AMORTIZATION
4.	MARKET VALUE	9.	DEPRECIATION SCHEDULES
5.	BEFORE TAX RATIOS	10.	PARTNERSHIP REPORT

If Position # 1 of Entry 400 =

5 = Auto 1, 2, 3, 4, 5, 6, 7, 10

9 = Auto for ALL

3 = Select Specific Line #'s (10 maximum)

PRINT YEARS (Enter any year number 1 - 25, in any order)

403, ---- , ---- , ---- , ---- , ---- , ---- , ---- , ---- , ---- , ----

99 in first entry of line 403 means 10 year wide carriage output option.

LAST ENTRY OF DATA SET

999,99

```
DIS GURD.CAP
1,  RETAIL - AVG/AVG,          GURD
10,1981,9,1,1.00,5,1
40,   72000,.04,*
60,.05,*
70,.19,.03,*
80,.30,.07,*
100,.15,.50,.07
101,0,7.5,2
102,.17,1,.05,0
200,1,LAND
201,1, 50000 ,0,0
202,1,1,0,0
200,2,BUILDING
201,2, 170000 ,1.00,3
202,2,1,35,0
200,3,PARKING
201,3, 6400 ,1.00,2
202,3,1,15,0
300,1,MORTGAGE
301,1, 169800 ,.11,0,30
302,1,1,1,10,0
400,5
403,1,2,3,5
999,99
301,1, 113200 ,.11,0,20
303,1,0,0,0,0
400,3
999,99
301,1, 169800 ,.11,0,20
303,1,0,0,0,0
999,99
301,1, 203760 ,.11,0,20
303,1,0,0,0,0
999,99
301,1, 113200 ,.11,0,30
303,1,0,0,0,0
999,99
301,1, 169800 ,.11,0,30
303,1,0,0,0,0
999,99
301,1, 203760 ,.11,0,30
303,1,0,0,0,0
999,99
301,1, 113200 ,.11,0,35
303,1,0,0,0,0
999,99
301,1, 169800 ,.11,0,35
303,1,0,0,0,0
999,99
301,1, 203760 ,.11,0,35
303,1,0,0,0,0
999,99

Ready
```

BUS MRCAP
ENTER INPUT FILE NAME
*GURD.CAP

75% 30 YR

P R O   F O R M A

INVESTMENT ANALYSIS OF

RETAIL - AVG/AVG

FOR

GURD

R E P O R T   S E C T I O N   N U M B E R   1

* GROSS RENT	$ 77995.	* RATE OF GROWTH OF GROSS RENT	0.0400
* EXPENSES	$ 24843.	* RATE OF GROWTH OF EXPENSES	0.0700
* R E TAXES	$ 14526.	* RATE OF GROWTH OF R E TAXES	0.0300 (1)
* INCOME TAX RATE	0.5000	PROJECT VALUE GROWTH TYPE	2.0000
* VACANCY RATE	0.0500	WORKING CAPITAL LOAN RATE	0.1700 (2)
EQUITY DISCOUNT	0.1500 (2)	EXTRAORDINARY EXPENSES	$ 0.
RESALE COST	0.0500	REINVESTMENT RATE	0.0700
WKG CAPITAL RS $	0.	CAPITAL RESER INTEREST RATE	0.0000
INVESTOR TAX CLASS	0	OWNERSHIP FORM	1
INITIAL COST $	226,400. (3)	INITIAL EQUITY REQUIRED 25%	$ 56600. (3)

ALL '*' VALUES ARE AVERAGE AMOUNTS FOR HOLDING PERIOD. OF 5 YRS.

R E P O R T   S E C T I O N   N U M B E R   2

C O M P O N E N T   S U M M A R Y

more of a component method

TITLE	PCT. DEPR	BEGIN USE	USEFUL LIFE	DEPR METHOD	COST	SCH
LAND	0.00	1	0.	0	$ 50000.	0
BUILDING	1.00	1	35.	3	$ 170000.	0 (4)
PARKING	1.00	1	15.	2	$ 6400.	0

ST LINE 125%

M O R T G A G E   S U M M A R Y

TITLE	INTR RATE	BEGIN YR.	END YR.	TERM	ORIG BALC	PCT VALUE
MORTGAGE	0.1100	1	10	30	$ 169800.	0.750 (3)

REPORT SECTION NUMBER 3

CASH FLOW ANALYSIS

		1981	1982	1983	1985
1	GROSS RENT	72000.	74880.	77875.	84230.
2	LESS VACANCY	3600.	3744.	3894.	4211.
3	LESS REAL ESTATE TAXES	13680.	14090.	14513.	15397.
4	LESS EXPENSES	21600.	23112.	24730.	28313.
5	NET INCOME	33120.	33934.	34738.	36308.
6	LESS DEPRECIATION	6498.	6281.	6072.	5676.
7	LESS INTEREST	18678.	18584.	18480.	18236.
8	TAXABLE INCOME	7944.	9068.	10186.	12396.
9	PLUS DEPRECIATION	6498.	6281.	6072.	5676.
10	LESS PRINCIPAL PAYMENTS	853.	947.	1051.	1295.
11	CASH THROW-OFF = DIST C AFR TX.	13589.	14402.	15207.	16777.
12	LESS TAXES	3972.	4534.	5093.	6198.
13	LESS RESERVES AT 0.000	0.	0.	0.	0.
14	CASH FROM OPERATIONS	9617.	9868.	10114.	10579.
15	WORKING CAPITAL LOAN(CUM B)	0.	0.	0.	0.
16	DISTRIBUTABLE CASH AFR TAX	9617.	9868.	10114.	10579.
17	TAX SAVING ON OTHER INCOME	0.	0.	0.	0
18	SPENDABLE CASH AFTER TAXES	9617.	9868.	10114.	10579.

Tax I

net worth =

REPORT SECTION NUMBER 4

CASH FLOW ANALYSIS

		1981	1982	1983	1985
	MARKET VALUE				
19	BY METHOD - 2 - AT 7.5000	248400.	254502.	260539.	272311.
20	LESS RESALE COST	12420.	12725.	13027.	13616.
21	LESS LOAN BALANCES	168947.	168000.	166949.	164487.
22	PLUS CUM. CASH RESERVES	0.	0.	0.	0.
23	B/4 TAX NET WORTH	67033.	73777.	80563.	94209.
24	CAPITAL GAIN (IF SOLD)	14864.	25945.	36963.	58715.
25	CAPITAL GAINS TAX	2973.	5189.	7393.	11743.
26	TAX PREFERENCE TAX	0.	0.	0.	0.
27	INCOME TAX ON EXCESS DEP	607.	1106.	1500.	1990.
28	TOTAL TAX ON SALE	3580.	6295.	8893.	13733.
29	AFTER TAX NET WORTH	63453.	67482.	71670.	80477.

no tax shelter

REPORT SECTION NUMBER 5

YEAR OF ANALYSIS

		1981	1982	1983	1985	
BEFORE TAX RATIO ANALYSIS						
30	RETURN ON NET WORTH B/4 TAX	0.4244	0.3155	0.2981	0.2702	
31	CHANGE IN NET WORTH B/4 TAX	10433.	6744.	6786.	6831.	
32	CASH RTN ON ORIG CASH EQUIY	0.2401	0.2545	0.2687	0.2964	
33	PERCENT ORIG EQUITY PAYBACK	0.1699	0.3443	0.5230	0.8928	– 12
34	PRESENT VALUE OF PROJECT	239906.	248293.	255477.	266834.	– 13

REPORT SECTION NUMBER 6

YEAR OF ANALYSIS

		1981	1982	1983	1985	
AFTER TAX RATIO ANALYSIS						
35	RETURN ON NET WORTH AFT TAX	0.2910	0.2190	0.2119	0.1980	
36	CHANGE IN NET WORTH AFT TAX	6853.	4029.	4188.	4471.	
37	CASH RTN ON ORIG CASH EQUIY	0.1699	0.1744	0.1787	0.1869	
38	PERCENT ORIG EQUITY PAYBACK	0.1699	0.3443	0.5230	0.8928	– 10
39	PRESENT VALUE OF PROJECT	233339.	236651.	239399.	243464.	– 11

TIV: incl. sale.

40	NET INCOME-MARKET VALUE RTO	0.1333	0.1333	0.1333	0.1333	
41	LENDER BONUS INTEREST RATE	0.0000	0.0000	0.0000	0.0000	
42	DEFAULT RATIO	0.7613	0.7577	0.7547	0.7508	– 14

REPORT SECTION NUMBER 7

YEAR OF ANALYSIS

		1981	1982	1983	1985	
MODIFIED INTERNAL RATE OF RETURN ANALYSIS						
RETURN ANALYSIS WITHOUT SALE						
41	CUM. AFT TAX SPENDABLE CASH	9617.	20158.	31684.	57930.	
44	MOD. I.R.R. ON ORIG EQUITY	-0.8301	-0.4032	-0.1759	0.0047	–15
45	MOD. I.R.R. ON CUM. EQUITY	-0.8301	-0.4032	-0.1759	0.0047	
RETURN ANALYSIS WITH SALE						
46	CUM. CASH LESS ORIG EQUITY	16470.	31041.	46754.	81807.	
47	CUM. CASH LESS CUM. EQUITY	16470.	31041.	46754.	81807.	
48	MOD I.R.R. ON ORIG EQUITY	0.2910	0.2444	0.2223	0.1958	–15
49	MOD I.R.R. ON CUM. EQUITY	0.2910	0.2444	0.2223	0.1958	

ENTER THE NUMBER OF LINES TO BE PRINTED -- MAX. IS 10
SEPERATED BY COMMAS -- MAX. IS TEN VALUES

10

ENTER LINE NUMBERS

5,7,10,14,16,17,18,38,39,42

50% L/V

CASH FLOW ANALYSIS

		1981	1982	1983	1985
5	NET INCOME	33120.	33934.	34738.	36308.
7	LESS INTEREST PMTS	12452.	12258.	12043.	11539.
10	LESS PRINCIPAL PMTS	1763.	1957.	2172.	2677.
14	CASH FROM OPERATIONS	11820.	12021.	12212.	12546.
16	DISTRIBUTABLE CASH AFTER TAX	11820.	12021.	12212.	12546.
17	TAX SAVINGS ON OTHER INCOME	0.	0.	0.	0.
18	SPENDABLE CASH AFTER TAXES	11820.	12021.	12212.	12546.
38	ORIG EQUITY PAYBACK AFR TAX	0.1044	0.2106	0.3185	0.5388
39	AFTER TAX PRESENT VALUE	228664.	227844.	226937.	224887.
42	DEFAULT RATIO	0.6874	0.6867	0.6865	0.6877

75% L/V

CASH FLOW ANALYSIS

		1981	1982	1983	1985
5	NET INCOME	33120.	33934.	34738.	36308.
7	LESS INTEREST PMTS	18678.	18387.	18064.	17308.
10	LESS PRINCIPAL PMTS	2645.	2936.	3259.	4015.
14	CASH FROM OPERATIONS	7825.	7978.	8115.	8323.
16	DISTRIBUTABLE CASH AFTER TAX	7825.	7978.	8115.	8323.
17	TAX SAVINGS ON OTHER INCOME	0.	0.	0.	0.
18	SPENDABLE CASH AFTER TAXES	7825.	7978.	8115.	8323.
38	ORIG EQUITY PAYBACK AFR TAX	0.1383	0.2792	0.4226	0.7151
39	AFTER TAX PRESENT VALUE	233339.	236522.	239034.	242375.
42	DEFAULT RATIO	0.7861	0.7816	0.7777	0.7721

90% L/V

CASH FLOW ANALYSIS

		1981	1982	1983	1985
5	NET INCOME	33120.	33934.	34738.	36308.
7	LESS INTEREST PMTS	22414.	22064.	21677.	20769.
10	LESS PRINCIPAL PMTS	3174.	3523.	3910.	4818.
14	CASH FROM OPERATIONS	5429.	5552.	5657.	5790.
16	DISTRIBUTABLE CASH AFTER TAX	5429.	5552.	5657.	5790.
17	TAX SAVINGS ON OTHER INCOME	0.	0.	0.	0.
18	SPENDABLE CASH AFTER TAXES	5429.	5552.	5657.	5790.
38	ORIG EQUITY PAYBACK AFR TAX	0.2398	0.4850	0.7349	1.2440
39	AFTER TAX PRESENT VALUE	236145.	241729.	246293.	252869.
42	DEFAULT RATIO	0.8454	0.8385	0.8325	0.8227

20 YEAR MORTGAGE TERM

II-12

30 YEAR MORTGAGE TERM

50% L/V

CASH FLOW ANALYSIS

		1981	1982	1983	1985
5	NET INCOME	33120.	33934.	34738.	36308.
7	LESS INTEREST PMTS	12452.	12389.	12320.	12157.
10	LESS PRINCIPAL PMTS	569.	631.	701.	863.
14	CASH FROM OPERATIONS	13014.	13281.	13545.	14050.
16	DISTRIBUTABLE CASH AFTER TAX	13014.	13281.	13545.	14050.
17	TAX SAVINGS ON OTHER INCOME	0.	0.	0.	0.
18	SPENDABLE CASH AFTER TAXES	13014.	13281.	13545.	14050.
38	ORIG EQUITY PAYBACK AFR TAX	0.1150	0.2323	0.3519	0.5980
39	AFTER TAX PRESENT VALUE	228664.	227930.	227180.	225612.
42	DEFAULT RATIO	0.6708	0.6707	0.6711	0.6735

75% L/V

CASH FLOW ANALYSIS

		1981	1982	1983	1985
5	NET INCOME	33120.	33934.	34738.	36308.
7	LESS INTEREST PMTS	18678.	18584.	18480.	18236.
10	LESS PRINCIPAL PMTS	853.	947.	1051.	1295.
14	CASH FROM OPERATIONS	9617.	9868.	10114.	10579.
16	DISTRIBUTABLE CASH AFTER TAX	9617.	9868.	10114.	10579.
17	TAX SAVINGS ON OTHER INCOME	0.	0.	0.	0.
18	SPENDABLE CASH AFTER TAXES	9617.	9868.	10114.	10579.
38	ORIG EQUITY PAYBACK AFR TAX	0.1699	0.3443	0.5230	0.8928
39	AFTER TAX PRESENT VALUE	233339.	236651.	239399.	243464.
42	DEFAULT RATIO	0.7613	0.7577	0.7547	0.7508

90% L/V

CASH FLOW ANALYSIS

		1981	1982	1983	1985
5	NET INCOME	33120.	33934.	34738.	36308.
7	LESS INTEREST PMTS	22414.	22301.	22176.	21883.
10	LESS PRINCIPAL PMTS	1024.	1136.	1261.	1554.
14	CASH FROM OPERATIONS	7578.	7821.	8056.	8496.
16	DISTRIBUTABLE CASH AFTER TAX	7578.	7821.	8056.	8496.
17	TAX SAVINGS ON OTHER INCOME	0.	0.	0.	0.
18	SPENDABLE CASH AFTER TAXES	7578.	7821.	8056.	8496.
38	ORIG EQUITY PAYBACK AFR TAX	0.3347	0.6802	1.0360	1.7771
39	AFTER TAX PRESENT VALUE	236145.	241883.	246730.	254175.
42	DEFAULT RATIO	0.8155	0.8098	0.8049	0.7972

35 YEAR MORTGAGE TERM

50% L/V

CASH FLOW ANALYSIS
=================

		1981	1982	1983	1985
5	NET INCOME	33120.	33934.	34738.	36308.
7	LESS INTEREST PMTS	12452.	12416.	12375.	12280.
10	LESS PRINCIPAL PMTS	331.	368.	408.	503.
14	CASH FROM OPERATIONS	13252.	13532.	13809.	14349.
16	DISTRIBUTABLE CASH AFTER TAX	13252.	13532.	13809.	14349.
17	TAX SAVINGS ON OTHER INCOME	0.	0.	0.	0.
18	SPENDABLE CASH AFTER TAXES	13252.	13532.	13809.	14349.
38	ORIG EQUITY PAYBACK AFR TAX	0.1171	0.2366	0.3586	0.6098
39	AFTER TAX PRESENT VALUE	228664.	227947.	227228.	225757.
42	DEFAULT RATIO	0.6675	0.6675	0.6681	0.6707

75% L/V

CASH FLOW ANALYSIS
=================

		1981	1982	1983	1985
5	NET INCOME	33120.	33934.	34738.	36308.
7	LESS INTEREST PMTS	18678.	18623.	18563.	18420.
10	LESS PRINCIPAL PMTS	497.	552.	612.	755.
14	CASH FROM OPERATIONS	9973.	10244.	10512.	11027.
16	DISTRIBUTABLE CASH AFTER TAX	9973.	10244.	10512.	11027.
17	TAX SAVINGS ON OTHER INCOME	0.	0.	0.	0.
18	SPENDABLE CASH AFTER TAXES	9973.	10244.	10512.	11027.
38	ORIG EQUITY PAYBACK AFR TAX	0.1762	0.3572	0.5429	0.9281
39	AFTER TAX PRESENT VALUE	233339.	236676.	239472.	243680.
42	DEFAULT RATIO	0.7563	0.7529	0.7501	0.7466

90% L/V

CASH FLOW ANALYSIS
=================

		1981	1982	1983	1985
5	NET INCOME	33120.	33934.	34738.	36308.
7	LESS INTEREST PMTS	22414.	22348.	22275.	22105.
10	LESS PRINCIPAL PMTS	597.	662.	735.	906.
14	CASH FROM OPERATIONS	8006.	8271.	8533.	9034.
16	DISTRIBUTABLE CASH AFTER TAX	8006.	8271.	8533.	9034.
17	TAX SAVINGS ON OTHER INCOME	0.	0.	0.	0.
18	SPENDABLE CASH AFTER TAXES	8006.	8271.	8533.	9034.
38	ORIG EQUITY PAYBACK AFR TAX	0.3536	0.7190	1.0958	1.8830
39	AFTER TAX PRESENT VALUE	236145.	241914.	246817.	254435.
42	DEFAULT RATIO	0.8096	0.8041	0.7994	0.7921

STOP --

Ready

D. Analysis of MRCAP Output

After you have used MRCAP to produce measures of the alternative projects' financial profiles, you should analyze this output carefully, making sure to include the following points. (In your report, do not include all of the printed output; select and include only that which is pertinent.)

1. Identify the sources and relative importance of the various returns from the real estate investment. Evaluate the risks associated with these returns: cash after tax, tax savings on other income and the reversion.

2. Evaluate (and discuss) the rate of equity payback.

3. Evaluate (and discuss) the project's net present value or P.I.

4. Examine the default ratio as a measure of risk. Discuss it from both the lender's and the developer's point of view.

5. Include any other financial attributes that you feel are important to an analysis of the projects. Explain and discuss them.

E. Conclusions: Summary of Financial Attributes Section

Select the "best" development option from among those studied in the Financial Attributes Section. Identify the best option from the developer's point of view, from the lenders point of view and point out the most resonable grounds for compromise.

Justify in detail your selections, and discuss why your development option appears feasible or not feasible.

VI. CONCLUSIONS

VI. CONCLUSIONS

The final section of your feasibility project is a two to three page report, in which you will summarize the facts and inferences that lead you to your conclusions concerning the most appropriate use of the site you have studied. Your summary should recap the critical features of the analyses you made in the Site Attribute, Market Attribute, and Financial Attribute portions of your study. By drawing these together in a short synopsis, you should be able to reinforce the conclusions that you present.

These final conclusions should be the direct result of your analyses, and this concluding section should make clear precisely how you reached those conclusions. The page limits preclude elaborate discussion, so be concise as you emphasize the flow of logic that results in your conclusions.

Real Estate 550/705

Preliminary Risk Analysis

Risk

Risk is the variance between the realizations and the expectations about the execution of a program.

A. Test validity of assumptions concerning growth
#40 Net Income - Market Value Ratio

$$\text{Yr. } 3 = \frac{58114}{992750} = .0585$$

For the purpose of this course you will not be concerned with the magnitude of the value, i.e. is .0585 too small??

The concern will be centered on the ratio's magnitude of <u>change</u> and <u>direction</u>, i.e. is the ratio getting larger or smaller and how much has it changed over the holding period?

The total acceptable change is $\pm$ 1.0% over the holding period.

Analysis

Yr. 1 = .0541
Yr. 2 = .0563
Yr. 3 = .0585
Yr.10 = .0766

Note that the ratio is increasing over time. This indicates that one of two conditions exists:

1. The Net Income is growing too fast.
2. The Market Value is growing too slowly.

Why is Net Income too big?

1. Income is growing too fast.
2. Expenses growing too slowly.
3. Real Estate Taxes growing too slowly.
4. Vacancy rate is under stated.

Why is Market Value too low?

Rate of Project Value Growth is too low.
This is controlled by the data packet.

The analyst must determine how to bring the ratio into proper scale.

B. Test cash breakeven point
#42 DEFAULT RATIO

$$\frac{\text{R.E.Tax + Expenses + Debt Pmt + Working Capital Loan}}{\text{Gross Income}}$$

Yr. 3

$$.9329 = \frac{10404 + 63654 + 47002 + 6998 + 3544}{140608}$$

Analysis of Default Ratio

.9329 = Default Ratio
+.0600 = Vacancy Rate
.9929 = Effective Cash Drain

1.0000 = Gross Income
-.9929 = Effective Cash Drain
.0071 = B/4 Tax Income

140,608 * .0071 = 998.31

How Much Risk?

998.31 ÷ 140,608 = .00709 Gross Inc. Down
998.31 ÷ 8,436 = .11834 Vac. Up
998.31 ÷ 10,404 = .09595 R.E. Tax Up
998.31 ÷ 63.654 = .01568 Exp. Up
998.31 ÷ 47.002 = .02124 Int. Up
998.31 ÷ 6,998 = .14266 Princ. Up
998.31 ÷ 3,544 = .28170 WCL Up

C. Test Duration of Equity Exposure
#33 B/4 Tax Orig. Equity Payback
#38 AFR Tax Orig. Equity Payback

$$\#33 = \frac{\text{Cumulative Cash Throw-Off}}{\text{Original Equity}}$$

$$\#38 = \frac{\text{Cumulative Spendable Cash After Taxes}}{\text{Original Equity}}$$

	1	2	3
	15400	12841	10238
Cum.	15400	28241	38479

$$\text{Yr. } 3 = \frac{38479}{350{,}000} = \underline{.1099}$$

CASH FLOW DEMO PROBLEM

Basic Assumptions

1.	Gross Rent	= 130,000 @ 4%/yr (5,200)
2.	Expenses	= 60,000 @ 3%/yr (1,800)
3.	R.E. Taxes	= 10,000 @ 2%/yr (200)
4.	Vacancy	= 6% of Gross Rent
5.	Project Growth Rate	= 1.5%/yr (14,250)
6.	Working Capital Loan	= 14%
7.	Income Tax Rate	= 50%
8.	Equity Discount	= 12%
9.	<u>Project</u> <u>Cost</u>	= $950,000
	Land	= $250,000
	Improvements	= $700,000 (Life = 40 yrs)
10.	Depreciation	= 200% Declining Balance
11.	<u>Mortgage</u>	
	Amount	= 600,000
	Interest	= 8%
	Payment-Yearly	= 54,000

1. 550 DEMO PROBLEM — Orvil P. Anderson
Project Title — User Name

10. 1979 . 0 . 0 . 1.0 . 10 . 480
Starting Year — Data Sets — Classification — % Owned Yr. 1 — Holding Period — Units/Year

40. 130000 . .04 . * . ____ . ____
Fixed Income — 2 — 3 — 4 — 5

60. .06 . * . ____ . ____ . ____
Vacancy Rate — 2 — 3 — 4 — 5

70. 10000 . .02 . * . ____ . ____
Real Estate Tax — 2 — 3 — 4 — 5

80. 60000 . .03 . * . ____ . ____
Fixed Expenses — 2 — 3 — 4 — 5

100. .12 . .50 . .06
Discount Rate — Income Tax Rate — Reinvestment Rate

101. 0 . .015 . 5
Extraordinary Exp. — Project Growth Rate — Project Growth Type

102. .14 . 1 . .0 . 0
Working Capital Loan — Ownership — Resale Cost Rate — Charge New Capital

COMPONENT ENTRIES

200. 1. Land
Title(20 character maximum)

201. 1. 250000 . .0 . 0
Original Cost — % Depreciable — Depreciation Method

202. 1. 1 . 0 . 0
Starting Year — Useful Life — Switching

200. 2. Improvements
Title

201. 2. 700000 . 1.0 . 5
Original Cost — % Depreciable — Depreciation Method

202. 2. 1 . 40 . 0
Starting Year — Useful Life — Switching

200. 3. ____
Title

201. 3. ____ . ____ . ____
Original Cost — % Depreciable — Depreciation Method

202. 3. ____ . ____ . ____
Starting Year — Useful Life — Switching

MORTGAGE ENTRIES

300. 1. Perminent Mortgage
Title(20 character maximum)

301. 1. 600000 . .08 . 54000 . 0
Principal Amount — Annual Interest — Payment Period — Term

302. 1. 1 . 1 . 40 . 0
Payments/Year — Year Began — Year End — Refinanced by #

303. 1. ____ . ____ . ____ . ____
Bonus Interest — Base Amount — Base Type — Mortgage Factor

300. 2. ____
Title

301. 2. ____ . ____ . ____ . ____
Principal Amount — Annual Interest — Payment Period — Term

302. 2. ____ . ____ . ____ . ____
Payments/Year — Year Began — Year End — Refinanced by #

303. 2. ____ . ____ . ____ . ____
Bonus Interest — Base Amount — Base Type — Mortgage Factor

400, 9 . ____ . ____ . ____ . ____ . ____ . ____ . ____ . ____ . ____
1 — 2 — 3 — 4 — 5 — 6 — 7 — 8 — 9 — 10

403, 1 . 2 . 3 . 10 . ____ . ____ . ____ . ____ . ____ . ____

999, 99

20. ________ , ________ , ________ , ________ , ________ , ________
Back-Door, Back-Door Loans, Investment Default, B/4 Tax, Beginning Year, End Year

= Back Door

0 = Do Not process through Back Door
1 = Derive value based on Default Ratio
2 = Derive value based on Loan-to-Value Mortgage
3 = Derive value based on Debt Coverage Ratio

30. ________ , ________ , ________ , ________ , ________ , ________
Default Ratio, Cash-On-Cash, Year, % Change, Equity B/4 Tax, Reserve B/4 Tax

103. ________ , ________ , ________ , ________
Reserves Withheld, Equity Reserves, Equity Reserve Rate, Reserve Maximum

Field #5 = Depreciation Method

0 = no depreciation
1 = sum of the years digits
2 = straight line
3 = 125% declining balance
4 = 150% declining balance
5 = 200% declining balance
6 = reverse sum of years digits
9 = equity modification
"-" = remove equity
"+" = add equity

= Bonus Basis Type

1 = fixed income - base amount
2 = gross rent - base amount
3 = effective gross rent - base amount
4 = fixed income - fixed expense - base amount
5 = net income - base amount
6 = cash throw - base amount * bonus interest rate
7 = market value - base amount * bonus interest rate
8 = B/4 net worth - base amount * bonus interest rate
9 = after tax net worth - base amount * bonus interest rate

Report Field Identifiers

Field #	Report Title	Field #	Report Title
1.	Summary of Income & Expense	6.	After Tax Ratios
2.	Component Summary	7.	Modified Internal Rate of Return
3.	Cash Flow	8.	Mortgage Amortization
4.	Market Value	9.	Depreciation Schedules
5.	Before Tax Ratios	10.	Partnership Report

* = Position #1 of Card 400

5 = Auto 1, 2, 3, 4, 5, 6, 7, 10

9 = Auto All

3 = Select Specific Line #'s (10 maximum)

PRINT YEARS (Enter any year number 1-25, in any order)

403 ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

99 = first entry line 403 means 10 year wide carriage output option.

```
1,550 DEMO PROBLEM,ORVIL P.-ANDERSON
10,1979,0,0,1.0,10,480
40,130000,.04,*
60,.06,*
70,10000,.02,*
80,60000,.03,*
100,.12,.50,.06
101,0,.015,5
102,.14,1,.0,0
200,1,LAND
201,1,250000,.0,0
202,1,1,0,0
200,2,IMPROVEMENTS
201,2,700000,1.0,5
202,2,1,40,0
300,1,PERMINENT MORTGAGE
301,1,600000,.08,54000,0
302,1,1,1,40,0
400,9
403,1,2,3,10
999,99
#NU
#T
#P 30
      1=1,550 DEMO PROBLEM,ORVIL P. ANDERSON
      2=10,1979,0,0,1.0,10,480
      3=40,130000,.04,*
      4=60,.06,*
      5=70,10000,.02,*
      6=80,60000,.03,*
      7=100,.12,.50,.06
      8=101,0,.015,5
      9=102,.14,1,.0,0
     10=200,1,LAND
     11=201,1,250000,.0,0
     12=202,1,1,0,0
     13=200,2,IMPROVEMENTS
     14=201,2,700000,1.0,5
     15=202,2,1,40,0
     16=300,1,PERMINENT MORTGAGE
     17=301,1,600000,.08,54000,0
     18=302,1,1,1,40,0
     19=400,9
     20=403,1,2,3,10
     21=999,99
#LOG
 21 lines

Ready
```

R E P O R T   S E C T I O N   N U M B E R   9   PAGE 1

DEPRECIATION SCHEDULE FOR IMPROVEMENTS

INITIAL COST 700000.
DEPRECIATION METHOD 5   PERCENT DEPRECIABLE 1.000
USEFUL LIFE 40.   BEGINNING YEAR 1

YR	ANNUAL DEP.	CUMULATIVE STR. LINE	CUMULATIVE ACCELERATED	EXCESS
1	35000.	17500.	35000.	17500.
2	33250.	35000.	68250.	33250.
3	31588.	52500.	99838.	47338.
4	30008.	70000.	129846.	59846.
5	28508.	87500.	158353.	70853.
6	27082.	105000.	185436.	80436.
7	25728.	122500.	211164.	88664.
8	24442.	140000.	235606.	95606.
9	23220.	157500.	258825.	101325.
10	22059.	175000.	280884.	105884.

R E P O R T   S E C T I O N   N U M B E R   8   PAGE 1

MORTGAGE AMORTIZATION SCHEDULE FOR PERMINENT MORTGAGE

MORTGAGE AMOUNT 600000.   TERM 28
INTEREST RATE 0.0800   MORTGAGE FACTOR 0.09000000
PERIOD PAYMENT 54000.00   PAYMENTS PER YEAR 1
BONUS INTEREST 0.0000   TYPE 0 GREATER THAN 0.

YR	ANNUAL PAYMENT	INTEREST PAYMENT	PRINCIPAL PAYMENT	BALANCE	BONUS INT PAYMENT
1	54000.	48000.	6000.	594000.	0.
2	54000.	47520.	6480.	587520.	0.
3	54000.	47002.	6998.	580522.	0.
4	54000.	46442.	7558.	572963.	0.
5	54000.	45837.	8163.	564800.	0.
6	54000.	45184.	8816.	555985.	0.
7	54000.	44479.	9521.	546463.	0.
8	54000.	43717.	10283.	536180.	0.
9	54000.	42894.	11106.	525075.	0.
10	54000.	42006.	11994.	513081.	0.

P R O   F O R M A

INVESTMENT ANALYSIS OF

550 DEMO PROBLEM

FOR

ORVIL P. ANDERSON

R E P O R T   S E C T I O N   N U M B E R   1

*	GROSS RENT	$ 156079.	*	RATE OF GROWTH OF GROSS RENT	0.0400
*	EXPENSES	$ 68783.	*	RATE OF GROWTH OF EXPENSES	0.0300
*	R E TAXES	$ 10950.	*	RATE OF GROWTH OF R E TAXES	0.0200
	INCOME TAX RATE	0.5000		PROJECT VALUE GROWTH OF	5.0000
*	VACANCY RATE	0.0600		WORKING CAPITAL LOAN RATE	0.1400
	EQUITY DISCOUNT	0.1200		EXTRAORDINARY EXPENSES $	0.
	RESALE COST	0.0000		REINVESTMENT RATE	0.0600
	WKG CAPITAL RS $	0.		CAPITAL RESER INTEREST RATE	0.0000
	INITIAL COST $	950000.		INITIAL EQUITY REQUIRED $	350000.

ALL '*' VALUES ARE AVERAGE AMOUNTS FOR HOLDING PERIOD. OF 10 YRS.

P R O   F O R M A

INVESTMENT ANALYSIS OF

550 DEMO PROBLEM

FOR

ORVIL P. ANDERSON

R E P O R T   S E C T I O N   N U M B E R   2

==

C O M P O N E N T   S U M M A R Y

TITLE	PCT. DEPR	BEGIN USE	USEFUL LIFE	DEPR METHOD		COST	SCH
LAND	0.00	1	0.	0	$	250000.	0
IMPROVEMENTS	1.00	1	40.	5	$	700000.	0

M O R T G A G E   S U M M A R Y

TITLE	INTR RATE	BEGIN YR.	END YR.	TERM		ORIG BALC	PCT VALUE
PERMINENT MORTGAGE	0.0800	1	40	28	$	600000.	0.632

P R O F O R M A

INVESTMENT ANALYSIS OF

550 DEMO PROBLEM

FOR

ORVIL P. ANDERSON

R E P O R T S E C T I O N N U M B E R 3 PAGE 1

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CASH FLOW ANALYSIS

	CASH FLOW ANALYSIS	1979	1980	1981	1988
1	GROSS RENT	130000.	135200.	140608.	185031.
2	LESS VACANCY	7800.	8112.	8436.	11102.
3	LESS REAL ESTATE TAXES	10000.	10200.	10404.	11951.
4	LESS EXPENSES	60000.	61800.	63654.	78286.
5	NET INCOME	52200.	55088.	58114.	83691.
6	LESS DEPRECIATION	35000.	33250.	31588.	22059.
7	LESS INTEREST	48000.	47520.	47002.	42006.
8	TAXABLE INCOME	-30800.	-25682.	-20476.	19627.
9	PLUS DEPRECIATION	35000.	33250.	31588.	22059.
10	LESS PRINCIPAL PAYMENTS	6000.	6480.	6998.	11994.
11	CASH THROW-OFF	-1800.	1088.	4114.	29691.
12	LESS TAXES	1125.	863.	613.	9813.
13	LESS RESERVES AT 0.000	0.	0.	0.	0.
14	CASH FROM OPERATIONS	-2925.	225.	3500.	19878.
15	WORKING CAPITAL LOAN(CUM B)	2925.	3109.	44.	0.
16	DISTRIBUTABLE CASH AFR TAX	0.	0.	0.	19878.
17	TAX SAVING ON OTHER INCOME	15400.	12841.	10238.	0.
18	SPENDABLE CASH AFTER TAXES	15400.	12841.	10238.	19878.

P R O   F O R M A

INVESTMENT ANALYSIS OF

550 DEMO PROBLEM

FOR

ORVIL P. ANDERSON

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CASH FLOW ANALYSIS

		1979	1980	1981	1988
	MARKET VALUE				
19	BY METHOD - 5 - AT 0.0150	964250.	978500.	992750.	1092500.
20	LESS RESALE COST	0.	0.	0.	0.
21	LESS LOAN BALANCES	596925.	590629.	580566.	513081.
22	PLUS CUM. CASH RESERVES	0.	0.	0.	0.
23	B/4 TAX NET WORTH	367325.	387871.	412185.	579419.
24	CAPITAL GAIN (IF SOLD)	31750.	63500.	95250.	338677.
25	CAPITAL GAINS TAX	7938.	15875.	23813.	84669.
26	TAX PREFERENCE TAX	2381.	4763.	7144.	24585.
27	INCOME TAX ON EXCESS DEP	8750.	16625.	23669.	42354.
28	TOTAL TAX ON SALE	19069.	37263.	54625.	151607.
29	AFTER TAX NET WORTH	348256.	350609.	357560.	427812.

P R O   F O R M A

INVESTMENT ANALYSIS OF

550 DEMO PROBLEM

FOR

ORVIL P. ANDERSON

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YEAR OF ANALYSIS	1979	1980	1981	1988
BEFORE TAX RATIO ANALYSIS				
30 RETURN ON NET WORTH B/4 TAX	0.0495	0.0589	0.0733	0.1011
31 CHANGE IN NET WORTH B/4 TAX	17325.	20546.	24314.	26244.
32 CASH RTN ON ORIG CASH EQUIY	-0.0051	0.0031	0.0118	0.0848
33 PERCENT ORIG EQUITY PAYBACK	0.0000	0.0000	0.0000	0.2997
34 PRESENT VALUE OF PROJECT	926362.	908469.	895573.	841992.

R E P O R T   S E C T I O N   N U M B E R   6

YEAR OF ANALYSIS

		1979	1980	1981	1988
AFTER TAX RATIO ANALYSIS					
35	RETURN ON NEW WORTH AFT TAX	0.0390	0.0436	0.0490	0.0874
36	CHANGE IN NET WORTH AFT TAX	638.	4734.	9332.	19295.
37	CASH RTN ON ORIG CASH EQUIY	0.0440	0.0367	0.0293	0.0568
38	PERCENT ORIG EQUITY PAYBACK	0.0440	0.0807	0.1099	0.4512
39	PRESENT VALUE OF PROJECT	924693.	903490.	885778.	823147.
40	NET INCOME-MARKET VALUE RTO	0.0541	0.0563	0.0585	0.0766
41	LENDER BONUS INTEREST RATE	0.0000	0.0000	0.0000	0.0000
42	DEFAULT RATIO	0.9538	0.9536	0.9329	0.7795

P R O   F O R M A

INVESTMENT ANALYSIS OF

550 DEMO PROBLEM

FOR

ORVIL P. ANDERSON

R E P O R T   S E C T I O N   N U M B E R   7   PAGE 1

YEAR OF ANALYSIS	1979	1980	1981	1988
MODIFIED INTERNAL RATE OF RETURN ANALYSIS				
RETURN ANALYSIS WITHOUT SALE				
41 CUM. AFT TAX SPENDABLE CASH	15400.	29165.	41153.	203356.
44 MOD. I.R.R. ON ORIG EQUITY	-0.9560	-0.7113	-0.5101	-0.0528
45 MOD. I.R.R. ON CUM. EQUITY	-0.9560	-0.7113	-0.5101	-0.0528
RETURN ANALYSIS WITH SALE				
46 CUM. CASH LESS ORIG EQUITY	13656.	29774.	48712.	281168.
47 CUM. CASH LESS CUM. EQUITY	13656.	29774.	48712.	281168.
48 MOD I.R.R. ON ORIG EQUITY	0.0390	0.0417	0.0444	0.0607
49 MOD I.R.R. ON CUM. EQUITY	0.0390	0.0417	0.0444	0.0607

The lakeshore versus the hilltops and the valleys and so forth were in a large part a matter of the decision institution that characterizes the body - those institutions were in a constant evolutionary process. The real estate was determined as much by politics and sociology as it was by investment finance and the logic of business.

As a result, real estate here at the University always retains a very multidisciplinary view as opposed to other schools where real estate eventually gravitated to the finance department of the school of business and all things were presumed determined by the present value of capital. We continue to retain the traditional Wisconsin view that real estate is not a commodity per se but, in fact, it is a representation of an institutional process that's relatively complex - that our cities merely are reefs built out of the secretion of skeletons of earlier decisions and those those skeletons have political and social and economic, as well as geological origins. And that man really is the only animal that builds his terrarium around it as he goes. And real estate is really the business of building that terrarium and maintaining it. And, therefore, we are really concerned with the life qualities, as well as, the work qualities of the society which we are attempting to house with our real estate. That gives us perhaps the hottest ethical content of any artifact of manufacturing process that we have. And it also gives us the highest level of complexity in terms of the interaction between that terrarium and all of that which lives within it.

Your textbook, on the other hand, and most real estate textbooks and language that you hear elsewhere talk about something called highest and best use. Highest and best use is that use which maximizes the wealth of the individual - classic laissez faire, 19th century economics. We know for a fact that doesn't work very well and, therefore, one of the things that we hope to train you to do is to think in terms of two other terms, which will require considerable expansion as the course goes forward. And one is going to be called the most fitting use.

The concept of most fitting use is that use of the land which produces the most significant economic surplus while at the same time having the least adverse impact on third parties - economically, environmentally, culturally. It is obviously a normative ideal - a goal toward which you are striving. But modern problem solving doesn't let you ________. First of all, define and identify the ideal solution, you'll never know whether the current solution, the temporary solution is moving you in that direction or not. The guy who invented penicillin - is his only problem was - excuse me, the guy who invented DDT - if his only problem was to get rid of mosquitoes, he did a hell of a job. But, again, in a larger sense on this total problem he probably wouldn't have moved in that direction because with that solution came far more problems than he had with the mosquitoes to begin with. If he had a better idea what the ideal solution was in terms of insect control he probably would have moved in a different direction in terms of the solution. So we need to have first of all, a normative ideal - where is it we're trying to go? Realizing that we're going to fall short of that because either our technology or our politics or our decision process or topical shortfalls of resources at a particular point in time don't allow us to make that all in one jump. So then we'll fall back on the so called most fitting use to what we'll call the most probable use.

The most probably use recognizes that in the short term and relatively shortfall, conclusions to many of our problem solving. But at least that's moved in the most probable use looking toward the most fitting use. We should not close the door on our eventually arriving at the most fitting use. So our terminology here will be, first of all, to identify all of those elements in the solution which lead toward the most fitting use. And then how do we evaluate what we can accomplish now in accomplishing the most probable use.

One element, in terms of real estate, that seems surprising I think to most - after all, you've all been standing on real estate all your life, you must know all there is to know about it

- is the complexity of the problem. And Patrick Monehan, the Senator from New York, who is quite an analyst, put it forward this way - he was talking about housing policy. He says, "We've never learned to be particularly bluntfull about the task of running a complex society. The essence of tyranny is the denial of complexity. It is the great corrupter, it must be resisted with purpose and energy. What we need are great complexifiers." So this course is going to be common sense made difficult by complexity. And, hopefully, in the process, you will 1) gain a better appreciation of those that put real estate together, 2) perhaps be more sympathetic on their failures and more appreciative on their successes of the urban environment, in which you will spend most of your day.

The old concept of highest and best use productively valued as really to be simply a self serving product of the National Association of Realtors. It really has some very deep historical roots. Cultures and society from the beginning of time have become civilized as they have learned to grapple with the allocation of the benefits and responsibilities of land. That certainly is almost always the beginning of some sort of legal system, is how do we allocate the benefits and responsibilities of land? In North America the first hint of private property came from the Indians along the St. Lawrence estuary who had no concept of property whatsoever - who were as close to passive as you could get in terms of how to live with nature and in some sort of natural rhythm. But they found that as the French introduced fur trading that there were those among them who tended to overhunt the territory and kill off the breeding stock so that, as a result, there was no adequate regeneration of the fur bearing animals that were in demand by the French. And, therefore, the Indians actually had to divide up the territories among their various family and private structures in such a way that they could only hunt for certain fur bearing animals within certain boundaries. And if they abused that recourse, then that tribe, that family unit, was out of trading materials for the next time around. Relative to firewood, relative to food, relative to all the other things that the forest and the natural environment provided, they still had no sense of property. But they found that in order to have administrative responsibilities for the resource that it was necessary to delineate turf. A lesson that was relearned from Mesopotamia and the Babylonian Empire went to considerable expense to bring water for the land. And found that it was necessary to allocate certain fields to certain families to use the water properly. Because if they didn't, they didn't eat. And that was the best way to allocate administrative responsibility for the resource. So that private property rights really grow out of the need of society to allocate not only the benefits but the responsibility of resource management. And ironically, that's where real estate began as a subject area. That's what Healy and Carmon were interested in. How do we control in the cheapest fashion the responsibilities for the wide use of our resources and, obviously, a major resource being land and that which pertained therein. And so we're really looking at real estate in that effort. As most of our decision processes are still trying to balance off the responsibilities and the rewards for wide use of the assets - because it's in the public interest to do that with the least amount of administrative hassle.

Now highest and best use throughout history, societies and certainly in the European areas in which our country was first settled had highly structured land use procedures and allocations. And we'll look at those in the second or third lecture in terms of the value systems that were at work in determining who got to live where, and who got to farm where, and who got to do whatever it was they did at a particular location. That presumed, however, that you have 1) a very static set of values that could be passed on from generation to generation so that it sustained itself over long periods of time. Second of all, by the very nature of the fact that our sewage systems weren't very good it presumed a relatively static population because otherwise the sewage problems and the disease that went with it simply overwhelmed the capacity that they had to deal with it and illness very quickly brought the population down to a level that could be absorbed by the natural landscape. And the third element was that technology was constant. The way we cut stones didn't change very much. The way we cut timbers didn't change very much and therefore the city beautiful, really built over multiple generations pretty much looked at the finish as it was planned to look at the start even though it spanned several hundred years in the building. Boston and many of the traditional eastern cities grew over slow, long periods of time and yet came out looking like they had been all been done by Disney planning department in a relatively short period of time. And, given that, you could have a consensus about land use and land gardens. Now come to the new world and suddenly the cultural stability that determined what the long term value of the city beautiful were were gone. Instead we have tremendous cultural diversity. Second of all, we no long had population that was static - we had population that was dynamic. We had to absorb increasing numbers of people at a relatively rapid rate and their social roles were no longer very clearly established by an outer controlled society. We had inner controlled people who were pursuing their own objectives and their own motivations as the Lord gave us ability to see it. And finally we had tremendous changes in our technology. The cultural revolution struck shortly after the founding of the new world and we began to see changes in our communication and our transportation system virtually every fifty to one hundred years, which drastically altered where we could go, how we could get there in terms of the costs, and so forth. And what it is we're going to have to expect of - our communication, transportation and our industrial network in terms of support. And so the three basic cornerstones of a land use consensus that controls society until the discovery of the new world, were gone. And the only thing we could agree on was 'them what takes the most, got to use it for what they wanted'. And if the steel mills could use the lake shore of Cleveland, then they got to use the lake shore of Cleveland. This was really the historical origins of laissez faire - highest and best use concept.

The only value system that remained was essentially those who could create the greatest economic surplus on it could afford to pay the most for it. And therefore the steel mills and the industrial areas and so forth often pampered some of the premier areas that, were we to have an alternative way of going about our cities, design and lay out and so forth might not have happened. By the turn of the century, by the late 1800's and beginning 1900's we realized that what was working. That we were creating urban areas in which there were tremendous conflicts among the users both in terms of what was fair, what was healthful and what was safe. And what we really needed some sort of regulatory framework to regain control of this laissez faire process of urbanization and industrialization that was going on. It wasn't until 1954 that the federal government made it a matter of policy that they would subsidize urban planning and each city could have a master plan as to how it should grow, and where it should grow and what it should look like in 20 or 30 years. Not only should there be a master plan but there should be a capital budget as to what capacity the community had to achieve those planned goals. That’s 1954! That's only 32 years ago that we began to recognize that there had to be a new consensus about what our urban process should be and how it should work and what the ultimate product should be. And we're beginning to see the results of that. Baltimore which had to be the pits in 1954 is emerging now as a beautiful city on the east coast with virtually total redevelopment in its downtown core. Downtown Boston which had to be virtually inaccessible in 1954, now draws more people for recreation than Disney World on a year-by-year basis. But that only happens over 30 years time. So there's been a quiet revolution in real estate which is really what we want to talk about in this course. The concept of fee simple ownership in which you could do with your land as you damn well pleased in the early 1900's has moved to the point where any ownership of real estate is a trusteeship for public purpose. The State of Wisconsin Supreme Court says, the land belongs in very small part to those who were here yesterday, a small part to those who are here today and a larger part to those who are here tomorrow. There is no inherent right to develop the land if it comes at the expense of the public health and welfare. That's the solution. That is a concept which your forefathers, who carved the land out of the woods, and stocks of trees and said "I conceived this piece of land out of the wilderness with my own sweat and my own blood and it's mine." It's moved to the point where we realize that land is a collective resource. Not a shot was fired _______, socialized basic resources of our country and we have continued to do that in a democratic process that allows you to interact with the decisions that are made about how your land is used, and about how your cities will be built, and how they will look and whether your neighbors should have chickens in the back yard. Incredible statement of the democratic mind and the mythology of land and real estate versus the reality of land and real estate is what this course is going to be about. Thank you. See you on Monday.

____________ is coming along with the syllabus and all the details. We'll get underway with a couple of announcements. One - the reading materials for this week's quiz section on zoning and the building envelope and so forth are out of sequence in the study kits - you'll find them at the back of the mimeograph pile starting about page 640 something. So if you're wondering where that set of materials for the problem is, that's where they are for reasons best known only to Bob's Copy Shop I guess. Second of all the Real Estate Club has its first meeting tomorrow night at 7 o'clock in the room right next door in Room 22 and our guest is Jim McFaddon - Kenton Peter's associate - and the subject is the convention center design alternatives for downtown Madison which should be fun. And, in addition, they will be talking about the summer internship program. We typically have about 35 or 40 of our Real Estate students scattered across the country in various forms of summer internships and we'll explain how that works and I believe all of that will start at 7 o'clock in Room 19. We'll do our guest speaker first and the internship elements second. And I think you’ll find the, if you haven't already found, the arguments about the convention center in the newspaper a fine topic area for anyone interested in real estate. So that'll be tomorrow at 7 o'clock. And to give you some further information as to what the balance of the semester's programs are going to be. Young lady with her hand up. Yes, ma'am. Question: This may seem like a really trivial point, but it's really not obvious to our people. It would really help if people would come early to fill in seats in the center, not allowing the luxury of having a number of empty seats around them for those of us who can’t come early. It really causes problems. All right, we'll write a compact. Any other questions, statements, announcements? Anybody missing a syllabus at this point? OK, we'll get underway.

Real estate began sometime along where some Neanderthal rolled a rock and cut out of a cave and created a space unit that was artificially delegated to the void around him and in the process created an enclosure to house some kind of activity. And to give that activity some sense of closure, defensability, warmth, etc. ultimately he learned to paint on the wall to provide to some status and esthetics. But, essentially real estate grows out of that experience as artificially differentiated space with a fixed reference point to earth. It begins first of all as cubic and then we add a fourth dimension, time. He may have occupied it for several moons. Today we have perhaps, somewhat more sophisticated calendar, but we're always talking about a space/time unit. Now in the abstract we talk about space/time but when we talk about specific products we're talking about a room for a night at a hotel. We're talking about square foot by the year. We're talking about apartments by the month. If we do an ice arena we're talking about ice hours for a rink for a hockey game. Or, we're talking about even so many frames at a bowling alley - are still space/time units. And, as a result, the basic product of real estate is space/time. And there is a great irony there because we're always so concerned in picking the walls and the dirt and the things which seem so tangible and yet the ultimate product of real estate is space. Space designed to enclose and enhance some kind of activity. And the efficiency with which we do that, of course, continually improves. We have moved a long way from the mountain necessary to enclose the cave, to relatively thin curtain walls to enclose a much more efficiently shaped piece of space to a point where the Germans even have very tent-like structures in which the mass of the structure is minimal relative to the total volume of space enclosed for festivals, world fairs and other types of events such as symphony orchestras in the summer and so on. Even if we talk about a wilderness park or whatever, we're still talking about artificially delineated space. Congress saw the line around hundreds of thousands of acres and said, "We will not touch that for a century or two centuries." Or we put Alaska or large portions of it into a permanent preservation area. And, obviously, it's artificially delineated. It depends, obviously on the nature of the legislation and how we draw our lines and how we define our space and to what degree we can violate the air space above it. And, for that matter, whether we create parks below water for scuba divers. We're nevertheless creating artificially delineated space.

And that space has developed some rather unique characteristics. When we draw a survey line and we define a square lot, let's say, on a two dimensional surface. In fact, you are presumed to own to the center of the earth, were you to take a ray off each corner of that lot you would send them to a point where they converge at the center of the earth and move into the air as high as man can make use of that space. And so when you own a lot, you really don't own just a surface, but you, in fact have a technical claim to the volume below that surface and the air volumes above it. So, at some point when the airplanes begin to land too low on the envelope approaching the airport, they are in fact encroaching on your land and you can sue the government for adverse possession of your air space. And at some point if Chicago decides to put a storm water system 500 feet below the earth to carry off major storm water problems and so forth, they have to condemn that area well below your space. And one of the great ironies of the Mount St. Helen's volcanic explosion in Washington was, if you'll recall, there was a little resort area called Spirit Lake made famous by a man called Harry Truman that got buried in the mud. And, when the explosion was over, Spirit Lake was now 700 feet higher than it was before and a half mile to the South of where it was before. In fact it was directly above the subdivision that was, at one time, along the lakeshore. Now the Department of Insurance of the State of

Washington ruled that the cottages had been destroyed as a matter of fire and, therefore were fully covered under their fire insurance but the lot owners were still a little sore about the fact that it was going to be very difficult to sell their lot which initially and novelly appeared to them to be 700 feet below the mud. And the State of Washington thought it necessary to drain the water off of Spirit Lake, which had no outlet any longer, and lest this cause another mud slide into the river system, and, as they began to lay pipe across the land to get to the lake, some bright attorney representing the owners of the subdivision said, "wait a minute, that lake is on our land, we own it. And, in almost any other situation, the lake bottom is always owned by the state, it was never, in fact, in private ownership. But, in this instance, the lake bottom was a platted subdivision in which they had title. And they said, "you can't drain our lake unless you buy our lots first." Well, what's the price of a lot? And, initially the state's attorney said, "well that's ridiculous, your lot is 700 feet down." "Well, no it isn't. It's platted on a surface that happens to be 700 feet below the top. But, nevertheless, if we run our mythical lines up the corners of the lots, and so forth, we own all of the volumes of mud that are on parked on our lot and, therefore, in essence we have, in essence, a new surface to our lot and you're running your pipe to take the water off of our surface of our lot. And, the State of Washington had to buy their lots for $1,500 apiece in order to quiet the title, as it were, to Spirit Lake.

So when you begin to think about real estate, think in terms of space/time. And, that that space/time is a relatively unique kind of commodity. And that only after we begin to add improvements do we begin to create attributes for that enclosure that enhance its suitability to house a family or house a business, or enclose a store or create some kind of germ-free environment suitable for the production of some pharmaceutical drug, as the case may be. So space/time is our product even though we spend a great deal of time with some things called walls and floors and ceilings and so forth. It is simply a way of defining geometric spaces to enclose an activity.

The history of man is about a thousand life times of 40 years each, man has lived in caves primarily for about 750 of those. So, already in one sentence we have explained 75% of the subject of real estate and this course is on the balance of the 25%. The utility of the cave as an economic good, as I said, was its ability to house an activity. Obviously, the mountain provided a certain amount of air conditioning or control on environment. The solidity provided some kind of defensible space and so forth. And simply the technology of building has always been moving toward providing the same sense of shelter and character as the cave both physically and emotionally but trying to do it with a great deal less bulk. In fact, virtually every technical improvement in building science which has survived is those kinds of materials and things which have reduced the weight and bulk of the structure. Think about the evolution of the structure in the U.S. which began with heavy logs and so forth and it only went to 2 by 4 balloon framing. It was lighter, easier to ship, easier to work with, more flexible and more moldable. And if you'll look at the history of downtown Chicago we built building initially with big solid brick load bearing walls and columns and it was too heavy for the ooze on which Chicago is built. And so we moved to light steel internal framework and outside brick bearing walls and then to a total steel frame and then the steel frame was very light curtain walls using various kinds of laminated materials in order to provide the same insulation and weather control and climate control that the caves used to provide but with a lot less weight so that we could go higher and create more usable space for the amount of ground area that was occupied and so on. And a very small increment in usable space per floor can be a very significant element in the value of the building. Think about going through a wall let's say like this which is built with approximately 12 inch block with another 4 inches on the outside. That's 16 inches thick at least. If we take 12 inches off that wall, all around the perimeter of the room, how many square feet of space have we created? And if we're in downtown Chicago and usable space rents for $25 a square foot. That's a sizable piece of change per year. And extrapolate that out over 30 or 40 years and by a technological innovation of a 4 inch thick wall with the same insulating and safety characteristics of the 16 inch wall, we've modified our structure significantly. So, think in terms of the space/time enclosed - how efficiently we do that, as becoming a very significant element in the technology of real estate.

Now, man-made improvements really represent the manufacturer of artifacts, if you will. Certainly real estate is no different than any other major manufacturer of capital resources. Certainly a good part of the manufacturing process is unique in terms of the bulk and weight of the final product and so on, but, nevertheless, it is a manufactured product to that extent. But it's also a service. Real estate is a highly unstable element, if you don't think it's unstable, just leave your windows and doors open one of these nights and notice the amazing organic difference to your plumbing system and your heating system and how rapidly the building starts to deteriorate as a result of rain coming in and ice beginning to build up. It requires constant attention. Someone once described real estate as having the glide angle of a brick. Therefore, it is almost always a combination of a service and your manufacturing product.

Now, if we define space between all of our various improvements from survey marker to our ultimate structural element, how do we define time? Time of course is the product of our legal system and we have two major categories in real estate - a so called free hold estate in which time is at the option of the owner and a less than free hold estate in which time is at the option of the contract. So if you own your house, you can stay there as long as you wish until you choose to sell it subject to certain limitations under public policy down at the bank. But on the other hand, if you rent the home you're there from month to month or you're there for six months or you're there for a year - some type of contract or social custom provides a time limit on your benefit and possession of that real estate. So we have free hold and less than free hold estate.

The definition within that time then further has to suballocate who benefits, and who is responsible. And real estate is a very elastic medium in which we begin to define benefits and your ability to sell those benefits back and forth with very, very fine lines of distinction. So that we're working in a very plastic fluid medium. Most people look at real estate as something rather static. If you go kick it and it doesn't seem to go anywhere, your foot tends to have the lesser of the barn and so forth. And yet real estate as we will see becomes a very elastic medium. I can convert real estate into virtually any kind of money contract I want and any degree of benefit that I might want. The fine art of that a couple of years ago was practice in what was called the Payhon Agricultural Syndication in which the Payhon Ranch wanted to develop much of its undeveloped land in orchards and irrigated land and so forth and it wanted to be able to finance that in the most favorable way possible. And so it technical sold its land to a syndication that provided the money to create these orchards and tiled fields and irrigated lands and so forth because the tax law was very very favorable in allowing you to write those off as expenses of that time. And therefore you got great tax shelter going through to those who provided the money - in fact, you could write it all off in five years. The only right essentially that the owners got under the fee, subject to all the covenants that controlled their use of the fee was the right to take the tax losses. Any other benny that came along was still in the hands of the Payhon Ranch. And yet it was so artfully crafted by the lawyers that it represented a sale of the title which was all that was necessary to transfer the depreciation rights to the investor. And as a result, by selling the shelter for, say, fifty cents on a dollar of shelter, they were able to finance half of the development without any hard dollars being put out by Payhon Ranch at all.

The balance of course was financed with debt. At the end of five years they had a clause that they could buy back any interest which appeared to the benefit of the fee holder for an MAI appraisal of the property. Well, how in the devil do you figure out what there was to appraise. There was virtually nothing there, other than the right to receive further losses of which there weren't any. And so for a very nominal price they bought the title back. But for that very short period of time, whatever tax benefits were under the code were available to the nominal holder of the fee. So we can carve up this interest in real estate into extremely sophisticated combinations of benefits and responsibilities under the law.

The law, of course, is a reflection of our political machinery and our legislature which in turn are expressions of the values of the citizens that are passing out legislation. And as we have suggested since 1900 there's been a very quiet revolution in the nature of the private interest in land. And that's one of the confusing aspects of studying real estate. We still talk about a fee interest in land, but the fee interest in land today is not what it was five years ago, nor is it what it was twenty years ago, and so forth. And as a result while the language tends to remain static the substance of this language - the meaning of the language is constantly shifting in real estate. And, therefore, we tend to talk about things in old

English that King John might have had in the Magna Carta, but I don't think King John would recognize much of what we trade in real estate today. In fact, one of the major arguments in the law right now in real estate is how much real estate is real estate. For example, the major case that we just argued in New Jersey - Quakerbridge Shopping Center is a million three hundred thousand square foot shopping center in which it is governed by a unique contract among the five major department stores who say they will stay open for thirty years, operate under their brand names, provide six thousand units of parking, contribute to the merchant's association - on and on and on - creating a unique marketing franchise opportunity in something called an operating agreement. And then they lease space between the department stores to smaller stores who want to play a part in that total center development. Now along comes the state of New Jersey that says, "Hey, wait a minute, that whole deal is worth 70 million dollars and that's what we're going to tax it for on real estate. And our attorneys are coming back and arguing, "Wait a minute, friends. The land cost us so many dollars and it cost us all together 35 million dollars to build the center. The other 35 million dollars is because of the unique business risk and management and marketing characteristics of the operating agreement, and the operating agreement is personal property and there is no personal property in New Jersey subject to tax." At what point does the personal property and the operating agreement become part of the bundle to the right to real estate? We're not quite sure, nobody is quite sure as to when you transcend that interesting difference between the bundle of rights which are inherent in fee real estate and the bundle of rights that you acquire when you buy a real estate business - they become merged as a public census and it's very difficult in many legal cases to decide where one stops and the next begins.

Ironically, the private rights to real estate are those which are left after the public has defined their interest - a seldom known reality in real estate. The U.S. Constitution reserves, first of all, first right of claim on productivity of the real estate through the real estate tax. And as Justice Holmes, at one point, observed the power to tax involves the power to destroy. You can create a real estate tax which is equal to the total productivity of the real estate and sometimes do. First claim on productivity goes to the public via the real estate tax. That grows out of the old tenure logic in which the yeoman has to provide a certain percentage of his crop to the landlord and the landlord had to provide a certain percentage of that to the noble and so on.

Secondly, the constitution says that the public has the first right of control - that your right to use is always a right to propose, but the public can dispose through the police power.

The public can provide infinite to ad nauseam detail on how you can use your property and when you can use your property and if you can use your property at all for certain kinds of things. The police power is noncompensatory. If the planners paint you green for open space and Charlie over there red for apartment house. Charlie just won a fortune and you just lost your butt. There's no compensation for that. That's police power. If you have a filling station which depends on left turn and they put a median strip down the boulevard and nobody can make left turns, tough luck Charlie that's police power. That's considered to the betterment of the health and welfare of the community and as long as it falls under the police power provisions of the constitution, no compensation.

And to the degree that you do have any vested interest in the land, that may be identified or perceived by the courts, government can always reacquire it by the payment of tax through the process of eminent domain. Therefore, private property is defined by what's left after the government has determined how much to tax, after the government has set the police power rules and after the government has decided what right’s to reacquire through eminent domain. Since the taxes are steadily increasing and can be expected to do more so under the Reagan administration, and two police powers are spawning at an incredible rate and because the frequency with which we apply eminent domain even to parcel takings is also increasing, private property has to be declining steadily. And as we mentioned in the earlier lecture, Wisconsin regards private property as a trusteeship in which you enjoy the benefits for having taken over the custodial responsibilities for society.

Now a real estate project is really a cash cycle enterprise. In systems engineering parlance today, an enterprise is any organized undertaking - any effort to set about achieving a certain goal in a rational systematic way is an enterprise, whether it involves one of you or a dozen of you or thousands of you. And because we are in a money economy, most enterprises are cash cycle enterprises. Which means you begin with some kind of money in the bank, you acquire raw materials and services, you have goods in process, ultimately you have sales and accounts receivable and you're back to cash again. The great majority in cash cycle enterprises are intended to break even, only a minority are even intended to be profit taking enterprises and of those that intend to be, only a minority of them are. The State of Wisconsin is a cash cycle enterprise as is the University of Wisconsin, as are you as individuals and as households. And the one thing a cash cycle enterprise has in common with all other cash cycle enterprises in our economy is that if you don't balance the checkbook on a regular basis, you self destruct. The number one rule of any enterprise in a cash cycle situation is to survive. Solvency. And that's true whether we're a city of Madison, or the University of Wisconsin, or an individual household. That becomes the basic ground rule by which some kind of agreement can be accomplished among and between all of the various parties that may have a vested interest in a real estate transaction. We have a fixed point against which to negotiate, which is solvency and survival of the parties at interest.

Now, a real estate project, as I say, is an organized undertaking as an enterprise and generally requires a great deal of expertise. It's all done on expertise. So the real estate business really includes any expertise involved in a real estate project - architects, engineers, lawyers, planners, finance people, leasing people, property managers, etc. All of them bring to bear some form of expertise on the project. Now the project ultimately will be a space time product with some service component and it will always have a corresponding money/time structure. So be begin in this course with a truism that space/time = money/time and that's a reversible equation. You tell me the amount of rent you got to spend and I'll tell you how much space I can find for you that's warm and dry in a given semester. And, by the same token, if you bring to me the capital budget on the Taj/Mahol, I'll tell you what the rent structure's got to be in order to justify the capital and services and so forth necessary to go into to creating that enterprise. Give me a space/time requirement and I can give you a budget, give me a budget and I can tell you how much space/time you're going to get for the money. It's a reversible equation. Space/time = money/time.

The real estate business expertise is always involved in that transfer and money is the energy transfer system. So the real estate business is any business, any element of expertise, involved in that interchange between money/time and space/time. Now, once that becomes apparent some rather interesting things occur. First of all, virtually all of the profits that are in real estate are in the sale of expertise. Even the expertise of how to get a log converted into two-by-fours or how to get rock converted to cement is nevertheless sale of expertise. There are, therefore, a whole series of profit centers in real estate in the outlays and the one reason that people control the real estate enterprise is to control the outlays. More money is made above the net income line in real estate than below it, because each expenditure in a real estate operation is revenue to somebody's expertise - whether it be the leasing agent or the insurance agent or the contractor or the lumberman or the cement maker or whomever. Each outlay in a real estate enterprise is revenue to somebody's expertise. And, ironically, one of the major reasons for controlling real estate is to be able to divert, obviously, some portion of those outlays to your expertise. Therefore, the only definition of ownership that works in explaining real estate is trying to identify the degree to which you have power to divert cash to your benefit - legitimately, obviously as the ___________ etc. Fee ownership is the ability to divert cash from the real estate enterprise to your benefit. We'll come back to that theme again and again because there are so many subtle ways to do that.

But one of the elements that falls out of that reality is the fact that the public is one of the major owners of each piece of real estate because of its ability to divert cash flow from that real estate. The ability to assess a real estate tax and collect it, the ability to charge fees for the use of public services, the ability to require that developer, for example, to set aside $1200 out of each lot sale to fund the public park system or to build schools or do any one of a number of other things, exactions as they're called on the development process, indicates the degree to which the public owns a piece of every real estate product. And that's bankable. The public can borrow on that ability to divert cash flow in advance. We'll be looking later at something called tax incremental financing - which you'll hear a great deal about in Madison. And what it really says is, "Hey, me as the public, if I build a parking ramp for you and you build the office building, I'll take the real estate taxes from that office building for the next 15 or 20 years to amortize the investment I put in the parking ramp. It is to my interest as a city to create jobs downtown and people who will shop at the stores downtown and to keep the spending power downtown by making discrete investments which help make your investment work better." If I build a convention center for you, I can charge a room tax for 9% of the room value and I can have shoppers in the stores which will support the rent values which, in turn support the real estate tax base of my community and I can borrow on that. So we're not talking about something abstract. We're talking about a bankable interest in each assessable property in the community. So again, fundamental principle - the degree of ownership is the degree to which you can divert cash flow to your benefit.

Now the real estate process really involves the interaction of a whole series of cash flow enterprises. And if you look at the circular drawing in your thing - I was in my early compass period here - we have three major groups. The space consumer group at the upper end of the area, the space production group and a public interest structure group. It's much like that says "the big wheel stayed up by the grace of God" if that's the top - that's the drive wheel, demand for some kind of space. Traditionally we were only interested in the space user group - those who were going to rent or buy space in which to enclose their enterprise, their household, their store, their industrial plant. But in the last 20 years, two other groups have come up of virtually equal power. One we're going to call a collective user - those who see a real estate decision as affecting their cash cycle but who operate politically to accomplish that. Instead of being in the market place as tenants or buyers, they operate collectively through the political process to accomplish the kind of real estate they wish to see accomplished. We'll look at that later when a citizen's group says in Palo Alto that we want more green space and that we want to maintain low density. The fact of the matter was, they didn't want to share their tax bonanza with any other residents. Two-thirds of the taxes of Palo Alto are paid by the industry in the Silicon Valley. And, as a result, you can live in Palo Alto and enjoy enormous public benefits in terms of education, libraries and all the other good things and hardly pay anything for it. Why would you want to allow more residents into to share that so that 50% of your costs rather than 80% of your costs were being paid by somebody else. The collective consumer suddenly got holy and said we really need to maintain green space on the western edges of Palo Alto. Hooray for conservation and ________________. The collective user operates to a point today where virtually all real estate, first of all, depends on the entitlement provided by the collective user. If you can't sell the older person in the planning committee in your ward, the chances are you're not going to get a building permit to do what it is you want to do. When a taco parlor wanted to go down on Williamson Street, even though all the laws in the world said they could do that, the neighbors said we don't want it because it's not an ethnic taco parlor and they didn't have to put one in. The collective users.

And the third group we're going to call the future users. They have a great deal to say about what gets done today too, although they don't know it. Future users really are of two types. The relatively smaller group is the one represented by the Sierra Club who says that the children of tomorrow should have the right to screw up the world just like we did and therefore we ought to save a little piece of it for them to screw up. That's not the folks I'm worried about in this case. We're talking about a much larger group of future users who are going to be the next users for what we build. Because virtually everything we build today has such a short useful life that, in fact, it will go through three or four or five cycles of reuse by new groups. And unless we anticipate that flexibility and adjustability, we are going to waste a great deal of our resources. For example, the Towers Building on State Street - classic example of an architect coming in at a point when housing was in short supply for students and saying, "I know what the perfect place for them will be, it will be a tube that is about 9 feet wide, 7 1/2 feet high and 30 feet in from the corner to the window. And in that tube we're going to have two metal desks, two metal closets, two metal bunks, two metal chairs and a shared bathroom with the unit next door. And we can build those really cheap." Northwestern Mutual said, "Look at that, you dummies over there at the State, you don't know how to build a dormitory. We can do it for 40% less than the State can." And so distribute to architectural and systematic construction went up - highly specialized, highly focused on what the student residents might require as an architect's perceives it anyway. So then the students came home from Nam and said, "Hey, whaddaya mean we have to live in dormitories until we're 21. Whaddaya mean we've gotta have house mothers and hours and no drinking in the dorm, you gotta be kiddin." And the University with a stroke of a pen said, "yea we were kiddin. Live any way ya want." Well, the last place they wanted to live was in the Towers. Now the architect had been brilliant. He said, "you know, we'll build the walls out of concrete and while we're building the walls out of concrete, they might as well be structural, right? no sense wasting all that concrete without making it structural. And, students don't weigh all that much so 75 pounds per square foot floor load is great adequacy and you know if we cut every floor by about 10 inches in height, we can get one more floor before we reach the maximum height allowed on that site which is controlled by a Madison ordinance which says no building can be higher than the base of the columns on the Capital dome. And they did it. It was beautifully engineered. Only one problem, nobody wanted to live that way. So, of course, naturally in the state capital the first try is, "Gee, it doesn't work, we're going bankrupt, let's sell it to the State." And, of course, the State dutifully comes down and looks at it and says, "Gee, guys we'd really like to buy this for office building, but we need 150 pounds per square foot to handle all our file drawers, the number of lumens isn't enough to shed any light for bureaucratic performance so we'd have to put in a dropped ceiling, more light and that means only little people can walk around in there." They say, "Let's convert it to apartments, well the room shape is a little - goofy so we're going to have to knock out the wall - no we can't knock out the walls because they're load bearing. So you go around in a circle and the highest and best use comes out perhaps as a breakwater when Madison becomes a deep water port. Now don't laugh, Madison could have been a deep water port if we'd only had legislators like they get down in Texas and Tulsa. They can a dig a canal from the Gulf all the way to Tennessee for a deep water port and fund that pork barrel with _________ _________ and Baker or they can get the boys down in Texas to make Tulsa a deep water port and, yet, they're hundreds of miles from anything that looks like water. And we're only 80 miles from Lake Michigan and we're a deep water port. So what do we get? We get honest, well meaning, intellectual, liberal Congressmen and can we get any graft? No. We still believe in democratic government - a great handicap to our shining state. Anyway.

And the Towers Building is a classic example of no consideration of the future user at all. Said, "hey, wait a minute, maybe tomorrow we don't need that kind of space, maybe we need a different kind of space." So the more generic, the more flexible, the more opportunity that we have to convert our space to the next use, the longer it will maintain its resource value. Down in Newport Beach which is certainly anybody's dream of where it will come true, I guess, they built industrial buildings a few years ago with 22 foot high ceilings. Now the average industrial worker can't afford to live in Newport Beach any more and so those buildings only five or six years old that have survived and maintained their value are the ones that got converted to office buildings by putting another floor right through the middle of the industrial space. The charm of the old New York brick warehouses and so forth downtown is their total generic flexibility of simply being space fine cubes in which we continue to re-engineer the interiors to adapt to the places for textile manufacturer or clothing industry or apartments or artist studios or whatever the need of the moment may be. So today our space consumer group you really have to keep your eye on three groups: 1) what's our collective consumer going to think about this and will they get entitlements to do it? 2) what's the next use going to be have we closed our door dramatically on virtually any other reuse of the project because it has a relatively short social life as it were? and 3) finally can our space user afford it? Can he afford to rent it? Can he afford to buy it? Does it provide what he wants, where he wants at a price he can afford?

The space production group are those which are involved in creating the real estate projects on the site. It doesn't have to be public, it doesn't have to be private - they're simply involved in creating the product on the site as opposed to the public infrastructure group which creates off site elements of the total product - the water system, the street system, the fire department, the police department - all of which are necessary functions which have to be provided in one form or another often have collective economies of scale which are better to be done off site and then the water is piped to the site or the sewage is piped away from the site or the streets system brings them to and from and so on. But it's just as much a part of the real estate. If in fact you don't go into an urban area and you have to go out into the hinterland, you have to create all of that for yourself. For those of you who travel up and down interstate 90 probably see from time to time that the White Gear Company plans along side the road, on the east side of the road, and in front of it is this marvelous pond with fountains and swans tootling around and so forth. And everybody says, "isn't that sensitive of them to provide that kind of rural aesthetics." That's got nothing to do with comfort, the fact is there is no water system out there and to have a decent fire insurance rate they have to have so many gallons of water above surface in order to feed their fire system and you can't get it all plugged up with algae and gum and muck so you got to aerate it to keep the water clean. You got to have a little swan paddling around to eat the debris in order to keep the water quality up to a point where you can pump it around the outside of the building and bring it to the point where the fire is. It's all part of their insurance rate. In this case the off site services that might have been provided in an urban environment, have to be created on site. So there's a great deal of flexibility in terms of the infrastructure that may go on site or off site but we make the distinction that if it's off site we're talking about a collective kind of business which may be the water utility or the bus company or the recorder of deeds, all aspects of government and so on. But if you don't have that off site, then you're going to have to create it on site. Fire engines, security service - you name it. In fact, at one point when Connecticut General moved out to its SOM designed glass box in the hinterlands of Hartford, CT they were devastated to find out they were losing all of their key employees because the key employees couldn't do their convenience shopping during lunch. They we used to going to the shoe repair or handling the various domestic matters during their lunch hour. They, in fact, had to convert the first floor into a retail shopping center so that there was a sportswear shop for the ladies and a shoe repair shop and a liquor shop and a delicatessen and all of the other things that they normally did during their lunch hour. And then they had to add a bus besides that would ferry people down to the major regional shopping center so they could do the kinds of things they used to do in downtown New York City during their lunch hour. If that infrastructure isn't there to support, the on site isn't going to happen. And sometimes that gets very subtle. For example, we were involved in a case out in Seattle in which they suddenly realized that there was one beautiful little truck farming valley just on the edge of Seattle that was known for its strawberries and its other kinds of truck farm production might be becoming encroached on by estate type development and become a residential area, and so they decided they wanted to save it and they would buy all the development rights and allow everybody to remain as a strawberry farm and compensate them for the loss in value because they couldn't sell to subdividers who were going to create single family homes. So when they got into it and analyzed it, they discovered, due to their sadness, that that point had already tipped over. That there were not enough strawberry farms in the area to support a packing house, which was necessary to provide an outlet for marketing it. It wasn't there in sufficient strength to support an agricultural supply organization that provided the fertilizers and the seeds and all of the other technical support. And, in effect, it was no longer possible to have an economic strawberry industry because the infrastructure necessary to supply it, and support it, and provide a market for it had already evaporated because they had moved beyond that critical mass necessary to support that kind of economic base. So you need to look at all three of those elements - who our space consumer group is, what kind of public infrastructure do we have and what space production groups do we have. And the one thing they all have in common is that they are organized undertakings on a cash budget. And whatever solution you find must be able to allow each of them to survive at their cash break even point at the very least.

Now, the solvency is only the first point of departure. Obviously to continue simply to break even is a somewhat discouraging effort and, therefore, we generally need to provide some sort of surplus so that the managers of the enterprise gain credibility with those to whom they report. The mayor who could provide a surplus in his city budget will obviously have considerably more political power than those who end up with a deficit. And the same is true whether you're running a hospital, or a university, or your own checkbook at the end of the year.

Your spouse will allow you to control the checkbook another year if, in fact, you have achieved a surplus. So, cash is the requirement to enhance the credibility and efficiency or reputation of efficiency of the manager. So we need solvency as a base point, we need a cash surplus in order to create stability of the organization and credibility of its managers with those to whom it reports - whether it's the board of directors, the board of trustees, the city council or any of the broad elected constituencies if you're running a little co-op on Langdon Street, the management better well produce a balance on the books and a little cash surplus if they're to retain control into the next fiscal period.

Beyond that, we have, of course, we have the larger social issues of are we using our capital and our cash efficiently. Only after we've achieved survival, only after we've achieved credibility, if you start to play intellectual games that says are we optimizing, are we doing this efficiently? In this day and world if you can just survive and make a little to set aside for the future - you're optimizing baby - no matter what they say across the street. Internal rate-of-return is an intellectual exercise which has almost no relevance to the management of an enterprise. All it says is, "gee, I wonder what my ratio of repeats to outlays is over time" and obviously, there is no final point that represents nirvana and final success for the enterprise. You'd obviously like to be able to see if you could tighten up the enterprise and do better. While all of the intellectual can conceits of capital pricing theory and so forth are simply targets by which we begin to motivate and measure performance but are certainly not the objects in and of themselves. The object of any enterprise is not profit. Profit makes possible the other goals of the enterprise, generally the life quality of management. It doesn't matter if it's a university or a private enterprise. Profit is not the object. It is the means to the objective and the objective is to enhance the life quality of those who run the enterprise. That's why universities are run for faculty, not for students. After all, if we were profit minded, we'd take much better care of you in a sense that we could keep the surplus from your tuition. Since that doesn't work in a public university, universities are run for faculty - they're run for chancellors - they're run for administrators. The number of degrees that we produce is simply a by-product of the attending to the life quality of those who would life to live in Shangri La.

Now, the concept of highest and best use that we addressed in the first lecture simply presumes that we were going to maximize wealth. It was one of those internal rate of return things and it was so narrow that it was simply trying to maximize wealth for the property owners - laissez faire, 19th century economics. But it taint so. Because of the democratic process by which real estate is created in dialogue and in stress between the consumer group, the infrastructure group and the production group we do move effectively towards something called most fitting use. Most fitting use is the optimal reconciliation of effective consumer demand, the cost of production and the fiscal and environmental impact on third parties. That can't always be measured in financial terms. It has to be measured in terms of esthetics and satisfaction, as well as respect for other interests. The reconciliation ultimately involves some kind of balancing of who pays and who benefits. Now we're going to come back to that theme again and again as a way of providing you and me some way of dissecting all of the heat and sound and fury of the real estate process and try to get behind the scenes and saying who pays and who benefits.

The most probable use that is recognized is the fact that we fall short of our ideal. The normative and that we eventually have to respect short term considerations in terms of technology, pressures on the consumer, or the actors that are involved in the decision process and that while we take aim on the most fitting use, we achieve the most probably use. And the most probably use is where we begin our analysis. How do we begin to identify the most probable use of a piece of ground or a piece of real estate.

And then we move out from there in terms of the larger issues involved. Bring your lecture notes to class next time.

OK, a course in problem solving. If you want conflict of resolution, it's my view that the university education can not only teach you to enjoy more about what you see about you, but indeed perhaps something to provide mechanisms for the conflict resolutions that will be needed as you move into the outside world. And real estate is really the battleground of virtually every major issue of our time and our society is a manifestation of one point in time of our weakest and our strongest points as a society and those battles continually are fought out over the development of each building. Can you imagine what would happen if General Motors had to produce each car by going down and getting a specific building permit from the city council and having the virtues and not such attractive features of the car open to discussion all over again and perhaps one of the council members saying I bought one of your automobiles and the ash tray didn't work and by golly I'll never give you another permit. And, now the city councilman is sitting there saying I lived in one of your apartments and you didn't change the washer fast enough and I'll be damned if I'm going to let you have a permit to build another apartment building. But, nevertheless, that's what the real estate process goes through. Each decision is another cycle through the public process of decision making. And, everything that can involve the social attitudes and conflict and viewpoints of our society, whether it be by class or by region or just by vested interest of the individual making the decision, manifests itself once again in the real estate process. That's what's fun about teaching real estate, in it allows us to preach on virtually every major issue that it can find at any particular point in time. And, the fact that anything gets built at all is a minor miracle and is a statement of the strong mindedness and willfulness of the ironics that we call developers in our society. But, nevertheless, the real estate process is critical. If we can not understand it, if we can not control it, and if we can not devote it to creative purposes, we, as an urban society, fail. And we are an urban society, there's no two ways about it. And, therefore, we need to understand the process so that at some point you can react knowledgeably to what you read, knowledgeably to what you participate in, and can do that without the paranoia that really doesn't permit you to tell your friends from your enemies so far as the terrarium about you goes.

Now in judging whether a real estate succeeds or doesn't succeed, there are probably several different models that we could follow. One, of course, is the physical model of the manufacturer of an artifact in which we tend to talk about some sort of template which represents the context, within which something is supposed to operate, and the form that we're going to give the ultimate solution. The artist initially talks about the physical form but in real estate we could extend that form into our legal arrangements and our financial arrangements and even the software of our organizational characteristics. But, in any event, context becomes all of those things which are given or all those things which are uncompromisable goals that we must have. And form are all of those options which are available to the designer in which he attempts to accommodate that context and solve a problem. Consider, for example, if you were trying to judge something so simple as Indian pottery spun off a potter's wheel and we were trying to determine whether it was attractive and successful as an artifact or a vase. It doesn't really matter if it's pretty of not. If it was intended to boil water and it had to boil water over a mesquite coal and someone was expected to lift it off of those coals and pour it into some other vessel and you need a certain amount of water to cook a certain amount of food, and so on. That becomes part of the context in which that has to operate. And, if in fact, the clay in the certain part of the southwest as a coefficient of expansion that limits us to certain forms and certain thickness of the clay, because otherwise the heat transfer will be unequal and cause it to crack open and split before we in fact have achieved the water, that becomes part of the context in which the artist must operate and control the curves and the form that he can provide that pot and get a thickness of the walls that it may have and so on. And if the glaze that we require to hold water from sinking into the vessel and so on, has certain characteristics and limitations, that becomes part of this context. Now, within those elements there may be certain elements of choice. So you only judge whether in fact the artist has succeeded in this complex problem of spinning a pot that we can then glaze and temper and use for boiling water. If it works, if it does accomplish what that artifact was expected to accomplish, and so in real estate we begin the same way. How do we define the context within which a particular real estate solution is expected to operate. And then what were the choices that that real estate decision maker could make from an array of options and now can we judge whether, in fact, that property works within that context. If it does, we can talk about it as a successful project. If it does not, no matter how attractive it may be, no matter how many awards the architect may receive, no matter how many dollars the developer can make, it's still a failure as a real estate project if there is a significant misfit between the form of the solution and the context at which it was expected to operate. So I'll give you these two very simple little illustrations. A number of years ago we had one of our summer interns working for Charles Shaw out of Chicago who had just done Lakepoint Towers, which was a very successful project, and it was proposed that he build an office building over the Roosevelt Street Station. The Roosevelt Street Station I think is the second or third one down going south from Randolph Street on the Illinois Central. And the premise was that Mr. Rubloff had been so successful in building office space over the Northwestern depot in downtown Chicago that any office building in which the individual could get off the commuter train, take the elevator upstairs, and avoid the cold, wind, and the rain of downtown Chicago must ultimately be a success. That was the hypothesis. Now, when he gets down there and Mr. Shaw says, "Gee, Michael I'd like you to prove this project is feasible, meaning that the present value of the receipts are going to exceed the costs. And Mike takes it seriously and he figures he really wants to know that and so they survey all of the people who ride the Illinois Central. Well, they all turn out to be Indians rather than chiefs. There isn't anybody riding the Illinois Central who signs the lease - who gets to make it, based on role in the decision making process. They call it the lower income community and so he comes back and he tells Mr. Shaw and he says, "Golly, they all think it would be a wonderful idea but there's none there that can sign the lease. People who sign leases ride by car." So he then goes out and takes a survey of the cars turning off the outer Drive onto Roosevelt Drive and he gets three hundred brand new automobile license numbers and sweet talks one of the girls in the motor vehicle department into giving him the names - half of them are corporate owners who provide them as a perk to the exec. And the other half he gets the names on and he queries them and they say, "Sure." Turns out they live in Wilmett and Lakeforest etc. etc. to the north. They wouldn't ride the train on a bet, they don't think it's safe and they all park in the building in which they're currently renting office space and pay $50-$100 a month for that privilege. And, they all knew where the site was and they really weren't interested because it wasn't in the Loop. And so he goes back and tugs at Mr. Shaw’s coat tails and he points out that the architectural program has no parking in the building whatsoever because the premise is that everyone will arrive by train. We now have a significant misfit between the expectations of the consumer and the form of the program that's being advocated. Well, Mr. Shaw says, "Don't worry about it son, we're going to get the overspill of demand from the Loop." And, of course, he says, "Gee, that's right I forgot about the overspill." He goes on and he adds up the amount of space coming out of the ground in the downtown Loop which is about ten million square feet at that point in time and does a calculation as to what rate new space is being absorbed into the office market which is about a million square feet and that suggests the overspill theory won't work for ten years, that's as long as nobody else starts a building. So he tugs at Mr. Shaw’s coat tails again and says, "Explain it to me again about that overspill. The statistics here indicate that there's about ten year's supply ahead of you in the Loop and why would anybody come way out to Roosevelt Drive if they can simply step out the door of their current office and find space down the street. And the building was never built. Notice, he went right for the juggler. It didn't matter how attractive, how original, how creative the concept of the building, there were two significant misfits - there was no demand that was going to reach down to that area and pay those kinds of rents and those that might expect to park their car in the building, there was no design provided for parking space within any convenient point of the building. With that, a multimillion dollar project failed, and $200,000 worth of blueprints get dumped in the incinerator and it's all over. Context, form and we want to look really at the ensemble. Is there a fit between the proposed solution and the template of events and characteristics and elements within which you must work.

That in some ways is a very physical, static concept of measurement of success. Today the enterprise engineer talks instead in terms of power. We were talking about enterprise before and enterprise is any organized undertaking of individuals. And the industrial engineer says that an enterprise in terms of its configuration and its behavior at any one point in time represents a negotiated consensus between two general sources of power. The power outside the organization to impose its will on what it will have that organization do and become. And the power within that organization to push back and decide for itself what it will be and what it will do. That's a much more dynamic statement really, about how our American process works. The city council has a view of what downtown will be like or the mayor has a view of what downtown will be like. And he can push to accomplish those objectives. And the development fraternity within that context can push back and say, "Wait a minute, that isn't going to work or this is going to work" and so forth. And each environment is very distinctly different. Minneapolis and St. Paul both have outstanding development records and yet St. Paul has a dictatorial mayor system that if you want it done you talk to the mayor and if the mayor likes it, it shall be done. Where Minneapolis has a very strong city council, weak mayor situation in which the power is with the council and you have to be very careful to maintain your communication lines open into that political sector in order to move in the direction in which you may want to take your development firm and so forth. And, of course, there's all forms of power. The consumer that we were talking about, obviously, has a great deal of say in what he wants and doesn't want and so forth. And obviously the collective system who are operating politically have something to say about it. And those that are trying to anticipate the future and have some vision about what it should be and what we could be in the future, have something to say about it - all with varying degrees of power at various points in time. All of those begin to impose on the development process. So we begin to judge a real estate project or those that are involved in the real estate, we really have to put into context at any one particular point in time what kind of forces were arrayed against them with their vision of what his project should be. And then, what kind of forces internal to the organization were they capable of applying.

Let me give you an example. The University of Wisconsin would like to develop a golf course, presumably because we are the only big ten school that doesn't have one. That logic is lost on me, but for the moment let's assume that that is a good thing to do. And so they bought land out here on the west side of town to do that. Then they said, "Gee, what we otta do is help finance the golf course by selling some residential enclaves around the outside perimeter of the golf course and then people will pay a premium for open space and the green space and so forth and so on. And all of a sudden the environmentalists come and say, "You idiot, that hilltop is the prime auto baan area in the state of Wisconsin. It has the longest autobahn history and is in a major flight pattern for birds because it's one of the high points in Dave County flanked by water on one wide with Sugar Creek to the west and corn and good things to eat on the valleys on the other sides. It's a high water recharge area and we shouldn't tamper with that and so forth and so on." And somebody else says, "Gee, that's a bad example to set for urban sprawl." And forces comes out of the woodwork from all over. The University Foundation very well meaning, very innocently stumbled into that but, as an organization they're intended to make friends for the university. Their primary function is to attract support for the university. They can't go pick a fight and say I won because I got fifty-one percent of the vote. Because forty-nine percent of the people that are mad, are still going to be mad at them the next time they knock on the door for money. They can't take on that kind of outside force and so they have to cut back and say, "OK, no residential, we'll build the golf course. We won't go through the main part of the woods, we'll nick the corner of the woods with our fairways etc. And we will set up our water systems to enhance the high water recharge area rather than encroach on it and so forth." So the outside forces are winning - they're shaping the golf courses to be consistent with environmental and conservation and preservation aims simply because the agency in this case, can not, because of its character in terms of its fundamental mission of making friends, and also just because of the people that are in it. The people who are in it are very nice people. They're in a university environment in which high levels of sensitivity to the environmentalists and conservationists and so forth are socially appropriate things to be in favor of. Whereas, if you get a developer who is a little more single-minded and purposeful about what he is going to do, he says, "hey, enough is enough, you want a park you buy it, you're not gonna steal it from me." And he takes on the world head on and maybe a little more adroit politically and so he wins 51% of the vote and he goes forward and he doesn't care if the other 49% don't like it. You're not running a popularity contest. So the nature of the enterprise, the nature of your ability to push back and decide what it is you're going to do as opposed to what the outside forces decide you're going to do has a great deal to do with the final outcome of the result. And quite often, of course, when you get everybody in the community telling you what to do, you end up with something that looks a lot like a camel. A committee project in which nobody was in charge. Most of the good real estate has always been done by single-minded individuals. There's almost no good real estate done by committee which does not bode well, obviously, for the convention center. I think that is why real estate is dominated by personalities who have long since forgotten whoever put U.S. Steel together but we still talk about Trammel Crow and Gerald Hines and Mr. Rousa and so forth. Real estate is almost always dominated by a strong personality, some have more sensitivity than others to the current issues of our time but, nevertheless, is a highly personal creative product of a very creative neurotic. There's nothing wrong with being a creative neurotic - our society depends on them. But on occasion they obviously are fairly irritating to work with.

Now, given that as a basis, there are really only two problems in real estate, maybe three. One is a site in search of a use. I have a piece of ground with a little old building on it, what am I going to do with it now? The alternative is - I have a use. I need to find a site for my factory, a place for my store, I want to locate my family someplace, and so forth. So I have a use in search of a site. And the third problem which has only been relatively recent is I have a lot of capital that needs an outlet to fund pensions forty years from now. How do I find a place in real estate or, since there's not enough space in the stock and a bond market for it. So I really only have three problems. A site in search of a use, a use in search of a site or capital that would like to use real estate as a temporary repository until it's needed for some future use.

And we’re going to begin with the first of those problems which is a site in search of a use, although, typically that's not the way to begin. Typically, we're much better off to be given a use in search of a site. We're much better off to define specifically what kinds of things we need at a particular piece of ground or building and then go find a match for that particular need. But, we'll begin with the other problem first, a site in search of the use so that we can begin to understand a little bit more about what is real estate. What kind of attributes are we looking for?

And with that, we'll switch over to our lecture notes number 2. Move down to Roman Numeral II if you would, item B. In analyzing a piece of property, there are five basic sets of attributes which combine really direct us toward the most powerful use. The first, obviously, are the physical attributes of the site and the improvements, we'll talk about those further in a moment. Sometimes called the static attributes.

The second are what we call the legal political attributes of the property. The legal elements depend, of course, depend on what kinds of rights and responsibilities you get. But today, nine-tenths of our law which controls real estate, is in the administration of the law. The commission which applies the rules, the land planning group that approves the plan, the city council which votes the permit and so forth. And so I really can't talk about the law without talking about the administration of it. And that becomes a political process. And so we really talk about the legal/political attributes of the property.

The third element is what we call the linkage attributes and this is perhaps the most critical concept of location that we have. I'm sure you're all going to go home and say, "Gee dad, we're taking a real estate course, and dad's going to say, and you can hit him if he says it, 'Aw, there's nothing to real estate, it's location, location, location. Big Deal.'" "Then say, gee dad, what's location?" "Well, it's a place where longitude and latitude cross." "Oh, that will get me an "F" in the course." Location always exists as a relationship of the user to something else. It has nothing to do with the longitude and latitude point. And we'll see that linkages have to do with the interrelationships of the establishments at a particular location - it is not inherent in the location itself.

The fourth element that we're going to talk about is dynamic attributes. Dynamic attributes are those which exist in the mind of the beholder. Status - gee I want to live in Maple Bluff. You know, it's ironic, if you go to the historic library there's a wonderful dissertation by some student who graduated about 1922 here and he had to do a dissertation so he analyzed Maple Bluff. He said it was doomed to failure. It was a packing house on one side, there was swamps on the other, there was a rail line that went right through and the road going out there was full of pot holes. Nobody in their right mind would ever go to Maple Bluffs. Now, of course, if you have to be in high society, you have to go to Maple Bluff - no doubt about it. And I can always remember one of our mayors complained about the fact that the developer of Cherokee was in an area in which the water table was relatively high and was afraid that if the Yahara went any higher that basements would flood. And he was shut up when the developer showed him that the mayor's own house was in fact about two feet lower than anything in Cherokee and his basement was much more likely to flood than anything out there. And he did see any objection to his house in that locale. But, in any event, dynamic attributes have to do with those things which are in the mind of the beholder - the esthetics, the status, the anxieties and so forth. And, finally, we have environmental attributes - the off site environmental attributes. What will happen off site if we develop the site. Where will the storm water go? Will we pass or reflect heat to the building next door and screw up their air conditioning system. Or will we intrude in terms of additional exhaust fumes, and so forth, in terms of an air situation or will the traffic pattern become unmanageable as a result of this additional element. So if you want to talk about the environmental attributes of the site. What are its limitations in terms of its capacity to handle a new site.

OK, let's begin then by cataloguing some of the elements of the site. We often refer to this as site reconnaissance. So if you we considering purchase of a particular property or as a feasibility analyst you are called in by somebody to figure what am I going to do with, now that I own it sort of thing. You would begin with this type of catalogue of attributes and begin to see what it is we have that's positive, what negatives do we need to neutralize and, maybe, what it is that prevents us from using it all together. Obviously size and shape and the total area becomes a significant element. Size has to do with the efficiency of the site. Interestingly enough, for example, in the areas originally colonized by the French, they worked on a very narrow but very long band of land. If you look up as you fly over Green Bay some time, notice that at the mouth of the Fox most of the land seems to be very linear running inland. Everybody was to get a few feet of the Fox and then they had a cross section going way back up into the bluffs. Well as the traditional US geographic layout is a very square - one square mile divided into smaller 40 acre sections, 160 acre sections and so on. Well the shape determines in many ways the efficiency of a site. If you have a site on State Street that's 22 feet wide and 132 feet deep, there's not a lot of area for window space and not very efficient floor layout and you don't really want to go very high because most of the space will be taken up by stairwells and elevators and utility runs relative to how much window space you get. And, as a result, you probably are going to stay on a very low rise basis. On the other hand, if you can buy three more lots next to you and end up with a piece that's 88 feet by 132 feet you can get a much more intensive use of the site - there's more window space, and so forth. So size, shape and lot area have a lot to do with the efficiency of the improvements that you can place on that site. And we can go through that illustration ad nauseuma.

By the same token, what you can do with it is going to be impacted by topography - is it flat, hilly, etc.? What kind of soils do we have? Obviously there are areas in which the soils won't support much of the structure. Look at Los Angeles with its heavy rains and expandable soils and suddenly you're $200,000 mansion turns out to be a mobile home moving down the slopes to the next neighborhood. Geology has a tremendous amount to do with the success of cities over time. New York City and its high rises is made possible by the fact that Manhattan is essentially one big solid slab of granite and as a result you can tunnel and do all kinds of things and carry tremendous weight on it and as a result it lends itself to the tallest buildings in the world and so forth. Take away that kind of geology and you now have seismic problems, let's say, in San Francisco or in other parts of California, it dictates an entirely different type of construction and a much more significant lid on height and so forth. The geological history of many communities is a very fascinating aspect of it. If you'd seen the city of Madison's geological history in Mullenhoff's History of Madison book, I think you'll find it, fascinating to find since most of you are living in some aspect of a lake or whatever of a few eons ago. But, in any event, geology determines a great deal of the characteristic of the city. Anchorage, Alaska, for example, the commercial areas are built on nodes of gravel that poke out between the basically frozen tundra that's around it. And there are many lots in Anchorage which you can't build on because there's an ice layer that's still buried down in the peat someplace that, were you to put a building on top of it, you would gradually melt the ice and your ice would settle gracefully into the ground until the third floor was the first floor. Geology, therefore, becomes a significant element. Just one more example, a steel mill didn't pay much attention to that, had one of these huge hammer presses of multithousand pounds to stamp out car roofs. And, they did initial boring in, limestone, that's where we'll build it. They built the plant, put on the press and the press pounded itself into the ground because the first layer of limestone was from the last geological era but below that was a peat base from the previous geological era which was over another limestone base, which was over another peat base. By putting it over that kind of ground, it was simply not able to carry the vibration and impact characteristics of the press and it was necessary to pick the whole thing up and move it about 500 yards to where the geology was capable of supporting the plant. Ironically, that could have been discovered by simply taking thermal photography from a piper cub with a 35mm camera because that peat still radiates more heat from that particular point than would be the more stable rock formations that would have supported it. So the geology becomes a critical attribute whether you're talking about a farm field or whether you're talking about a building site. Slope stability for obvious reasons, bearing capacity of different soils varies widely and there's a course going on presently with Gerhardt Lease called soils for land use planning over in the soil department which for real estate people is a critical course. And, as a matter of fact, I can remember a couple years ago being called by an attorney who was representing a client who was suing one of the graduates from the University of Wisconsin who he had sold a lot to a client to build a home on, and the home had graciously settled and cracked, broken up and had various little problems and the issue was that if he was a real estate major at this school, had he ever had a course in soils, if so, he should have known better and therefore was publicly liable for having sold somebody a lot that wasn't buildable. So, as a result, real estate becomes a very eclectic field in which all of the various sciences and disciplines begin to bear on the success and efficiency with which you operate. Septic suitability - two-thirds of the state of Wisconsin is unsuitable for septic tanks and yet most of them use septic tanks and with more or less undesirable results. Potential for subsidence - for example, Florida is really built largely on water soluble lime stone stump and there are sheet flows of water through Florida which erode much of that limestone and leave large limestone caves underneath which, as long as you only have light flora and fauna above, are perfectly capable of carrying themselves and then you locate a house of top of that and suddenly it falls through 30 or 40 feet down. Most of the lakes in Florida are the result of subsidence of the soils as the limestone below was moved away by the water flow. And, various areas - Pennsylvania with their coal mines and Florida with its water soluble problems and areas for example, all of San Jose's downtown is gradually sinking because the nature of the soils there is such that the water is trapped under an impervious surface or above an impervious surface and they are pumping that out for irrigation. And, as a result, gradually the soil compresses, as they become dryer and now downtown San Jose is a couple feet below the water level of San Francisco Bay at high tide. Downtown San Diego, as they pumped out the oil under the naval base over the years has sunk to a point where some of the naval base has to be diked to keep out the ocean at high tide and so forth. So, subsidence, is a very real problem in many different areas taking a variety of different forms.

Water table is a critical element for several reasons. One, obviously, you don't want it coming through your basement. A couple of years ago it was necessary to get the Corps of Engineers to set the average height of Lake Mendota a foot lower because most of the houses on the east side of Madison and so forth, basements were below the mean water height of Mendota and therefore, constantly had six inches of water in them which meant that water level was exactly level with the water level of Lake Mendota. Almost all of the area starting with Tenny Park and coming this way about four blocks and then going all the way around the lake, in fact, had basements that were below the level of Lake Mendota. And it was necessary to reset the height of the lake in order to keep the basements dry. So a water table, for a variety of reasons, is a very significant factor. The presence of wells, whether they're permitted, whether they're desirable and so forth.

Streams and ponds, not only the existing streams but the old streams - where were the streams in the last glacial? For example, when West Town Shopping Center was built the developer came out and bought all three sites that could have been potentially shopping centers - or at least put options on them for negotiation reasons. And, the first farm which is the northeast corner of Mineral Point and the Beltline was often regarded as the front runner shopping center site on the west side. The fact is, though, that Lake Middleton, the last of the glacial lakes during the last glacial age had its major outlet running through the Frisch farm, and as a result there are deep peat deposits along the old stream bed, well below the level of the ground which would have all had to be removed before you could build a shopping center on top of it. The developer knew that, the seller of the site on which West Town is built didn't, and as a result, sold at a considerably lower price than they might have otherwise obtain because they geologically had the only site suitable and capable of carrying the regional shopping center in that general area. So, it pays to know what you're doing and to know the territory and to know what was there before as well as now.

Another good area of that is along west Washington Avenue starting about at the old railway station, there was a stream that came out of Lake Mendota and wandered across toward Regent Street past Madison General Hospital. There's a couple of lots along Regent Street which have only parking lots on them because the peat is so deep you could not afford to build a commercial building on that site at the moment particularly about at the intersection of Mills and Regent. So you really need to know the territory and what was the geological history of that particular area.

Storm water swells. There used to be a time when we figured we could build anywhere but we found it isn't nice to get in the way of mother nature and therefore we want to keep our flood plains and our storm water areas flowing naturally with a minimum amount of obstruction to simply get crushed by the water pressure of a hundred year flood line.

Shoreline edges. We've discovered that for much of what remains of our natural environment, that the critical elements are the environmental edges where water meets the land, where the hedge grow meets the edge of the field etc, etc. - where the woods meet the field. And these edges need to be preserved. And so in southeastern Wisconsin regional area of Wisconsin, it has been determined that 25% of all soil land edges will be in public ownership by a specific date and our land use regulations provide for acquisition of those edges or neutralization of those - in the building process you're not allowed to cut trees down to improve your view - just as in Florida you're not allowed to cut down the mangroves and the cyprus trees along the water's edges in order to improve your view. They're critical to the environmental balance of those edges and the shore land edge as well as what is called the bulkhead line set by the US Corps of Engineers is a critical element of knowing how far out into a river bottom you can build and what jurisdiction may have control of your land.

Floodplain designations. Only recently have we gotten reasonably good maps of the 100 year floodplain lines. And, most of the disasters that you read about in terms of floods moving through urban areas is because those were always disregarded. People built their houses let's say in Rapid City South Dakota where we had a major disaster, I think, two years ago in the hundred year flood plain. So it's not too surprising that when we have that unique hundred year storm that the water comes pouring through the neighborhood. So, it's perfectly predictable that's where it's been going for hundreds of thousands of years. If you look at it carefully environmentally you could have proven that beforehand. Spring Green, Wisconsin is built almost entirely in the flood plain and if it weren't for the fact that the Wisconsin River now is virtually controlled by its dam systems and so forth, it would periodically go under the water. Plus the little town that they just moved out here along the Kickapoo. Pardon. Soldier's Grove classic case in point where they could have spent millions of dollars building dikes and dams and so forth to keep the water out of the town - they found it was just cheaper to move Soldier's Grove over a few hundred yards and create a new downtown and get it out of the way. And now it is illegal for a federally regulated lending institution to lend on structures which are being built in the floodplain unless the community is involved in certain flood control programs and is setting various standards for that kind of location.

By the same token we may be interested in the flora and fauna which are on the site. Sometimes the trees and the vegetation enhance the marketability. In other cases it maybe so unique that we don't want them to build on it at all. That it is the last breeding ground of the monarch butterfly as one developer discovered out in California recently. Why the public will simply build a line around that 50 acre ravine with its unique spawning characteristics and say, "Thou shalt not touch". And suddenly 50 acres just dropped off your usable land area. The development of the Madison south side along the Yahara and along the Mud River. The developer bought what he thought was 400 acres of development land. By the time they defined what was in the water wetlands area, he lost about 150 acres although there was no history of anybody ever seeing it underwater, it nevertheless was characterized by water-related plants and little critters that crawl around in the mud, and as a result, it was deemed to be wetlands area and unsuitable for development.

Not only are we concerned with the natural constraints imposed on the land, we're also perhaps very much interested in the man-made constraints on the land - concealed utility easements, old foundations, old railway lines and so forth which all tie into our land use regulations in one form or another. Interesting piece of ground out here at the intersection of the Beltline and 12 and 18. The client, a number of years ago said, "Gee look I just bought this nifty 100 acres out here, what do you think?" I said, "I think you ought to get your money back. There's a sewer line that runs east and west across there that goes out to the Holiday Inn number 2 and the public golf course and you can't build over that without building a very elaborate concrete bridge over it with tunnels so they can repair and service this without having to have you tear your building down. Running north and south of it is a high pressure gas transmission line and you're not allowed to build within 50 feet of either side of that because they have a bad habit of corroding and blowing up. And, furthermore, you're not allowed any access on the site from either 12 and 18 or the Interstate and therefore to get there you've got to drive a mile and a half down highway 51, make a left turn and cross four lanes of traffic, drive a mile south on 51 make a left turn to cross another lane of traffic which happens to have a lot of tank trucks going by, drive a mile and a half east, turn left and another mile north and you're there!" Not exactly a convenient retail area. I asked them if we could in fact default on the mortgage but unfortunately it was drawn up by an attorney that I had representing me too and there was no defaulting on the contract.

So as a result, he owns a very nice peat bog. Proximity is not location. Proximity is not accessibility. You can be right across the street from something but if the traffic's too heavy, nobody is going to get across.

Old utility easements, one more example. The Fauerbach Condominiums built in an area in which at one time there was a railway track siding coming along the back of what is called Machinery Row and our ordinances state that you can not build any closer to the lake than the previous existing improvement line. Well, the people that bought the property were using a different rule which said that you could use the average setback of the adjacent building. Well, the adjacent buildings were quite a bit further down the shoreline because most of the nearby buildings had been torn down. And they thought they could build much closer to the lake than they could. As a result they lost most of the land that they thought they could build on - it was no longer feasible to be a hotel and they took a bath on the site by having to sell for condominium development and the setback on that project was determined by the old rail line which everybody had ignored because the rail line had actually abandoned the easement so that technically it wasn't there but the physical track was still there and that defined the buildable area of the site.

Old foundations may also be of significance. Sometimes, positively. For those of you who have been to San Francisco - perhaps saw the Cannery which is a specialty retail tourist area in the Fisherman's Wharf area. The reason they retained the old brick walls was that by using the old brick walls, it was a remodeling project and, as a result, they weren't constrained by the very tight floor area ratios that had been imposed on the area. They could get a lot more usable floor area onto the site than the law would have permitted had they built a new building. So by retaining the old brick walls and building a whole new building inside of them, using poured concrete and so forth, they qualified as a remodeling job. The same is true on the left end of Lake Mendota. You buy a cottage and you remodel it and you can be much closer to the water than if you tore it down and started new at which case you'd have to be 75 to 100 feet back from the water's edge. So, quite often, the fact that there is an existing improvement which can get you around one element or another of a land use control factor, may be a plus rather than a minus. In another case, that same improvement may be a negative factor if it's an old landmark and they won't let you touch it.

We also have access points. Where can you get on and off the site. How much space can you have, how many lanes can you have? Again, the old Frisch farm out on the west side, which was thought to be a prime candidate for shopping center development was only allowed, by the highway department, two lanes of access onto the Mineral Point Road. You can not handle the traffic created by Christmas shopping with only two lanes of traffic. Two lines of traffic waiting to get onto the main drag would be so incredibly long that it would snake through the rest of the project. You need, obviously, multiple lanes to move 2,000 cars an hour on and off a site, for the Christmas shopping period. Hence, it did not have adequate access even though it was immediately adjacent to some major streets.

You may be interested in what kinds of private right-of-ways go through the land. And, quite often those are what are called floating easements and they can be devastating because you have to provide access to the guy behind you and yet nobody ever negotiated exactly what route they could take to get there. And that gets to be very messy. But when the First Wisconsin bank building was built on the square, there was an alley that came down the middle of that block to the Tenney building and the Tenney building owned the easement to the alley. The owners of the Tenney building decided they wanted to sell, the building was getting old and obsolete and so they sold the Tenney building to the First Wisconsin for almost a million eight. So that the First Wisconsin could get control of the easement over the alley and then they extinguished the easement so that they could build a building over the whole block and then they sold the building for a million three. So it's $500,000 just to get rid of the easement that cut the block in half. And so those are very critical problems that you need to be aware of.

Site improvements such as paving, retaining walls, pedestrian paths, culverts all tell a story to the real estate analyst in terms of what the possibilities are and what the potential legal problems are on that particular site.

Is the site a landmark or not? Has it been designated as a historical landmark. If so, what constraints does that impose on the use and renovation and the responsibilities on the owner to maintain that landmark in an attractive fashion. What about the historical site feature? Gentleman up in LaCrosse has an interesting problem in that he bought 200 acres for an industrial park adjacent to the train company's plant only to discover that it is the richest area of Indian artifact probably in the Midwest. There was a major Indian encampment for centuries and virtually every square foot is loaded with arrowheads and pots and all kinds of things for the Indians and nobody will let him turn a shovel of dirt on his industrial park. They said he is expected to warehouse those artifacts for the anthropologists indefinitely. And, though he hasn't quite figured out how to solve the problem, he would like to give the land to the state historical society and at least get a charitable deduction for it, but the internal revenue service says, "for what, the land's worthless as it is." We can't give you deductions for something that's worthless. And there they sit. OK.

So much for at least the kinds of things we'll be looking for as we do a site reconnaissance. But there will also be improvements on that site of various kinds and we need to look at the improvements of that site again in a very systematic fashion. And we're obviously bouncing off the mountain peaks today, but simply to sketch for you the kind of detail and the scope of technological awareness that the analyst has to have. Looking at a building, what kind of foundation system does it have? Is it floating, is it built on pilings - so forth and so on. Structural system - structural system are the bones of the building - is it steel girder or is it poured concrete or whatever. This can be very intriguing. For example, one of the reasons Carley's bought the old emporium store was that the foundation and structure were designed to carry at least seven more floors so that the building immediately had expandable characteristics to exploit the market if there was one. What kind of floor system does it have? Not only are we interested in the floor loading capacity - how many pounds it can carry - but can we deliver utilities through it? All of you have been in office buildings where you punch a hole in the floor and there's the telephone line or the electric line or the other services that you may want and that floor system may determine what you can do with the building and it may mean that you can't do anything with it. For example, a number of years ago we did a study for the Federal Reserve Bank in Chicago which they're now acting on. We had to tear down about half of their building because the only way we could put the file drawers and the computers in was to cluster them around the columns. As soon as you got half way out from the columns it no longer had the capacity to carry the weight of modern office machinery and equipment. The ceiling system today is really the delivery system for all manner of things - light, air, and heat and so forth. And that ceiling system may also control a degree of privacy that you have in the building. Will sounds move up to the people upstairs or will the people upstairs banging away on the floor make life unbearable for the people in the room below. One man's ceiling is another man's floor so to speak.

The roof system - today the roof system becomes a critical element. Not only are we concerned with the insulation of it to prevent heat loss, but how much clear span do we need? Notice that in this building where we want a clear span auditorium they've had to pull the auditorium out from under the main building so that the girders and trusses above us can carry the weight of the roof but don't have to carry the weight of any additional building. You will see hotels organized in such a way that the main ballrooms and swimming pools and clear span areas are pulled out from under the rest of the structure in order that the floor loads and the ceiling loads can be done in the most economical and efficient fashion.

Well, we're interested in the exterior wall system. How does that work to make the building function. Want to see how not to do it? In fact, if you want to see how not to build a building at all, just look out the window at our building to the West there, what is that? Van Heise - classic stupidity - incredible stupidity for building a building. First of all, you've got the building has its broad side to the East and the West so the sun pours in on the East driving the air conditioning system absolutely bananas all morning long. About the time you get it balanced off, the sun's now on the West broiling everybody on the West and leaving everybody on the East on the cold side. You're supposed to turn your building the other way so that you don't have that problem. You don't have vertical fins on a building, they don't do any good at all except for the architect's psyche. If you do, you put them horizontally across the South so that when there's the right height or the right depth in the summer the heat is shielded off the windows and in the winter the heat gets in the windows and helps supplement the heating plant. That building was designed to be four stories shorter than it is. The architects felt it was aesthetically undesirable to see it break the skyline behind the dome or top of

Baskom Hall when you were standing on State Street. It was respectful of the city of Madison's law that no building should be higher than the face of the columns on the dome. But, there was a bright Republican lawyer by the name of Jeris Leonard from Bayside, which tells you something right away, and he was on the building committee. And he says, "Gee after you put all that money in foundations we ought to build a building as high as we can go." And the architect tried to explain to him that that wasn't all there was to it. He says, "If you're going to build a tall building, build a tall building." So they did! They added, you know, three or four floors to the building. Well, what you don't understand is that when you do that, you now need another elevator shaft which goes to all of the floors and you need wider stairs to handle more people to be evacuated from the building. You need fatter columns to carry the weight. You need more utility space to run the water up and down and so forth. The result of adding four stories to that building was simply to add about one and a half floors of usable space because everything you've got on the top floor you lost on all the floors below it as you provided service and access and so forth - classic stupidity. But, that doesn't seem to bother architects of university buildings.

We'll come back to this and pick up again on Monday.

In alphabetical split so that half of you will be here and half of you will be nearby in order that you can spread out and have plenty of elbow room, etc. So, anyway, that will now be on Monday, February 23rd for the 6 weeks exam.

We had started to talk about the subsystems that characterize our buildings and we had talked a little bit out the foundation and structural floor systems and ceiling systems, I believe, and were coming down to the roof systems, exterior walls and so on. And were, I believe, commenting on our magnificent lab specimen next door Van Heise. And, Van Heise doing virtually everything wrong is a very expensive piece of lab equipment for the real estate department and the exterior wall system, as we pointed out, not only faces the wrong way but the fins run vertically when they should run horizontally in order to control the heat load and the sun load. We began to look inside the interior wall system also becomes a significant factor. Can it be relocated, reallocated and so on, or is that locked in? As you'll recall we talked about the Towers Building down on State Street in which the inside wall system is poured in concrete and is load bearing as well as dividing up spaces so that you can't ever alter the interior layout. And that's almost always a fatal mistake in a building because the kinds of activities that it was intended to house when it was designed and built probably aren't going to characterize that building for its full useful life. At some point we change the way in which we do business or how we organize our activities and it would be nice to reorganize the building. So that many office buildings have totally movable wall systems which may be reallocated from time to time in order to recognize that different departments in the business are growing at different rates or shrinking at different rates or more space needs to be allocated to storage and computers and so on. We need to look at the interior wall systems and how free form is that, and how flexible is it.

Horizontal circulation has to do with lobbies and corridors, and so on, while the vertical circulation system has to do with stair wells, elevators and escalators. And these become critical dominant factors in controlling the usefulness of the building. They do not happen by accident. Each building such as a school building and commerce building as we're in, is first of all analyzed in terms of what is called station capacity. Station capacity essentially has to do with how many people are going to be in that room. Obviously, a lecture hall of this type has a very high station capacity with about one person for every three or four square feet of floor space. Whereas if we have a faculty office with 120 square feet allocated to one faculty member we have a much lower station density per square foot of floor area. Obviously then, to organize a building in such a way that we can use it efficiently we want to put our high density station uses at grade so we don't have to move people vertically very far. If we do have to move them vertically very far, escalators move a lot more people than elevators but they move them a lot more slowly. And so as a result we may use escalators to move large crowds for one floor or possibly two floors in height but after that we're depending more on elevators for speed. The problem with elevators of course is that 1) they're very expensive to operate and 2) people want instant travel, and every time you move an elevator through a floor, you're obviously creating a hole in the floor that isn't useful for anything other than the elevator shaft. And the more elevators you have, the less usable space per floor you have and the cost per elevator determines really how much usable space you have to have per floor. So if you have a relatively small narrow lot that, let's say, has 5,000 square feet of net usable space, you really can't afford to put two elevators and two stairwells to serve that area before the cost of vertical transportation to get you there, exceeds the rental value and the use value of the space once you're there. And so there are some very distinct linear programming types of trade offs between the number of elevators, their capacities, their speed, how high you can move in a certain period of time and so on. It's a very complex problem. In fact, we run seminars for our graduate students and do a whole day just on elevator economics in terms of what that means. Not only are we concerned with how many and how far they can go but where are they in a building? For example, if we are looking at one of the old department stores in downtown Madison for, let's say, conversion to another use. Department stores like to pull their elevators into their inside rear corner so that you have to walk through the whole array of displays on the first floor before you get to go to the second floor. And that works out very well for department stores and, in addition, of course they're using their elevators to move merchandise up and down so they want their elevators back near the loading docks for their trucks and so on. On the other hand if you want to convert that to an office building you're going to waste an awful lot of space getting people back to the elevator to go up to second floor office space. Your corridors will be too long, the lobbies will be too big and what's more is they're generally around the corner and therefore you have a securities problem. So look at that the next time you're downtown at, let's say, the conversion of 14 West Mifflin which was a department store. Their elevators are way in the back and you use up a large portion of the first floor just providing corridors to get there. And then you have a securities problem when you get there because you're out of sight of everybody and it's a wonderful place for a mugger to lurk or whatever. And as a result, it doesn't work well. So a building that has the elevators in the wrong place for office use might be very useful for department store use and so on. On the other hand, as you notice, 30 On The Square, they have a security problem because their elevator was right next to the Walgreen's store and the Walgreen's sort of tended to attract the wrong crowd and whenever they needed a little more money, they tended to go to purse snatching in the office building and they could just step next door into the office lobby and go up to the office floor really unobserved. So that had to place a security guard in the lobby of the elevator lobby in order to control who gets into the upper levels of the building. So, the interrelationship here between the vertical and horizontal circulation has a great deal to do with the efficiency of the building. Now for example, take this building, if all of you were expected to exit in an emergency through those doors in the back and out into the hallways, the hallways would have to be twice as wide as they really are which means less useable space. So if you pull your major lecture hall out from under the building, the first thing you do is you simplify your roof system in as much as you have a clear span roof across this kind of space that doesn't have to carry any building above it. Second of all, by having these doors which dump outside immediately you can reduce the size of our station capacity of our horizontal circulation system and our corridor system. Since this building was built, they realized that when the doors swing out into the corridor, that you really don't have the full functional use of the corridor - you're likely to lose your nose or your front teeth as the door swings open. So now the Social Science Building, built by the same architect but built several years later, across the street, chose the current state of the code in which the door when it swings out, swings into a small foyer and goes up flush against the wall and does not intrude into the circulation pattern of the corridor. Because now they do not give you credit for the width of the corridor if, in fact, the door swings into that portion of the corridor. So to make the building more efficient, it's necessary to recess the entrance into the classroom, let the door swing up against the wall and then you get full credit for the horizontal circulation system, which means then that it can be narrower than it would otherwise be. Therefore you have more space and usable classrooms. So that, you know, these kinds of elements begin to control the design's system.

Furthermore, under our fire codes, no point in the building can be more than 75 feet from an exit or a stairway leading to an exit. So that begins to determine the configuration of the building for how many stairwells you have. So if you end up with a very goofy shaped building, you may have to have three or four stairwells where two would have done just as well had it been a more efficient layout. In grading those types of escape systems, once you leave a room in a commercial building there must always be two routes of escape so that you can zig or zag and not find your only route of escape blocked by fire or whatever other catastrophe may be taking place. Therefore, you will find a lot of buildings going to a great deal of trouble to create that second egress. Whether it be your apartment building which has to have a jump platform at the back door because it doesn't have a stairwell close enough to the apartment - the apartment has to have two ways out and so forth. There gets to be some very major design constraints on how you lay out the building.

This then leaves the life safety systems. Life safety systems may be something as simple as having a jump balcony on a window that allows you to drop eight feet to the grade or whatever, sprinkler systems and so on. But they get more subtle as soon as we move into high rise buildings, for example, you have to have air pressure systems in the stairwells that maintains the air pressure higher than the air pressure in the building so that fumes, in the event of a fire, can not move into the stairwell. So the stairwell doesn't becomes a flu in effect for the fire. And by the same token, if we have a big atrium building like one of Portman's famous hotels with the great safe multi-story atrium in the center. That requires some very tricky ventilation so that in the event of the fire, there is a fan in the roof that have tremendous suction power and will move all of the smoke straight up so that if you have a fire on the first floor you're not asphyxiating everybody from that point above. Instead you can suck that right out through the roof of the building with very powerful fans. That becomes part of the life safety system. Obviously, we are not only concerned with sprinklers and how the water gets to the sprinkler system and whether it can be interdicted by explosion. We're also concerned with the kinds of material. Are the curtains fire proof? Are the rugs fire proof? Do we have fire proof door jams on the hotel so that a fire coming down the carpeting of the corridor can't leak under the door into the room and so and so on and so on. How high can a building be? In many cases and many communities the building can not be higher than the reach on their aerial ladders of their fire engines. Universities don't have to abide by that, and as a result if you're up in the tower on the top of Ogg you're well beyond the reach of the fire towers here in Madison - that's a comforting thought. But, universities don't have to abide by city codes - everybody else does - but, in any event life safety systems become a very complex part of a major building. And, in many cases, in many cities, there is that life safety system which is suspect in many of our larger buildings.

HVAC systems have to do with heating, ventilating and air conditioning. Obviously that has a great deal to do with what kind of climate you can maintain and what do you do with how many bodies are in the room. Where do you go with the cigarette smoke and how do you make it a comfortable place to work and so on. That could be a very subtle thing both in terms of work and in terms of shopping. Claustrophobia is the number one foe of the willing shopper. And the major cause of claustrophobia is temperature and humidity. And as a result at a shopping center you want that cool central mall high ceilinged, you drop the temperature as you come out of individual stores along the mall. You have water running to give you that acoustical pause over noises which are irritating and which also provides a certain soothing effect and you're constantly trying to create an environment which tends to defuse the claustrophobia of the average customer.

Site circulation. Next time you're out on the shopping center look at Hilldale's shopping center's site circulation system. It is something less than desirable. The site is a little shallow and as a result notice that in order to get onto Midvale Boulevard from Hilldale Shopping Center, you have a deep qua line which means the cars come right up against the edge of the shopping center. They circulate around the shopping center right at the edge of the building. In order to control that they put in what they called sleeping helleachment (?) which are those asphalt bumps which will knock the bottom of your car out and so on. But it would be much more desirable to have a perimeter circulation system keeping the cars away from the shopping center where the traffic doesn't separate the shopper, the lady shepherding her small children into the center, and so forth, from her parked car. So if you look out at, let's say, West Town Shopping Center notice that there is a perimeter road system that keeps all of the circulating traffic out at the edge of the site and those things that contribute to it like tire, batteries and accessories, the drive in bank, the fast foods, outlet, the kinds of things that are high frequency, short stay generators are all out at that perimeter road. And then the internal aspect of the shopping center is a very jagged perimeter. So that you're constantly making right and left turns and can barely move at 5 miles an hour. That will discourage you from 1) speeding and 2) discourage you from trying to drive around the shopping center by driving up against the edge of the shopping center - it's much more convenient to go to the perimeter of a site and then go around the center that way. That's what we mean by a site circulation system. How do you get on, how to you get off, how to keep the cars and the people separate, how do you keep the trucks and the passenger cars separate and how do you do that efficiently and comfortably?

And finally we have what we call social control systems. Social control systems really have to do with the fact that much crime and much vandalism can be controlled simply the way in which we design our buildings. We'll talk about social disorientation more later. But for example, if you were going to look at the Madison main library you would see that the lady on duty at the front desk car control, who's coming and who's going, who's going in the wash room etc. with a minimum of personnel keep track of what's moving in and out of the building as opposed to, for example, there's a very handsome, but nevertheless, very difficult to control Ag. Library here on campus. Until they began to bring some of their other entrances under control they were having chairs and everything else vanish right out the back of the building over to the dorms because they were not able to maintain some semblance of observation on the activities that were going on from a single point by a single individual. So social control has in part to do with how well can you self police the building. It also has to do with such things as visibility into the building at off hours, for example. If you drive by Memorial High School some time, if you look into the plate glass windows on the front they're right lined up with the hallways going all the way through the building. It makes it a see through building so the squad car going by at 2am in the evening and park in front of that window for a moment and detect any untold or unexpected movement within the building. And the same is true of the Alvium Art Center and other buildings of that sort. It creates points of visual access from outside that will detect, at least on a random basis, movement and lights and other activity that shouldn't be there at that particular point in time.

At the same time you can create very subtle psychological barriers that people will not enter an area which might otherwise be legally accessible. Look at the Capital Center some time. The city in its wisdom decided that the square in front of the townhouses in Capital Center is essentially public land - a public park. Now that doesn't make the people in the townhouses feel very safe and secure if anybody can just sit down in front of their window and stare back and so on. So notice that the entrances to that are very carefully sited not obvious to the eye for one thing. And then second of all there's a concrete arch over it which creates the idea that you are now penetrating into a zone which is not truly a public zone. You're creating a sense of enclosure, a sense of turf that means that the flight zone of those that are there for antisocial purposes is being shut down. And the more you can hint at the fact that they are now moving into an area where they are not necessarily welcome and at home and they lose their anonymity, the more you can begin to control antisocial behavior in that area.

By the same token if you create a building that is relatively hostile to the occupants such as Ogg Hall, with its unfortunate acoustics and some of its problems in terms of narrow halls and so forth, is a relatively claustrophobic building and people learn to hate the building and, as a result, it has a much higher vandalism cost than say, for instance, Elizabeth Waters which has wider halls, higher ceilings, less claustrophobic, which generates a much friendlier relationship between its occupants and the building which has the lowest rate of vandalism on campus of the buildings. So that while it may appear in some cases that the building is less than efficient because it's ceilings are a little higher and its halls are a little wider and so on, the fact may be that in terms of its operating characteristics it is more efficient because it does not generate an anti-building reaction from the occupants. That could be controlled by design and by a sense of space and light and so forth.

Another simple social control system - next time you look at a parking ramp - the stairway coming down the parking ramp are always encased in glass so that no one entering the stairway in a parking ramp can feel that they are now trapped with a mugger or some unknown force working within the stairwell. It's always under the observation of the passers by on a simply random basis and you never have the sense that you were alone and isolated from civilized society. And that's not an accident. That's part of the social control system built into the real estate.

OK. So much for the physical attributes for the moment but, nevertheless, it becomes a very subtle set of subsystems which the real estate analyst begins to review, inventory, determine the pros and cons of a particular structure and that, in turn, begins to decide what it is we can use it for. What is the most probable use of this combination of systems and for that matter, which of them may have to be replaced or altered or modified to make it useful for the kind of activity that we have in mind.

The next set of constraints then I will call the legal/political attributes. And the legal/political attributes have to do with multiple levels of control. And your lecture notes perhaps aren't as neat on it as I would like them to be, but I think you can begin the hierarchy at the federal level or at the very local level. And what you may want to do is just write on the back of your lecture notes a hierarchy something like this. The first element of control is in the deed. The deed for the parcel may contain private covenants which say you can never use this for the sale of food and supplies or you can never use this for anything but park etc. That becomes a form of control through private contract. So the deed is the first level of land use control.

The second level of control we'll call the district. The district may be simply a subdivision association and that all forty lot owners are subject to a neighborhood association and the neighborhood association has a committee in charge of architectural review and another one in charge of landscaping plans and so forth. And so your own small association within that little neighborhood district will control. On the other hand it may be an urban renewal district. Everything from Francis Street to Brook Street and for a depth of two blocks off of University Avenue is an urban renewal district. And that urban renewal district had a plan which was set twenty years ago and any alteration of that plan would require the consent of not only all the parties in the district, but all property owners contiguous to the district, which makes it pretty hard to change. So that's the second level of control - a district or subdivision type of area.

The third level would be the community - city, village whatever. The city will have a long list of ordinances. They are generally grouped in terms of land use ordinances - zoning maps and so forth, building ordinances - which control how it shall be built and so forth, housing ordinances - which define really the quality of the space created (minimum inhabitable areas), subdivision ordinances - which may have to do with how we're going to subdivide real estate, create new subdivision and plats, carve up buildings and parcels and so on (long list of those).

Then we move on to the state level. The state level will again will almost always control all buildings in excess of 50,000 cubic feet. Will be subject to the state industrial code in terms of how they will be built and so on. Indeed, they will require that any plan be submitted by a licensed engineer or architect. But there will be other forms of state control. The State Highway Department for example will control any access onto a state highway. The Department of Natural Resources will control any property within 1,000 feet of a navigable stream and a navigable stream in Wisconsin is anything in which you could float a log down at least one month out of the year. And there may be other forms. For example, the State Aeronautics Commission will control land uses around an airport and on and on and on and on.

At the federal level there are, again, a whole hierarchy of controls. Some of them are indirect through our financial institutions. The fact that the Federal Deposit Insurance Corporation and the Federal Savings and Loan Deposit Insurance Corporations can state what is an eligible piece of real estate for collateral will control land use. If they decide they will not finance mobile home parks, that controls the use of mobile home parks. If they decide that buildings can not be financed in a flood plain, that has a very distinct impact on what you can do with a flood plain and so on. So that the standards that control our lending institutions ultimately control our land use. By the same token, we can have direct control of our land use by the kind of lending programs that the federal government may have. If the federal government wants to encourage let's say dispersion of industry into smaller towns, they create a loan program which provides non-market interest rates to industries, buildings and small towns or they will create special financing for industrial parks in small towns or they'll create special loan programs for those that will build sewer systems and water processing plants in small towns in order to encourage dispersion of the population away from major metropolitan centers.

And finally, of course, you may have direct control through the Office of Environmental Protection Agency, EPA. The EPA comes in and says I'm sorry your community has now reached the acceptable level of pollution and that if you build this automobile plant, you will have exceeded that, or if you build this regional shopping center, the traffic congestion will now cause the exhaust and particulate level of pollution to exceed our acceptable standards. Sorry you can't build that shopping center there and so on. And so, for example, Oklahoma City, before they could have a new automobile plant which they very much wanted for the economic base - they had to get all the other industry to reduce their pollution output by ten percent so that there was adequate reserve capacity for pollution that was introduced by the automobile plant. So, as a result, the federal government can have a great deal of control of the land use on particularly large projects such as shopping centers, industrial plants and so forth. The Corps of Engineers is notorious for their land use control along any waters that are navigable for trade of one form or another and they will have very specific requirements about how you will go about building your project and are not always very rational or amiable to negotiation.

So we could begin to look at a hierarchy starting with the deed, moving to a local district or neighborhood, moving out to a community, then into the state, from the state into the federal and create a very, very elaborate hierarchy of control. There are some areas around San Francisco Bay that have over 80 levels of land use control agencies controlling a single land use decision. By the time you have moved through all of the various elements. Even in Minneapolis, for example, as I was telling my friend Frank Dunbar explaining that they looked all over the country to find the most complex regulatory district they could in order to build, in order to have enough challenge for their organization. And they found a little area along the river at St. Anthony's Bald in Minneapolis. Many of you have probably been to St. Anthony's on the Main or seen the project called River Place. They had forty-six different agencies controlling the land use legally plus the Catholic Church controlling it simply on principle. Once they had blocked out their initial land plan, they discovered that their tallest condominium tower threw a shadow on the steps of the Catholic Church in the neighborhood during December and the priests argued they already had enough trouble getting people to church without having the steps icy out in front. So they literally had to move their condominium a certain number of feet in one direction in order to bring the church door out from underneath the shadow on December 21st or they would not have had the support of the board alter person in getting final approval for their project. The land use controls not only can be official and designated through some sort of enabling power, but may be unofficial but, nevertheless, very real in the political sense of gaining the necessary approval for the project. Want to turn that page for me. Thanks.

Once we have these inventory of constraints and opportunities we can begin to define what we'll call the alternative potential uses for a particular site. And these alternative uses then are the possibilities that need to be examined further in our analysis. For example, if we were to look at a little old building on the Square which is now called, I think, The Atrium 25 N. Pinckney. In looking at that building initially you would have found that it had been a high style women's shop for many, many years which utilized only the first floor of the building. The reason was that on the second and third floors was an atrium that cut across the full width of the building - built in 1885 in a very beautiful Italian style of atrium. But it cut the building in half and as a result the front half and back half of the building didn’t have two stairwells, two routes of entry. And the atrium represents a fire hazard of slew which would require 4 hour fire walls under our current code. In order to resist the flu effects of a fire etc. and yet the building structure wasn't strong enough to carry that. So as a result they had only used the first floor since around 1920. The developer in going back and looking at that said, "Gee, what we ought to do is find a way to save the architectural character of the interior, but nevertheless, but get some kind of reading on the code." That became, then, a major element in signing the reuse of the building. What can we do consistent with the code? How can we gets the codes interpreted to allow us to retain the architectural atrium in the center? And eventually the state industrial code ruled that it was a not a conforming, but that it had been there since prior to the code and, therefore, was grandfathered in and they did retain that present use. They then had to modify the use of the downstairs to provide small shops rather than large shops - since the boutique rather than the department store is the characteristic of the retail market on the Square. So the developer looking at that in terms of alternative uses could have said well, 1) I can continue to use it as it has been used with a single seven thousand square foot retail store on the first floor and abandon the 2nd and 3rd floors, 2) I could subdivide the first floor into smaller retail and continue to abandon the second and third floor, 3) I could subdivide the first floor into small retail and convert the second and third floor to let's say, office space, and 4) I could convert the second and third floor to four townhouses which would permit me to have a two story unit, but as I came out of the unit on the second floor, I could provide then two routes of escape from that point forward. So the developer looked at that then as his four alternative courses of action with the existing building and he always has the fifth opportunity of tearing it down and starting with a vacant lot and carrying forward from there. So that begins to identify alternative courses of action that are suitable for the building. And looking at the legal controls he found that the city would not issue a demolition permit to tear the building down for fear that it would reflect badly on all the money they invested in the mall. So, now you have a legal/political constraint that says, you're going to end up going to the Supreme Court to get a permit to tear it down. That's not a very realistic course of action, so that drops out. And you know that 7,000 square feet won't rent because it's not available to rent for three years and it has been vacant for that whole time so that's not a very good alternative course of action. So eventually it gets down to saying, "Gee, can I put office space on the second and third floor, or apartment space?" The apartment space is a much neater solution because it doesn't require you putting in additional routes of exit because you can have a two story apartment and come out on the second floor and just have two stairways down, one to the front and one to the back and provide the two routes of escape. But at that point, just as he was about to buy it, Madison was going to have a rent control referendum. And the developer says, "No way am I going to provide residential real estate in Madison and be vulnerable to rent control, so I will go the office route." And now, given the office route, how do we solve the life safety system problems and everything and the other vertical transportation problems and so on. So, notice that he begins to move through the alternative courses of action and chooses one which seems to satisfy most of his objectives for the building consistent with the legal constraints and so forth that are on it.

So now, if you'll look at today's lecture notes, at the very back there's a little chart. As we're moving down that step chart so that our property attributes, physical and legal begin to identify some alternative courses of action. We're going to look at linkage and dynamic in just a moment. And that defines then a building envelope and an orientation of possible alternatives and then we have to say, "Gee, of those alternatives, who needs it? " We need to know the market for it. We need to look at what are the general market characteristics and then specifically what are the micro markets. Are there any specific tenants out there? Are there any specific types of tenants out there? What's the neighborhood think about this and so forth. And from those which have a market demand, we now weave down to a selected number of scenarios for the property. Once we have those scenarios, now we begin to look for solvency. What kinds of scenarios can we make work, in terms of revenue versus cost. And we'll come down to those which are acceptable from the private standpoint. Then we have to say, "Gee, there's several from the private standpoint, are they a good idea from the public standpoint." And we'll look at the infrastructure tests. Can we handle it in terms of the traffic capacity, and the sewer and water capacities and the fiscal impact - is this a good idea in terms of our tax structure and so forth. And if we can find then one of the remaining alternatives that also is consistent with the community's goals, now we can move into the final aspect which are the investment tests which say, "Gee, how do we polish this one up in order to get the best return on our capital and the best risk position relative to our possible default and so on." So we're moving down that ladder over the next series of lectures. With that we'll flip over to today's subphase of the lecture and begin to talk about linkages.

Probably one of the most critical concepts in real estate are linkages - the physical, and mental and commercial ties that relate one establishment to another. Urban land economists have talked about an establishment as any kind of activity that could go on at a particular location. A household is an establishment. A tailor shop is an establishment. The capital is an establishment. The University, looking over the entire university property, is an establishment. A particular use of organized folks doing something is an establishment. And the critical element of real estate relationships are the linkages that exist between establishments. Now at one time you all had to be within shouting distance of one another, but now those establishment linkages get more subtle. We can have a local call rather than a long distance call. We can have the fact that we can drive to the local super market in three minutes or five minutes or bicycle from the dorm or whatever. Each of those elements is a way of causing some sort of interaction between one establishment and another. And these elements of interaction we call linkages. Linkages are the heart and soul of demand for real estate and the essence of the concept of location. Location has nothing to do with longitude and latitude. Location has everything to do with the networks of linkages that particular establishments require or benefit from. Anything which improves the convenience and accessibility of one establishment to another enhances the value of that particular location. Anything which detracts from it is called friction. Friction - heavy traffic is friction. If you have to make a left turn across three lanes of fast moving traffic, that's very real friction. If you have to walk a long distance down an unlighted sidewalk at night, that's friction, just from the anxiety it creates. Congestion is friction. Cost of travel is friction and so on. So in evaluating a particular real estate opportunity, we're really interested in evaluating the linkages that it may have with other activities and what kinds of cost savings would be involved in friction that would be capitalized into the value of that property. For example, think of the condominiums along Michigan Avenue facing the lake which sell for several hundred dollars a square foot. Where does it get that kind of value? It only cost us maybe a hundred dollars a square foot to build it. How come they can sell it for two or three hundred dollars a square foot condominium? Well, what they've really done is they've capitalized into that the convenience of being able to go down the elevator and be downtown close to work, close to shopping, close to the recreation, as opposed to spending an hour of your life every morning and another hour every afternoon on the expressway driving back and forth from the suburbs with all of the stress and the wasted time and so forth that's involved. Suddenly people are willing to pay a big premium to be downtown. It's no different than Langdon Street. How come he can get a buck a square foot for a crummy little apartment on Langdon Street as opposed to paying 50 cents out in the suburbs. And, obviously, the difference is the cost of friction. It's so much easier to roll out of bed and fall into class or into the adjacent party or State Street saloon or salon as the case may be than it is to have to find your way to the bus or motor out to the perimeter and so forth at the end of the day and thereby waste time and money and so forth. So as a result, you are able to capitalize much of the savings in the cost of friction into the rental differentials that characterize the real estate.

Now, analysis of linkages moves best by starting with a particular establishment or location and moving out from that perimeter. But, by the same token, if we have a use in search of a site, what are we really identifying before we search for the site? By identifying for that establishment, for that use, a specific set of relationships which is critical to its successful and efficient operation. We're saying OK this particular industry has to be close to a railroad system, it's got to be close to certain kinds of raw materials. It's got to be close to certain kinds of employment pool etc. It needs to be close to certain kinds of customers and we begin to set up some sort of equation which says here are the critical attributes we must have, here are the attributes we'd really like to have, and here are the attributes which would be fine but are negotiable - we may not really need them at all.

Now, in starting with our discussion of linkages the initial linkages are physical. Physical networks of various kinds which tie us to other sorts of activities. Simple basic stuff like sewage lines, stormwater runoff and so on. Where do we get our water, where do we get our electricity, where do we get our telephone lines? Where's the point of connection? Does it have the capacity and where is it going? We need to know, gee, where is our water line going to come from for both use of the water within our particular processor and perhaps fire. And what's the water chemistry? Is it compatible with what we want to do? Heilman's presumably couldn't make its beer just anywhere. Coors needs obviously a mountain stream running through the plant. Energy Sources - what's the price of electricity in a particular area. Can we get gas? Can we have steam? Can we have solar energy? What's the capacity of our suppliers? All of these are physical connections.

And now we're interested with sidewalks going by and now if we're in Minneapolis, are we on the skybridge system? - that becomes a linkage. Are we adjacent to the TV lines. Many subdivisions now on the east coast not only provide hot and cold water in the trench going by, but also provide cable TV. In some areas of New Jersey they're experimenting with having garbage lines that move the garbage from one building to a collection point using pneumatic air tubes - it's a Swedish system that was initially used out in Disneyworld in order to move things. So there's a variety of kinds of services that we can bring to the site by pipe and wire and roadway and sidewalkway and skybridge and tunnel and so forth. And, if you've been to Toronto there's an underground pedestrian system which is very handsomely done, connecting virtually all of downtown and making a very significant impact on what is a desirable location for an office building or retail store and the subway system similarly has very significant points of station access and so forth. Indeed, one of the significant things in developing the subway systems in San Francisco and Washington DC was trying to anticipate where was the station going to go because wherever the station went could create a tremendous amount of value for the land immediately around it and the more that the transport authority could own that land before it announced the station was going there, the more it was possible to finance the subway station with the capital appreciation in the land around it. So, as a result linkages becomes a very critical element in terms of the physical network servicing a particular site. And once we move beyond the physical linkages related to that, in some ways, are what we will call the public service linkages. For example, where will the fire and police departments go and where will they not go. What is their service district. Where can you switch railroad sidecars on your side track for free and where would you have to pay a demurrage(?) charge in terms of having the freight car drop off and picked up and how many days it's on the track and so on. For example, a uranium processing plant lost track of that in Tennessee and just the cost of having somebody drop off the cars of uranium ore, allowing them to stay on the side track for several days and then picking them up again, made the plant virtually noneconomical after a while in terms of the extra charges. So you need to know where those kinds of zones are and where will you go from there. And sometimes that's political. There's a wonderful failure of a shopping center down in LaSalle, Peru that I use in the real estate finance class. And, it was discovered after the shopping center was built that it was outside the police and fire service zone of LaSalle, Peru and all of the rival merchants then were furious about this new shopping center being built and taking business from downtown, sat on the fire and police commission so they wouldn't change the zones. And by not changing the zones, they did not have city fire protection. That was a violation of their fire insurance which was then suspended and a major element in their mortgage, of course, is that you maintain a certain amount of fire insurance on the property or you're in default on the mortgage. So all of it led up to default on the mortgage and the shopping eventually failed for several reasons, one of which was its inability to get fire insurance because it was outside the service zone. Quite often that's a reason for putting a shopping center in. When West Town and East Town were built they were both outside of the city of Madison. But, because shopping centers are such bad fire risks, it's critical that they have municipal water in order to have an acceptable fire insurance premium. And the only way you can get municipal water in this town is by annexing to Madison. So, as a result, the city was able to capture the tax rate represented by the shopping center for the benefit of the City of Madison rather than the suburbs. If you're not in the zone, you'd better be in the zone and that may mean some very significant reorganization, and so on. But on the flip side of that, for example, the telephone company on Middleton is General Telephone, not AT&T. And AT&T has the City of Madison district, but General Telephone has the Middleton district. When they annexed the shopping center into Madison, AT&T sued to say that that was now their customer and the court said, "Phooey on that, General Telephone has already gone to the expense of running lines in and so forth, it's their customer." And this is why you have Middleton numbers on the west side of Madison because it was annexed out of Madison but it was part of the General Telephone district. So that got into the interesting problem of then our subdivision, for example, up in Applewood Hills which was mostly doctors, AT&T has the medical telephone service to call doctors and so forth, and General Telephone didn't. And, as a result, doctors didn't feel they could live in Middleton until we finally got General Telephone to add a medical call service that was compatible with AT&T's. And so the linkages get very very subtle here in terms of how the services are delivered and whose service district it is and what the costs are going to be and so on. So we'll pick up on that next time.

The only problem is really to establish the initial premise of our course that real estate is space time and space time equals money time and the first thing you need to do is establish what is the potential envelope on a given site. What kinds of set backs are required. What kind of height elements can you have? How many floors can you have, and so on? The space envelope gets to be a very complicated process. And in New York, for example, the shapes of most of those buildings are not architectural accidents. They are fitting a very carefully defined optimum spatial envelope. And many zoning ordinances provide very elaborate bonuses so that if you're willing to leave a bigger plaza and open space at grade level, you might be permitted to have a higher building. If you were to permit an arcade through the center of the block so that pedestrians wouldn't have to walk around the building, you might be given certain other bonuses in terms of additional floor area ratio in the building, and so on. Ultimately, in most urban areas it takes an architectural firm to program into the computer all of the different options for a given site, in terms of the spatial envelope. Then to select that envelope which is best for the purposes at hand. Once you've established the maximum amount of bulk and mass and floor area that you can have on the site, other factors will begin to fine tune how much you really do put on a site. For example, how many elevators do you have to have to go so high. You may be able to go 2,000 feet, says Mr. Trump, to have the tallest building in the world, but if all the floor space is going to be occupied by elevator core, there's really no net advantage to that. And so, obviously, there are some fairly elaborate linear programming models which then begin to carve down on the spatial envelope maximum and arrive at the optimum combination given various trade offs that you may want. How much window area do you want relative to floor area? For example, the optimum depth in an office building is that the space probably shouldn't be more than 30 feet deep from the window into the corridor and you have obviously two sides, double loaded corridor, you need about 68 to 70 feet max. as the width of the building, regardless of what the optimum or maximum space might be on the building. So we're starting to play with the game of the spatial envelope. And computer programs are typically used in the more complex urban environments. Here in Madison you'll see that the number of variables is relatively limited but there's always a key constraint on how much space you can put on a given site. It might be the number of parking units you have to have per thousand square feet of floor space. It might be the optimum amount of floor space that you can service with one elevator. It might be a maximum height limit imposed by the adjacent uses. It might be a setback imposed on the lake shore by state environmental concerns, whatever. But every site has a critical limit. And it might be, as I say, the going units that you can have - you have to have a thousand square feet of land for each apartment building. That puts a cap on how many apartments you're going to put on there. It might be the parking units. It might be a floor/area ratio. We want you to get some sense of the options that needs to be considered in exploring the development potential of the site. So the first step is to be able to start understanding what the codes said - fairly simple spatial envelope issues in terms of how much bulk can you get on a specific site under the City of Madison code.

So we are now defining space/time. The next step then will be to move to a simple statement about money/time. Then we'll start moving the time dimension on you and start doing cash flows over a five or ten year period, given a certain spatial configuration and so on. So behind the problems there is some edges holding it together.

We were talking about linkages relative to the physical networks which are supportive of a specific site beginning with the obvious utilities and street scapes and sidewalks and so forth. It's important that one always remember that those are dynamic elements and the character of a linkage is that it ties you to something else - that it goes somewhere. And that it's important to analyze where does it go and what happens when it gets there. For example, let's say we're talking about storm water. We could say, "Gee, we have a creek going right by the side of the site, we'll just tilt the parking lot a little bit toward the creek and the storm waters will run off into the creek and the problem is solved." Wrong. The question is, how much capacity does that creek have for storm water which formerly was absorbed naturally by the site and now, of course, hits an impervious surface and runs off. It may be it is necessary to create your own controls on how much goes into that system. Two types of controls for example: 1) the IBM building out on the Beltline here is that contemporary concrete three-story building sitting up there on the side of the hill. And that particular site was a bypass for years because it sloped into the arboretum. And the feelings was that if they created a parking lot, that you would get the oils and the other chemicals dripping off of cars and salt from the ice control systems, and so forth, filtering into what was supposed to remain a natural relatively unaffected environmental system. And the architect, in order to solve that problem, discovered that the city storm water drain was on the east corner of the site, not the west corner of the site. And to make that site developable, you completely regraded and tilted it so that all the parking lots drained east and into the city storm water system. And, therefore, the natural run off of a parking lot system don't enter the arboretum. So here's a linkage that's critical but now the question is how do I get my lot to flow in the direction of that particular linkage? Second example, in Milwaukee on the far north side is a boundary really to Milwaukee County called Faery Chasm. And Faery Chasm is essentially a storm water collector for virtually all of the northeast corner of Milwaukee County. And the water running through there now, as a result of all the development, is causing further erosion. So a shopping center developer proposes to build on the corner of Brown Deer and the Port Road, a fairly snorky specialty center with a Sacks Fifth Avenue and that type of thing in there. And, the planners looked at it and said, "Gee, if we paved that area with a parking lot and so forth, so runoff into Faery Chasm is now going to exceed its capacity to handle that, and therefore we'll have to design the center in order to retain so many acre feet of drain water or snow melt on the site for controlled time release so that it can follow the natural surge of a storm down the Faery Chasm network. That meant that the parking lot had to be sculptured so that the outer peripheral became water ponding areas. The roofs were built up with extra heavy duty girders to carry almost a foot of water inside the parapets on the roof and so on. And it very quickly became unfeasible from a financial standpoint to hold or retain on the site the water necessary to control where the storm water went. Notice it's not only important that there was a system to take the storm water, but it was also important to know, what was the capacity, where was it going to go and when was it going to go. So you have to look at the sewer and water and the sidewalk and the traffic and so forth. Not only the fact that you have proximity thereto or that you even have physical access thereto, but you have to understand what is the capacity of that? And, where did it go to? You have an industrial system that puts out a certain kind of waste. For example, Oscar Mayer puts out very hot water. Well, hot water doesn't work well with an anaerobic sewer processing system. So one of the problems you gotta do is say, "Gee, if that hot water's going to run down and be too warm when it gets to the sewer plant, that causes other problems in terms of foaming detergents, and so forth and so on, therefore because of where it's going and how it's going to get there, we have to cool water, pull that heat out and bring it down to a temperature that's simpatico with the anaerobic sewage process.

North Lakes development in the northwest sector of Milwaukee is a classic case in point. The Menomanee River goes through there - the Menomanee Creek, depending on how you rate that I guess - and they assume that that would be an acceptable storm water exit. The problem is that most of that creek has been channeled all the way through Wauwautosa and all the way through downtown Milwaukee so they have a very limited capacity. And North Lakes would have exceeded the capacity of the channel downstream area, thanks to the corps of engineers and the park builders and so on. As a result, it was necessary to build the lakes into north lakes in order to retain on site the storm water and provide a controlled release into the Menomanee River system. So you have to look at the availability of these physical networks, not simply as a static factor that they're either there or they're not, or you have access or you don't, but, in fact, what is their capacity, where do they go, do they have capacity on the other end to handle it? And, if not, it's not going to do you any good. If you have sewer line going by your property but it's already at capacity, you know, forget it. You’re not going very far with additional development. A good example of that is the Langdon Street redevelopment a couple of years ago was hamstrung for several years because people felt that if they expanded the sewer capacity, you would get more buildings like Wisconsin Hall. And, currently, the Langdon sewer was just about at its capacity - particularly on Sunday morning I guess after the beer fest - and as a result, there was a big fight by those that would like to keep a low density development in that area to retain the existing sewer capacity even though it was approaching the inadequate in order to put a lid on any further high density development in the area which is essentially what happened. So, you need to look then at those networks in terms of their capacity, where they come from, where are they going. The same is true of traffic flows, pedestrian flows and so on. Quite often you misjudge pedestrian flows. For example, between the Dearborne Street station in Chicago and the main banking loop, you have heavy pedestrian traffic counts and so many retailers thought ah haa, here's the place to locate my store with all those people walking by the store front. The problem is they only do that two times a day, once in the morning on their way to work about 8 o'clock and once in the evening when they're hustling to the train at 5 PM. As a result, their retailing needs are very limited. Maybe a bottle of wine to the little lady, maybe a corsage, particularly if they're running late and so forth. But they didn't stop to buy suits, they didn't stop to buy, you know, the type of shopping goods that located there initially. You really had to know where were those folks coming from, where were they going, therefore what was the character of their needs and so forth at that particular point in time. So you need to examine the flows within any kind of network servicing the site in terms of the exact characteristic relevant to a particular use.

Once we move from the network servicing the site, the next thing is to understand what are the contiguous properties. Who's on the lot next door? What kinds of folks do they attract to the area? What kinds of services and needs do they have? And that may be a plus, that may be a minus. If you have a fireworks plant in a lot next door, that may adversely affect your fire insurance premium. A classic case in point, Tenney building. The Tenney building suffered significant vacancies and a relatively bad image. The front door faced the saloons that were across the street with their various flesholds etc. and you were likely to be accosted on your way into the Tenney building. One of the ways of turning the marketing of that around was to turn that whole building around so that the front entry is now coming off the plaza next to the First Wisconsin building or coming directly off of the Pickney Street and you're no longer having to go into the area in which the approach zone is negative. So that you change the linkage from essentially a main street address to a bank plaza address and that's significantly alters the marketability of the property.

Contiguous property ownerships are also keys to whose vested interest you might be goring by developing one type of property or another. For example, the classic occasion in the deed restrictions is the location of the Lutheran Chapel on the corner of Lake and State, on the corner of the mall. That property was vacant for a good many years and next to that where the bookstore is was a very quaint romantic looking little Lutheran Chapel primarily used for June weddings and the bookstore was on the opposite corner with the library expanded. It became apparent that Lafollet Book Stores thought they would like to move into the Madison market and give the boys a little run for their money and a little competition. So the university book store and Browns and a number of others organized a consortium that bought the vacant lot on the corner and gave it to the Lutheran Church subject to a deed restriction that said it would never be used for the sale of student supplies, typewriters, barber shops, drug supplies. You could tell exactly who gave the money by looking at the restrictions. Then along came the university and said, "Sorry guys, we're going to push you off the corner and we want you to go over to the University Square Shopping Center and be the anchor for that urban redevelopment on that block." And the book store didn't want to go. And they didn't have any place to go except the vacant lot across the street which they had already killed with a deed restriction. Now, things are great, wonderful

- "We'll just get all our friends to remove the deed restriction, and then we'll build our book store on the corner." Well all their friends did except for one contiguous property owner, called Brown's Book Store with a say me too for a long time as a competitor who are now happy to say sayanara and good-bye and we'll anchor this corner ourselves. So they wouldn’t remove the restriction. So now where's the land without the restriction. It's in the middle of the block where the chapel was and the Lutherans wanted something that was more appropriate to a student ministry than romantic June weddings and so they sold the old chapel to the book store to locate their building IF the book store would build a new Lutheran ministry on the corner, which they did. Now the presumption was that they could deliver books from on the street or from the alley. Well, two presumptions were wrong - the university made that a mall and allow no deliveries across the mall and the alley turned out to be owned by the university, not a public alley and the university's policy was that they would not allow a private owner to benefit from public property and therefore, they couldn't deliver from the alley either - which is wide as a big garage door in the side of the Lutheran ministry which allows the trucks to drive across the property to load into the book store. So you need to know, who's my contiguous property owners. Who's there to say nay to what I want to do or object to a zoning change or are they in line to benefit by it. If I can bring everybody into camp and there's something for everybody, obviously I won't get much more more cooperation from the adjacent property owners than otherwise. So we need to know who are the contiguous property owners, what kinds of uses are there and what does that bode for whatever proposal we're going to make.

The third type of linkage is now moving away from the site toward the immediate environs. And really, it says, "OK, what kind of resources are nearby that I need to draw on." It may be, for example, student health which is very important to the restaurant business or it may be underutilized labor that would like to work in an industrial factory as well as perhaps farm their 80 acres and so on. And so it's no coincidence that some of the major furniture makers are in small country towns where there is a underemployed labor pool of people who are manually dexterous and so forth who can farm their 80 acres and work in the furniture plant, and so forth, at the same time. Maybe there's other natural resources. Maybe we need timber, maybe we need a special kind of water. Perhaps we simply need fish. For example, a number of years ago in doing a feasibility on a major resort proposal for Door County, the lender wisely said, "Gee, this is being designed for fishermen to take advantage of the resurgence of sports fishing in Lake Michigan." How long is that linkage going to be there? What is the long term prospect for the lake trout and the salmon and so forth in Lake Michigan? Will the nuclear power plant gradually make a cooling pond out of Lake Michigan have an adverse affect on that? Will the virus affecting the lake trout and the rainbows and the brown trout eventually wipe out the fish population again. Will the lamp come back and so forth. In other words, if the resort is tied to a critical resource such as fishing, how strong is the fishing over, at least the term of the mortgage on the resort? And, in that case the answer from the limnology lab came back positive - that the sports fishing would remain and the real problems were not the water temperature but certain problems with the Lampree and viral infection of the brown trout. But, nevertheless, you want to begin to look at what is the resource pool on which I've depended and how stable is that pool? How long is it going to last? Obviously, if we build a cannery, we want to know how long is there going to be a vegetable crop there. If we're going to build a meat packing plant, how likely is it that we're going to be raising pigs and sheep and so forth. It becomes part of the infrastructure necessary to support that. And, again, quite often that resource on which you're dependent may or may not be there.

Beyond that, of course, there are all types of institutional elements that we might depend on -employment centers, in terms of office and industrial places, school systems, their alternatives, retail services, health systems are becoming more and more predominant. For example, in Palo Alto Stanford's Hospital has a special program to teach geriatrics, gerontology to their medical school residents. And they will make out-patient calls. As a result, within a district of about two miles of the hospital is a favorite place to locate elderly independent housing because they receive very excellent medical care at a very low price as part of the overall training program of the Stanford University Hospital. So, there would be a very useful linkage which can be marketed to a particular segment of the population. Columbia, Maryland, as we'll see at the end of the semester, features, among other things, a house call medical support system that comes as part of your fee in a residence in Columbia. Quite often this type of software of a service component becomes critical. It may be a security system. That operates in a certain territory. There may be a private security system that operates within a certain territory. You maybe have to be, as we mentioned the other day, in an AT&T telephone system because that's what's compatible with other elements that you have your neighborhood. It may depend on waste disposal services, recreational services and so on. The demographics of an area may a great deal to do with the linkages characteristics of your enterprise. And they can be dramatically different. And finally, of course, you want to know what the relationship is to competitive alternatives. If you're a motel, how close are you to the off ramp coming off the interstate. Is it possible that there will be a series of intercepting sites which will have first crack at the tourist who does not have a reservation and is likely to take the first decent looking motel that he sees with a right hand turn once he gets off the off ramp. That becomes a linkage. How tied are you to the traffic coming off a specific intersection and, therefore, how close do you have to be to it or how do you control it so that you can capture your particular share of the market? So the linkages begin to move from a physical network to immediate, adjacent and continuous property to resources and then to institutional elements which contribute to the total infrastructure on which you're dependent. So linkages can be highly abstract relationships to population groups, age groups, educational levels and so on. And they can be very subtle. If we're doing a car wash we probably want to be in a group of relative young, swingle, living in apartments where there isn't adequate hose bids to do their cars. Their cars are one of their prize possessions and they tend to go to the car wash more often than folks that own their own single family home and have their own hose bid and probably have a couple of little kids to wash it for them rather than having to do it themselves, and so forth. So, as a result, that car wash thing becomes very, very susceptible to its convenience to or linkages to a specific demographic population housed in a certain kind of unit and with a high percentage obviously of car ownership so that that becomes your trade base. We could expand on that as the semester goes that the essence of location is your ability to define a network of linkages that supports a certain establishment. The establishment being the occupant of the space. The network of linkages being all of those relationships that are critical to its choice of space. And, once again, location therefore exists really in the priorities of the establishment and has very little to do with the geography and longitude and latitude of a particular point.

Dynamic attributes have to do with things which are in the mind of the beholder - which are emotional responses in many ways to a particular site or its environs and which, nevertheless, affect the decision-making behavior relative to real estate. You have the image conditioning of the approach zone. You can have a very handsome new apartment building, but if you have to go through a really slummy, threatening area to get there, you probably won't go there and if you did go there, your friends wouldn't come to see you. And, therefore, the approach zone becomes a critical element of romancing the buyer. And, that approach zone can be several miles long or it may be only 15 feet long. If you bring somebody to the new home that you're trying to sell them and they get out of their car and have to balance on a two-by-twelve over a pile of mud that's soup and construction debris to get to the front porch, the approach zone has already established a negative attitude toward that product and they'll probably pick it apart. On the other hand, if the flowers are blooming and the grass is green, and they're waltzed up a blue-stone walkway and they have a handsome front porch, all of the codes and vibes that are coming at them are very positive and they will have already decided that they like the place and will find other reasons to support that judgment. I know of office building developers, for example, in Phoenix that have a spray that smells like fresh cut grass and they spray that every morning along the sidewalk so that virtually all of your senses are enjoying that and they have double padding under the carpeting when you go in so it's like walking across the everglades. Everything is built to a tactile and even, as I say, aroma and color and texture are all establishing the approach zone so that once they've waltzed you into the bare office space you've already decided to like it. Trammell Crow does a beautiful job of romancing you through the door of the potential office. Once you get into the office, it's pretty much run-of-the-mill drop ceiling materials and pretty much run-of-the-mill carpeting and the window hardware, and so forth, they haven't spent a lot of money on, and so forth. But you don't care and you don't notice because you've already had a positive mind set as a result of the approach zone. Visual factors - obviously, heights and view and potential for controlling your sight line. A beautiful job of that is the Fauerbach condominium down on Williamson Street where if you were to have seen that site before they developed it, you stood in the middle of it and you had the coal yard on one side and the rail track going by and a slummy scummy old industrial building next to it called the Farm Hardware building and so forth, you would have never believed that people would build and buy prestige housing. So that whole unit is focused to capture the southern exposure over the lake. When you're standing in the building you can't see the power house and the coal fields, and so forth. And it's been designed so that the sound characteristics of the MG&E machine for shaking coal out of coal cars can't be heard by the residential units and so forth. And, again, to control the visual factors they would not allow the city to retain ownership of the shoreline so that they could continue the sidewalk up from the park onto the next park further up because as you had people intruding into the back yards of the townhouses along the lake shore their anxiety levels would have been increased and their privacy would have been encroached on and they would not have paid for that kind of lake shore view in that instance and so they've done a very nice job of controlling the visual aspects so that it is all positive -

that it's always a reinforcement to the domestic security that people want when they spend that kind of money for a unit.

Prestige and status, obviously, address - whether or not you're at Maple Bluff or not and so on. By the same token anxiety is created in a variety of ways. Sometimes it's a security element - it's too dark, you feel people are lurking in the shadows and so forth - but anxiety comes involved much more easily as a result, as an example, of confusion. Drive on a shopping center site and not be able how to figure out where the entrance is. You're somewhat embarrassed by that, that creates a certain stress level, and pretty soon you don't go back to that shopping center. You don't intend on embarrassing yourself again, particularly in front of your kids or whoever - "Hey, Daddy you're going the wrong way!" Or if you're going to romance the lad or lady in your life, and you have to cut across three fast moving turns in the left turn to get to that little romantic hideaway, by the time you're there one of them is shouting, "Look out for that car, watch where you're going." And pretty soon the romance of the moment is lost and she's thinking he drives like an idiot and he's thinking boy is she a nervous Nellie. The evening is ruined and it's still part of that anxiety factor that interferes with whatever the real estate is supposed to perform. So you have to really begin to analyze real estate in terms of whether it contributes to that anxiety factor or tends to control all manner of stress and confusion.

Noise, obviously, is one element. And there is actually for the FHA location of apartment buildings, a noise pollution manual that determines whether the decibel count is acceptable relative to residential life, normally not acceptable or totally unacceptable. And, there's a fairly technical analysis of the site. And as you get closer to noise common like railway tracks and high speed highways, and so forth, there are different setbacks and different design specifications that would be required to control that noise so that within the unit it falls within a normally acceptable level. Otherwise the premise is that the stress characteristics will hurt the marketability of the apartment unit.

Prevailing air currents - certainly want to be down wind of that little sewer plant out there at Oscar Mayer. Or, for that matter, the sulfide paper plants in northern Wisconsin. There may be airborne pollution of one form or another. One of the classic reverse stories, of course, is the phosphate mills in Tampa. And, there was a Ph.D. dissertation done with the expectation that they could prove that, in fact, the phosphate stuff blowing across Florida in the Tampa, St. Petersburg area was diminishing property values. And so they laid out where the dust was going, and so forth, and they analyzed property values and they found significant - the sales prices were steadily increasing whenever the orchards sold or whenever the old homestead sold down wind. And destroyed their dissertation premise that property values would decline under the phosphate dust. Well, they didn't look far enough because if they had researched it, they would have found out that properties were being bought by the phosphate companies as the owners threaten to sue. And in order to save them from the suit it was cheaper to buy the orchard, and run it as a corporate farm than it was to take on the public notoriety of being sued for it. A good example of a classic academish not understanding his own statistics.

Political images, obviously, can be created for and established for an area. You can see that all the time when somebody proposes a certain public project and immediately the residents organize and you always got the lady standing there with her baby in one saying, "they want to take my home." OK. Immediately attaching a negative value factor to the project. Or the little merchants say, "What do they expect a little guy to do." Classic case in point, is the old 600 block here on University Avenue. Under the urban renewal rules the city was obliged to find alternative points for each of those businesses that were there to operate and so forth. And so, of course, every time they found one why the merchant would find something he didn't like about it. Well, the truth was the city had already bought their buildings from them, given them hard cash for their facilities, and then allowed them to stay where they were, rent free - all they had to do was pay for the heat and electricity - until such time that they could find another place. And they stayed for ten years, who wouldn't, you know. And so no matter what the City showed them - won't work. Can't do it, you're trying to bully me. And periodically they go to the Cardinal or the Badger or Isthmus with somebody and they would run a big exposé on how the city was pushing these little businessmen around and Guedens (fish market)(or Gaydon's - I'm not sure correct spelling - or Geudens) and the rest of them would all sit there and chuckle quietly to themselves because they had had free rent for ten years. So, you can create positive or negative, you know, attributes through the political process for property. And, a classic case of that is that weedy little corner on the corner of Park and Johnson streets right next to the Zoe Bayless Co-op there. I don't know how many of you have strolled through the people's park lately, but back in 1969 that was a really hot issue, you know. The students rioted and said we're going to make that open space and green space and environmental edges for the birds and bees and so forth and that's the people's park and now the university can't touch it because it's got that negative political image that if they go in and strip it, they're in great trouble because they're obviously violating the bird sanctuary, and so forth. Another classic case - watch this thing that comes up on the university convocation center - a building sitting right in the middle of it is an old railroad townhouse series. I think it's on the corner of Francis Court and I forget what the cross street is, I think it's Lake Street, but maybe it's the next one down, and there's about six old townhouses in what were called railway flats. They were built for the brakemen and so forth at one point or another. And they had done some history and they had been allowed to deteriorate until recently they were kind of patched together and restored. But traditionally the editors of the Cardinal and that whole crowd, you know, and W. Faye (?) have always lived there. And we've got a whole bunch of people living there that are kind of left over from the 60's. Now you watch, the university is going to go in and bulldoze it and build a convocation center? You wait, it's going to be a ten year fight if they go in there and I'm betting the university loses. That's just a classic case of a political image being attached to something that totally alters a reality of the practicality of a situation. And that is a dynamic attribute that goes with that piece of real estate. And if you buy into that baby, you're taking on that little problem and you're going to have to figure out how to solve it.

Finally, of course, we have historical values which can be legitimately attached to buildings. They can be landmarks in terms of the history or homes of highly respected citizens and may represent architectural format that is important to preserve and we have creative mechanisms by which we can begin to institutionalize that kind of dynamic attribute to the building. Throughout the city and the downtown areas you'll find buildings with plaques between the sidewalk and the curb indicating that this is a landmark structure representing a certain character of design, a certain personage which played a part in Madison's history. And those buildings can not be torn down, they must be maintained by the owners and they must have their architectural integrity preserved. And so that it represents local blessing and a liability if you're one of those who won that award - being a landmark building as you have significant responsibility imposed on you with very little compensation by the city other than perhaps reduced real estate taxes to reflect the fact that the marketability of the building has been greatly diminished by the burden of the responsibility of maintaining it. And therefore all of those elements are what we would call dynamic attributes to the real estate. Those which exist in the minds of the holders and in the civic psyche, as it were, relative to its buildings.

Now, the last category of attributes we call really environmental attributes. But they're environmental in the very broadest sense of off site impacts. Now some of those off site impacts can be physical. We've already talked about the storm water runoff and so on. We've already talked about the contamination of air as a result of another industrial plant and so on. More subtle, perhaps, may be the impact of a change in the sun shadows and reflections. There have been a number of suits in which an architect has built very handsome contemporary buildings with reflective glass that reflected all the heat into the building across the street grossly distorting their air conditioning costs and were sued accordingly so that fairly elaborate steps had to be taken to neutralize that reflection. There may be encroachments of the project on limited supplies of flora and fauna and animal life of one form or another. And, as we said it could be encroached in historical treasures of one form or another. There's a tract up in LaCrosse, a case of a train manufacturing plant. Several hundred acres bought to be an industrial research park, only to be discovered to be the scene of the largest and longest Indian encampment in Wisconsin history loaded with Indian artifacts and therefore, untouchable in terms of development. Now what do you do? You just paid a couple of thousand dollars an acre for a couple hundred acres you can't do anything with other than to give them to charity and Uncle doesn't give you a tax deduction so a one to one split on your investment.

So that would be the physical impact and environmental impact. So we also have the social impact of a particular property. What about the displacement of residents or neighborhood units. What about whether the project contributes to social integration or creates barriers to social mobility. One of the things that we're concerned with in land use from a social standpoint is maintaining what we would call heterogeneity of land use. When we talk about social disorganization a little later we'll refer to a very classic book called The Death and Life of Great American Cities which points out that the cities are socially stable when you have mixed land uses. If you have all office uses for example in a given part of the city, obviously, the city is occupied 8 to 5 Monday through Friday and then is vacant and you create a tremendous social vacuum which attracts a great deal of those less socially desired character and it becomes a crime sink and a social sink because it has really been abandoned for parts of the week and parts of the day by organized society. Therefore, at some point we probably don't want to build another office building. At some point, another I, II, III or IV in the same immediate area would be very unfortunate for the area because now you have three or four square blocks of nothing but state office buildings and it becomes a vacuum on weekends and holidays and in the evenings and so forth. What kind of contribution does it make to the overall regional plan? Certainly we're having a big rhubarb in the city presently as we’re trying to redevelop downtown with some sort of convention capability. Should we permit motels to develop on the west side of Madison that would provide a competitive facility. Should the county be allowed to develop the coliseum at the same time that the city is trying to develop downtown. At what point do we build regional shopping centers which will squash retailing at some other point. This becomes then the social and economic impact off site.

Fiscal impact, of course, is going to have a great deal to do with what cities will allow and won't allow. The first level of course is how is it going to affect real estate taxes. Most properties will increase real estate taxes. That's not the question, the question is how does it affect the expenses of the community? If we build a mobile home park, we'll probably have a relatively low increase in real estate taxes but a very high increase in service cost. We'll have lots of children in elementary school. We'll have lots of people that are elderly and need of support services of one form or another. And therefore, the fiscal costs of servicing the residents in the mobile park may greatly exceed the public revenues generated by that service park. On the other hand, if we alter our land use mixes in such a way that we did, for example, a mobile home park and a shopping center. The shopping center may produce a high real estate tax revenue but very, very little servicing costs. And by matching off those kinds of land uses we can create fiscal solvency for the community. Part of the impact that they have on government revenue as we'll see later, there are various kinds of use taxes, sales taxes, fire dues, return of state revenues for certain kinds of situations that may make certain kinds of development highly attractive to a community or unattractive. And then what are the secondary impacts ultimately on a community where certain kinds of development takes place. Perhaps our school system is adequately sized now, but if we add another subdivision we're going to have to build another elementary school and everybody's real estate taxes flowing to the school will rise.

And finally we have certain social, ethical factors in the stability of our urban areas. What's the impact on supply and demand. Everybody thought the IDS building in Minneapolis was splendid unless you owned another office building in downtown Minneapolis. In which case, it drained the area. The classic misapplication of public funds was the International Trade Center in New York City. It was totally subsidized by the public and drained tenants out of many other office buildings in New York which then had their real estate taxes greatly reduced so that at the same time that the Trade Center didn't pay any real estate taxes to pay for the services they required, they were destroying the tax base for other sectors of New York City. Now, obviously, it's not a very bright thing to do. What's the impact, for example, of financing the grocery store on the back side of Capital Center and subsidizing that rent factor with public funds and causing the old buildings down on Main Street and the Bavarian Market up on Fairchild and so forth, to get plowed under simply because they're paying market rents while somebody else is being subsidized. So there's obviously a fair play element in the kinds of development which you might encourage. What's the stamina of the sponsor? Can the sponsor of the project take the stress of the project? We've talked about the university trying to build the golf course in the face of certain environmental threats. What's the venerability of those individuals to secondary political pressures and counter attack. Classic case, the paper company attempting to convert some of their land into recreational use in northern Wisconsin, Have to deal, in terms of subdivision and recreational land use, with the same department of resources that regulate their flow of paper liquors into the Fox River Valley. And the government is not adverse to taking their recreational development and holding it hostage for their cleaning up the river - which may or may not be productive relative to the state overall. In any event, finally there may be potential uses that require some sort of political consortium so that we can have a private/public partnership in the execution of those projects. We'll look at some of those further.

As we begin, then, to analyze all of these various attributes that constrain what we can do and what we can't do, we're obviously moving further down that step-like diagram that's on the back of your lecture notes and it's really to lay out the subject matter of the course. What time is it by the way? How many minutes do I have? Two, all right. I was about to hand out the next lecture outline, but I guess we'll do that on Monday. In any event, the complexity of the real estate processes being suggested to you by the types of attributes which we need to inventory and provide a reconnaissance on, and the process of defining what is the most probable use of a particular site at a particular point in time? And we'll come back to that again on Monday.

The ____________ Scholarship Program which gives away, I believe, four $3500 scholarships and for undergraduates has an equal number of $1500. And we generally have several of those here on campus every year. The application date is growing to a close and I haven't seen too many of you come in yet because I generally have to write a short essay, you know, exploiting your talents and values and virtues and so forth. I believe it all has to be in on the 15th. So if any of you are planning to do that or have the application form that you have been procrastinating on, now is the time. For an hour's worth of work to pay off, the $3500, that's probably the best hourly rate you're going to see for a long time.

The lecture today is perhaps, in some cases, you may seem a little remote and abstract from real estate but it really is the framework on which much of the course, and as well as the tradition here at the University of Wisconsin is built. Any time we make a decision about anything there is the implicit process, to oversimplify it, really begins with a pile of information of relatively unsorted, unstructured character and from that we abstract out an identification of what our alternative courses of action might be. And those alternative courses of action, lead, obviously to a variety of consequences with different degrees of probability. And those consequences may or may not be particularly desirable. Even the late Woody Hayes used to describe football decisions - when asked why he didn't pass the football more often, he says three out of the four alternative outcomes is bad. Obviously, applying the advanced decision theory out of faith and that's true. When we look at most decisions and we look at the consequences, quite often three out of four alternative outcomes is bad or at least unacceptable by some standard or other. That standard shifts, of course, in terms of the acceptable payoff matrix if the coach is about to lose his job and he has to get a touchdown on the last play of the game, he may go for the 90 yard touchdown throw although the payoff probabilities are relatively low. It's all or nothing, his job or whatever. On the other hand, if he is a couple of points ahead, he may go for the three yard plunge and accept the probability of a very low payoff because there's a low probability of fumble and a low probability that his players won't forget the play and the count and so forth. So that he should be able to execute it, use up the time and stall until he wins the game. But, nevertheless, at any given point in time, there is a series of choices that you can make. Each of those choices has alternative outcomes. And those alternative outcomes have different degrees of acceptability to the decision maker at a particular point in time.

The issue, of course, is how do we construct what the degree of acceptability is at any one particular point in time. And so on your little flow chart there, there is a really critical element is in the lower level. How do we express our value system and convert it to some sort of decision process? We can begin with values which are essentially truisms. To make money is good, is a value judgment - almost a truism. Most people agree with that, and so on. But it doesn't do much for a decision process. We can say to make 10 percent on our capital is good and we have come up with a more clear statement of our objective but that is still not a very good decision process because 1) what is a return on our money? What represents, or what should be included in that 10 percent. Is it just simply cash available from the project or is it cash plus tax savings, other income plus profit centers to our contracting company plus what salary and wages that our employees are able to make and so forth? What represents a return? By the same token what represents capital because its' the money we actually put in the project, the money we could lose if the project didn't succeed. Is it our own money? Is it the bank's money? We need, obviously, a whole series of specifications or standards by which we begin to make operational the objective of making 10 percent on our money. So we move from a value statement which is truistic or moralistic to a statement of objectives and then we begin to define very carefully what are the criteria, standards or screens by which we can determine whether in fact we have met those objectives through a specific course of action. And that essentially is what much of the decision process is about. And how do we correctly identify the critical value systems that are at work and then convert those to objectives and then criteria by which we can decide whether in fact we have succeeded. For example, a couple of years ago the radio station at the top of the hill here, White Foot, went out and relocated to the suburbs and the building was purchased by a local developer to be converted to a professional office building. And the neighborhood rose up in arms and said that they didn't want commercial in the middle of a residential area. The radio station had been there for 50 years and the neighbors had been there for 20 years, but that was irrelevant. They did not want commercial with their residential area, which is nominally a good concept. We don't want to make excuses if there is an interfere with the domesticity. But, when you got right to it, the basic value judgment that was concerning them was that if there was commercial development of the building, the woods around it would be chopped down for additional asphalt parking. And the thing that they characterized their neighborhood was as a wooded suburban hilltop and they did not want that intruded on. That was the value system. So they said fine, if that's the value system, the objective then is to save the trees. Which of your alternative sources of action saves the trees. If you pursue your own recommendation of making it all single family lots. Let's lay out a plat on that piece of ground and find out where the trees are relative to where the lots would be, and then where would we put a house on each of those lots. And virtually, invariably, by the time you put a house on each of the lots, you'd cut down most of the trees on the lot. So that if you are advancing the residential subdivision for homogeneity state, you were, in fact, defeating the fundamental value system for which you were fighting in the first place. On the other hand, if we place land use controls on the developer and say, "Hey, wait a minute, you can't expand your parking to a point within 75 feet of the property line in any one direction, as those woods have to be preserved permanently and the greenbelt. We can continue to conceal the existence of that office building. We'll maintain the visual character of the neighborhood and you will, in fact, accomplish what you wanted to accomplish. So quite often the land use decision is obscured because people provide what appears to be a conventional and appropriate course of action which, if pursued, in fact, produces exactly the opposite result of the underlying value system. So whenever you get into a debate, a contest of virtues in conflict, as it were, you really need to find out if there is, in fact, a common denominator value system operating and simply hasn't been articulative but has been implied by perhaps a half baked solution that's been put forward and so on. So we need to go from a value statement to an objective, to a set of criteria or standards by which we judge whether in fact the proposed decision accomplishes our purpose.

Now, where do those values come from? Obviously there are many levels. We have, obviously, first of all the value of the space user himself which he can express by his choices in the market - particular style of residence or a particular location characteristic or a particular level of attractiveness. He can do nothing which is a statement in itself. That's always a legitimate decision. Or he can make an explosive social statement about what he thinks his building should accomplish or what his real estate decision should account. A space producer is really reflecting his values. What's his trade off between quantity and quality. What's his trade off in terms of the kind of folks he wants to work with. What's his tradeoff in terms of sensitivity to the political conscience of the community. All of those things represent value statements by those who are decision makers. He either feels it's important to implement the goals in an entity or he says, "Gee, I'm not very good at that, therefore I'll only build what they tell me to." If they say that single family zoning on that site and the building has got to be a little box that has so many feet set back on all sides and so forth. That's what they want, that's what they get. I won't challenge that. On the other hand, others will say, "Hey, wait a minute, that doesn't make any sense at all. If what you really want is a community that has this type of appearance - you want to save the trees and so forth, a better way to do that would be as follows and he may argue for it and argue a long time for it. And, it's those kinds of people ultimately that are expressing the state and the value about their willingness to push for excellence as opposed to their willingness to accept the current standard. And quite often the people who are the most mule headed and obnoxious etc. are often those who are most committed to excellence. Admiral Rickover may have been an SOB of classic proportions but, nevertheless, he was willing to pay the price for excellence. And so quite often he is expressing a value system in terms of his impatience and in terms of his continuing pressure for reform, and so forth.

Political infrastructure also reflects value systems at work. Should we have housing downtown or a convention center or should we have lower taxes or higher services and so forth. There's always a value statement by various segments of society. As a result, institutional economic bureaucracy really began in the 19th century - right after the turn of the century which really grew out of the argument that economics was simply a by-product of social organization and a statement about social values of the political collective. And therefore to understand economics you really have to operate in the social value system first. And this is why it is termed institutional economics and it's why land economics really grew out of this tradition. That economics is a by-product of social dynamics and the social dynamics are really a way of expressing the value systems of those that are involved in the decision process. And so we begin with that history and so we don't have a lot of neat supply and demand curves that flow evenly and logically and on a calculus basis. Most of our demand and supply curves are kind of kinky in real estate and have unexpected little bumps and bulges and blemishes which really represent an accommodation to the value systems that are work at a particular point in time.

Once upon a time those value systems once were easy to identify because they were able to express themselves in a physical clarity in the ultimate architectural and physical plan of the community that we do now. The consensus first of all was probably imposed by the feudal system and most people had to go along to get along so that perhaps the fragmentation of social debate was considerably less. But we also have really a pretty clear statement about what people were afraid of or what people wanted to support. And, as a result, a very clear order exists in most of our western European and, for that matter, Asian community. The interaction of the value systems and the total city building process was pretty clear. It was usually a priority on defense or trade or religion. One of those groups was dominant and their value groups then subjected themselves into the character of the community. Moreover, once that valued consensus had been determined, time moved relatively slowly. technology hardly changed from one generation to the next. So that if you were going to follow a certain architectural pattern indigenous to the area, the people cutting the stone and cutting the timber and building those buildings really didn't change their technology over 3, 4, 5, 6 generations at a time. And so the last guy to carve a stone for the cathedral carved it pretty much as the first guy had and as a result it looked like the whole thing was built by the same artist at a relatively short period of time. But unfortunately they didn't have _________ fiberglass plants in those days. They were working over a much longer period of time, and yet the continuity, the value systems prevailed and projected themselves forward. The only changes really came where there was an obvious irritation or misfit with the solution relative to the experience. So that after London burned down a couple of times they said, "Hey, wait a minute, that way of building isn't working out real well. Maybe we ought to have stone fire walls and we ought to have building codes which established the minimum level of construction for everybody's joint safety. Maybe we need to set up a different type of sewer problem. We need a different way of delivering water so that everybody doesn't get sick at the same time." And as we began to find a significant misfits between our technology there was an incentive to go about improving the technology. When society became relatively content with their solution in accommodation to their environment, their building technology never changed. So we could look at certain tribal areas, for example, in Africa which continue to build their huts in a conical fashion with mud smeared on the wall, and so forth. Given the limitations of the materials, given the limitations of their climate and so forth, they had reached what they felt was a reasonably adequate accommodation to their needs and their resources and, as a result, their technology never changed again. There was not sufficient irritation to make them do it differently. One of the things about our society is that we become more and more easily irritated, more and more anxious about whether we are doing something efficiently or not. And so, to this day, all real estate is still marketed the four basic pains: 1) can we reduce an irritation between your fit to your environment and your perceived comfort level, 2) can we enhance the kind of activity that you want to do. Can we make you a better handball player by building a better handball court? Can we enhance the activity enclosed. Make it more efficient, make it more fun, etc. 3) can we enhance your self esteem? Tendency to change addresses, to get a house that has southern columns in front of it like Gone With the Wind because you feel that's the way you should live. And finally 4) can we improve your physical comfort.

Those four basic motivations really all have to do with irritation levels. Anxiety and stress on the irritation side. Enhanced physical comfort or at least our perceived comfort. And those four irritants continue to drive us forward to do kinds of real estate that if you can make people content with what they have, ultimately there is no further change, because there's no reason to change. Begin to look now at some of the ways in which value systems control the entire urban environment. One of those is the defense of town of Nardon. Many of you have seem him in the history of urban form books, and so forth, Nardon was laid out in a six pointed star pattern and it was designed around the fear of the cannonades and besiege guns, and therefore, was designed much like a modern gun turret in that at no point does it provide a straight on surface to a cannonball, all the surfaces on the walls are oblique because of the star patterns and the sloped wall patterns and so on. And the idea was to provide no firm impact going directly head on against the trajectory of the heavy cannon ball. The moat was inside the walls so that there if the shot carried the wall, it would then have a field in which to fall relatively harmlessly. Then, within that moat, you then had at the very center of the town, the two most valued properties, the church or cathedral and the pollatso of the noble who controlled the whole feudal area. They were at the point farthest from the possible siege gun or battery that might be assaulting the town. Your social standing then depended on how far from the church you had to move back until you were living over the moat. If you were relatively low in the social circle, your tail feathers were hanging over the moat and the most likely one to be exposed to the first shot to carry the wall. And it was a very, very clear expression of social structure and the basic fear of the society from this technological innovation called the siege gun. And it dominated every aspect of design and laid out an allocation of land within the community. A fairly simple statement. The Roman military towns like Aoka, which is always been regarded as the prototype. Remember it had a very clear value statement where you wanted the minimum number of Roman soldiers to hold down a maximum number of provincial primitives and we wanted to impress them with your military prowess, intimidation was essentially the value you were trying to put across and, as a result, the walls are perfectly square so you can man the maximum perimeter with the least number of men. And you came through a gate and the local residents had to go by all the tents of the Roman Legions until they got to the headquarters in the center of the encampment. And the process was, of course, one of intimidation in that you had to parade by all of these happy looking Roman soldiers. Once you were at the center of camp you weren't really likely to raise your voice real loud in protest because you had to figure out how to get out of the camp again with the rest of the crew chasing you and so, as a result, the whole thing was designed to really carry the psychological statement of intimidation and power with the minimum amount of resources. And from that standpoint, that was the value system and that was the objective - they did a very good job of it.

On the other hand, the Incas were a very socialistic society, in which they were simply agrarian, scattered over the hills and valleys of the Peruvian and related areas. And, nevertheless, when they found it necessary to collapse inward and create a mass, their capital cities like Picilapta were really designed to be 1) granaries in which the entire agricultural surplus production was stored for everybody's benefit and would also be a defensive to which they could retreat for protection when others were pillaging through their territory and so forth. The whole statement and the way the city is arranged is really a statement in government administration of common resources and really reflects a social structure relative to ownership of the crops relative to ownership of weaponry and tools that characterize their particular society. And the entire city is laid out to support those elements or functions. But I think when we talk about Peking, the original Peking was divided up to be a statement of the social structure of the Chinese Dynasty. The Forbidden City was just that, it was forbidden to everybody but a few of the socially elite. Around that was the Imperial City which represented the governmental sources of some standing and around that was the Tartar City which were essentially the citizens that serviced the other elements. And, therefore, as you progressed into the core, you were really making a statement about the social and governmental structure of the community.

The same is true if you look at the Japanese Imperial Palace and others - the arrangement of space is the progression into the community and so forth, is again a statement of your social standing and your political priorities within the governmental process and the value systems that are being reflected there are relatively narrow, but they are nevertheless being articulated in the plan and structure of the area. And the same is true if we look at Amsterdam or Venice, some of the early trade centers in which the priorities obviously were more an exchange from seafaring transportation to barge transportation on the rivers and therefore them that got priority with the merchant's associations that had their warehouses and their wholesaling houses along the canal and adjacent to the harbor area. And in each case the value systems of the _________ that lived there began to develop building codes and building styles and allocations of land among various sectors of society that reflects the priorities of the community. The value system is operating and becomes implemented in a whole series of subtle ways.

Now, it's not necessary that it all be self serving to some political power group. We've become much more knowledgeable in this country about how we make a statement about more desirable collective goals. For example, the Southeastern Wisconsin Regional Planning Commission has been a marvelous experiment in control proof information. The southeastern group represents 7 counties and it has no political authority to rule on anything at all. It's not going to be there to say thou shall or thou shalt not, all it does is examine the consequences of a course of action. So, initially, for example, as the townships around Milwaukee were willing to accept any kind of growth at all even though septics wouldn't work very well, they simply researched all of the soils very, very carefully in all of the counties and identified which ones would work and not work with septic tanks so when a subdivider came into a town board and wanted to lay a subdivision on top of lands that were totally unacceptable for septic tanks, the town board was fully informed as to the consequences of going along with that when they were already on notice that the septic tanks would fail and the subdivision would be fouled up and the property owners, and so forth, would ultimately come to the township and say, "What are you going to do about this mess? and how are we going to sewer and water, and so forth." In effect, when the consequences of a choice of action can be laid on the politicians and they are aware of what they are doing when they do it, they're fairly unlikely to make the wrong decision since the blame for the consequences can be very directly laid on those who make the decision. If the consequences are not so apparent or are not made so apparent, they can presumably be innocent of the consequences. So

Southeastern Wisconsin Regional Planning Commission simply made it their obligation to always analyze very carefully the consequences of alternative land use decisions by the several hundred political jurisdictions within their borders. So that the politicians were really cornered into doing the right thing since the wrong thing was already readily apparent, in terms of the facts at hand. By the same token, is it then possible to construct a knowledgeable public policy.

If the facts at hand suggest that the edges of where the water meets the land, where the hedgerow meets the corn field, where woods meet the meadow and so on, is the area of critical concern for conservation because, let's say, 75% of bird and animal life takes place at those edges. And we know that as a fact. From that then we can sort out a policy or course of action that says, "OK, tell you what, as an objective we want 25% of all environmental edges under public control by 1990." Now there's a firm statement of an objective from a truism that we ought protect our environmental edges - value statement. Objective: let's have at least 25% in public control by 1990. Now, we move from there to a series of implementations that says, "All right, how do we do that?" Which ones are of significance. Well, first of all we'll state that anybody that has, let's say, shore land for sale gets more than a thousand feet of shore land along a stream or a lake in the county will be put on a priority list for public purchase by the open space program. Anyone that comes in to subdivide land which has shore land or hedge growth will be required to dedicate at least 25% of its shore land to public access and public ownership as a condition of having their plat approved and their other uses expected. Anyone that comes in with a single house plan will not be permitted to cut trees and encroach on the shore lands that face it within 75 feet of the water. And it says in Florida, for example, you're not allowed to cut on the cypress and so forth along the water's edges. And you could then set up a whole series of screens so that as various events unfold in the future, you now have a decision screen that says, "Hey this is the situation and 1,000 feet being put on the market, this goes into our committee for purchase of open space. Or this plat has to be corrected to meet this standard. We move from a value judgment that our environmental edges are critical, to an objective of public policy that 25% will be owned, to a series of implementations, screens, criteria, standards, policy statements if you will, by which we implement and achieve that objective to advance that value judgment. So we all make our decisions that way in terms of our priorities, in terms of whether, in fact, the next step we take advances that or detracts from that series of priorities.

Now, the men of intellectual stature over the years have often expressed either fear or disgust of the urbanization process. __________ was afraid of the urban slums soaking up, as he said, with the displaced. Jefferson saw the city as the ruination of the American democracy. That value system pervades much of our urban design. The belief that ultimately domesticity required a house sitting in the middle of a green estate with a long drive coming up to it and so forth. That romantic value system still controls much of our subdivision layout, much of our home design and so forth. We continue to reflect the romance of the English Tudor estate on a little 60 by 120 lot with a couple of plaster timbered roof design and so forth to mimic the English Tudor or English Colonial and you can, of course, always sell the home in a modest priced neighborhood by putting columns on the front porch making it look like Gone With the Wind or something of that sort. That value system of a rural gentry controls much of our architecture and many of the central codes that reflect on our architecture. Only recently, have we seen some values which have contradicted that and said, "Wait a minute, we're an urban society. How do we make towns work, how do we make cities work, how do we can make people in a high degree of density, nevertheless, get along with each other? How do we protect their privacy? How do we enhance their self esteem? How do we reduce the irritation of putting people in that kind of density? When I came out here in 1957-58 they were building the first 4 unit buildings along Midvale Blvd. They have probably the worst sound control of virtually anything the way they were built - the floor is a drum head and you know as you flush the toilet everybody in the building knows. You've probably found you are living in stuff like that presently. Right? But now that's not true anymore. Our value systems have said, "Hey, wait a minute, you know, a really important thing to reducing stress and increasing self esteem and privacy is providing privacy in terms of noise. And we've built our apartment building very carefully today with a variety of techniques in order to provide some sancracent (derivation of sanctuary) privacy areas for the residents and protect their privacy in terms of control of noise and so forth. We've tried to create spaces that are self policing in terms of the willingness of intruders to encroach on that and, perhaps, get trapped off their own turf and so forth. So that we see a value system at work and as we gradually modify the application of our technology and we create communities that work better than the plans in the past have. And so value systems do intrude on the decision process and the application of our technology.

Now, one of the things we are working towards very slowly is a way of articulating the various value systems of the citizens into some consensus of the city beautiful. Remember that during the 19th century explosion of our country there was no opportunity for consensus. Everybody came with a different dream of what America was about, what a city should look like, and who was entitled to what and so on. But it was only 1954 when the federal government was willing to subsidize community planning at the city level, at the village level and at the second class city levels in order that there was a five year long term plan as to where it is we think we are going and what is it that we want to create and how do we treat our citizens with sensitivity so that if we want to relocate a family, how do we do that to make sure that they are relocated into quarters which are not only appropriate for their locational needs, but are meeting the basic standards of clean and acceptable living standards and so forth. And that's only 1954, that's only 30 years ago in which the community as a country has made a statement about the fact that we really ought to go about building our cities in a systematic way and that it's important enough that the federal government dedicate significant dollars toward subsidizing the planning process. You really have to think about that. Thirty years is not a very long time in history. It's certainly not a very long time in Bourbon Street and yet we have moved just an eon in terms of finding devices by which we can articulate the citizen's value systems. We have to have public hearings on virtually everything and they are the biggest pain in the tail, except for one thing, somebody did in fact ask you for your opinion and you can, in fact, go down and give it. And if enough citizens go down and say this doesn't make sense, we don't need a convocation center on this site. Or, why should we spend all that money on a convention center that's squeezed between an old city hall and a parking lot, and so forth. In fact, the decision is changed and it is altered and there is a response through the political process to the values that are being articulated by the various segments. And we do hammer out, over a time, a consensus as to what the city beautiful should look like and who's going to help pay for it, and who's going to benefit thereby. That is, truly a remarkable political process. The fact that we have moved from a point in which everyone believes that his home was his castle and that he could do with his land as he wished to a point where any significant change in use today is a subject open to public discussion and debate and hammering out a consensus over a period of time that may take one to five years before the battle is won. Slows down the process, extremely frustrating to the individual decision maker but, nevertheless, we are creating political institutions which provide some tradeoff between the efficiency with which we would like to achieve our own objectives and the sensitivity by which we incorporate the consensus of the larger group.

That sense of historical process has been advanced by a number of our planners and we're going to look at some of those as the year progresses. Particularly Baltimore's play of handling of that process and Rouse’s way of doing that in

Columbia and elsewhere and a couple of other projects as well. But it's not unique to the U.S. A Greek city planner who just passed away just recently by the name of Doc Zadeus pointed out that one of the things that destroyed our city beautiful is this tradition of concentric expansion that the city kind of grows like rings on a tree. And that ultimately the old rings of the center can rot out and choke off the community. Wouldn't it be better if we could have our cities develop in a linear fashion so that we could maintain a central commercial core which would sell the best of our historical architecture, allow us to replace that which was obsolete and still go on as we expanded in a single direction. And as a result, we would not have multiple centers and rings gradually choking off the older part of the city. His concept of city expansion has been applied in many other areas of the world particularly the third world where their new urban centers and so forth gave them an opportunity to do that. Pakistan for example is a classic case in point, Brazil and a number of others - Egypt have all applied some of those principles. And I think it's useful to compare that sense of city's evolution over time in a somewhat linear pattern with a sense of time moving forward in a linear pattern as well.

Now then as we begin to look at the value systems, keep in mind that one of the things we're going to articulate through the semester is a sense of who benefits and who pays. That ultimately the consensus is arrived at when we can find an equilibrium between those who will benefit by a particular collective decision and those who will have to pay for implementation of that. OK.

I'm going to start off on the next lecture even though you won't receive it until Wednesday.

There are value systems that work and why people begin to concentrate as they do in an urban environment. And one way of looking at that is a series of alternatives, the first of while we'll call scatter. We could follow the Jeffersonian and coined the idea of spraying individuals as far apart as possible over the landscape - So that the people are no damn good, go into your box, no contact whatever. And this means that while each individual has far more land at his control than he can possibly use, the problem is that he's also maximized his total cost of either political action and collectively with someone else or communications. He is at a point remotest from any one of his neighbors and just simply exchanging of commodities or messages or simply words of encouragement and friendliness are very difficult indeed. And so there's a natural movement toward clustering.

Even under clustering, as the second concept, space is a free good. Says the economist, you can have as much land as you want, as much land as you can control. It's just that we'll consolidate everybody into single clusters. A little bit like compressing data on a computer memory. The ultimate, of course, statement of free good is the father giving advice to his son that he should never buy a lot bigger than his wife can take care of - obviously a chauvinistic a statement, but that has been changed now to never get lawn bigger than your children can maintain. But space up to that point is a free good. Now, obviously it’s more efficient than scatter, people are at least closer together. The cost of getting together is less, exchanging commodities and information is less. It's a little bit like having everybody live in Dane County and providing a rural mail system rather than having everybody live across northern Wisconsin. The savings are considerable, but they really can't be attributed to any one individual or any piece of land because everybody can still have as much land as they want for free.

The third step towards a socialization of the urban process is what we call dense cluster. Space is no longer a free good. For you to give up your isolation and control over as much land as you want, in order to achieve a tradeoff with transportation and communication costs. You're willing to pay more and more for land - that's on a per square foot or per acre basis - in order to avoid other costs. Most of the savings, therefore, that are attributable to high density are, in fact, then spent again on competing for land which provides you the most favorable transportation and communication and exchange costs. Obviously, dense clusters really represent what we're really all about in an urban area. The density is, in effect, driven by the need to find some tradeoff between the linkage efficiencies between all of us and the value of another unit of land. At some point it's cheaper to build a higher building, at considerably more cost to go high, because the next unit of land would be even more expensive. We can begin to build tradeoff models which indicate an increment in the cost of construction for going high plus increment in the elevator costs, is still less than increment of buying enough land so we could build a one story building. At some point it starts paying to go higher rather than to spread out over the surface.

The final element of evolution in that realization is that there are various segments within the society that have better relationships one-to-another than others. Then we have certain categories of land users. We have residential land user who need convenience to retail, shopping and recreation. On the other hand, we have manufacturing and wholesale distribution land users who need better connections to rail and highway and perhaps resources like coal and so forth. And we may have a third set of users that are institutional in character, that need linkages to some other element of the community. As a result, within the dense cluster, we begin to see uses filter out and cluster in areas of similarity. So that we have single family districts and commercial districts and office districts and industrial districts and, so on. And, again, we're beginning to improve further on the communication and exchange economy by that type of arrangement.

These economies are measured by what we talked about earlier as the cost of friction. And the cost of friction or the savings, I should say, in the cost of friction become incorporated into the land values. For example, the individual who is willing to pay $200,000 to be in a little condominium down on the lakefront in downtown Chicago is really saying, "Hey, I'm willing to double the amount I'm willing to pay for space, just so I don't have to make the commute out the interstate or ride the train to the suburbs where I can have a lot more land, a lot more roof space, but I would be wasting two hours of my life commuting every day to reach that point. I'm willing to, in fact, spend twice as much money to stay downtown and then have a cottage out at Aspen where I can escape to when urbana gets to be too much for me. But the cheaper, more satisfying solution, dollar for dollar. The cost of friction, therefore, is the dominant element in determining where people locate their particular establishment. And Radcliffe threw away a line in his 1947 urban land economics book that really should be a lesson to all urban planners and to all politicians. He said, "Ultimately the goal, the value pursued by the urban planner is to make the costs of friction between and amongst various sections of the city equal so that there is no rent differential between one part of town and another." When that's been accomplished then all citizens have been benefited equally by the public investment and infrastructure and communication and transportation, and so on. It's only when the planner fails to make all parts of town equally attractive, that we begin to see first of all a rental differential and then eventually some sort of social differential between those areas. There's a value statement therefore which leads to an objective, which leads then to a set of critical standards or criteria by which you can judge whether, in fact, the public expenditure was, in fact, well made. If, in fact, we can improve the bus service on Park Street and Fish Hatchery, to a point where it's equally convenient to live out on Fish Hatchery Road as it is to live on one end of Langdon Street. The rents on Langdon Street and in the suburbs will be the same. The only reason you pay a ridiculous rent on Langdon Street is because you tradeoff in your value system the time and hassle of taking the bus from some point more remote from campus. So that's a very idealistic statement of what the urban planning process is all about. But, nevertheless, that ultimately is what it trades down to. If we can make all parts of the community, equally attractive, then the costs of friction are equal, and the rent differentials or the differences in land values just disappear. OK we'll pick up again on that Wednesday.

. . . Commerce Room number 16, there's one other room for you, so that you can see what we're talking about. The real estate club is exploring right at the moment the feasibility of picking up 30 or 40 people and taking them to Washington DC for a weekend. If anybody is interested in that - it would be less than $200, but $200 is still a hell of a lot of money. And we also have alternate field trips which will probably go someplace closer like maybe, Columbus, Wisconsin. In any event, if there are those that would be interested in doing that, it would be a super trip and that the real estate development as well as the kind of speakers that we could put together there would be a lot of fun. And that has to be the low traffic period for Northwest Airlines trip so they could give us their ridiculously low rock-bottom price where can put you all in those little plastic cages that your pet dog goes in and get a good price. Not a long horse ride, it's a short airplane trip to DC and back leaving on a Friday morning, coming back on a Monday morning so that we get the best spread as far as ticket prices go. But if you're interested in that, let us know, we're just exploring market testing, as it were, to see whether there is a constituency for such a jaunt. We have to leave a few minutes early today and, therefore, at the end of my lecture, Dan Knox will hand out your next problem set so don't break and run right at the same time that I do.

You now have in front of you the outline of the lecture that we started on at the end of the previous period looking at the evolution from scatter to some sort of structured density. And all of you were attempting to scribble at a rapid pace at the end of the last lecture is there before you on the first page and I am now on page 2 relative to the preference for a highly structured density. There is, obviously, an economic imperative that moves people toward some element of structured density. But beyond that there is an aesthetic imperative and a social imperative that leads eventually to a much more highly structured density in which other constraints begin to sort out where things go in the urban environment over and beyond just a basic marginal revenue, marginal cost kind of concept. And so about really in the epic of interdependence and know about some sense of what the aesthetic of the community should be. And as we have mentioned earlier in other lectures, 1954 was really the very first federal recognition that this highly structured density was in the national interest and should be deeply subsidized by the federal government. So most of the development really of a professional planning tawdry of planning departments and people who try to anticipate the effective growth pattern of the community and begin to organize the infrastructure to anticipate that and to go about it in a systematic fashion of capital budgeting and anticipation of the demographic characteristics of the town five years from now, 10 years from now and so forth really began in 1954. The beginning of planning as a legitimate profession really began with tremendous diffusions of federal money at the local level. Up to that time, most communities with a few minor exceptions really had no sense of where it was they were going or the fact that they could control and channel that growth to achieve a more desirable life quality for their community. And that's really not that long ago, 30 years ago is virtually a split second in terms of historical social development time and yet we have gone a tremendously long way. By 1960 we began to really see significant changes in the price and ?? motor that were growing out of the urban planning function. And by the time Mr. Nixon took office we had arrived at a consciousness about our urban ethic so that when Lawrence Rockefeller was asked to head up a 12 member committee to establish a national policy relative to urban development, the committee concluded in (remember this is a republican administration - the old property right fuddy duddies that are only identified with the far right) and Lawrence Rockefeller, of all people, a major banker interest coming out and saying, "when the protection of natural cultural or aesthetic resources or the assurance of an orderly development are involved, a mere loss in land value should never be justification for invalidating a regulation of land use." My God, that's revolution. Up until that time the idea that my land would be worth less because you zoned it for single family instead of high rise office building and so forth, was regarded as a direct attack on the individual. Now we're saying, "Wait a minute, as a matter of social interdependence, if we're going to get the right kind of patterns in urban area, the community will have the ultimate say in what goes where and how it will be allocated and how that system will work." And, shortly after the Lawrence Rockefeller statement we have the Justice Hallis here in the state of Wisconsin saying that in effect there was no inherent right to develop the land, if it came at the expense of the health and welfare and the general interest of the public. The land belongs in small part to those that are here today and lesser degree to those who were here yesterday and in the larger degree to those who are yet to come. The ownership of land is a trusteeship. If you think about that philosophically and how far you have moved from fee simple title - man is the master of his castle and so forth - to a point where land ownership is simply a trusteeship in which it is to be husbanded as a resource for the future. That is a revolution of the most drastic and radical qualities in which they are still fighting about in South America and Central America and yet it was completed through the political process here. And so we're really talking today about a highly structured urban density in which the forces at work are not only economic forces but are, in fact, social and political forces reflecting the essence and the aesthetic of what we perceive to be the life quality that we want to achieve for our urban areas. I can think of no other area of manufacturing enterprise because, ultimately, building buildings is a manufacturing process, which is subject to that level of public oversight and control on both an aesthetic as well as an ethical basic. Real Estate is, by far, the most regulated industry in our society and quite rightly so, given the fact that it is the terrarium in which we all live.

Now, let's begin to explore some of the other forces that not only determine what goes where within the community but why do communities locate where they do and relative to one another. The little drawings that you have there or doodles out of my Roger Price era of some years back, (Roger Price is a comedian that has since died but he would lecture with flip charts and explain very elaborate political concepts with small doodles of that sort) and so to the degree that graphics communicate better than a thousand words, why you can move through those doodles toward a highly structured dense cluster. And the initial driving forces we suggested are really the tradeoff between the distance among the various establishments and the transportation, communication costs or friction costs that were involved in that. And yet those tradeoffs became the initial controlling imperative and then we moved toward a more urban aesthetic imperative and, more recently, there are other shifts in our society as a result of larger technologies shifts which are changing that pattern once again. And what I'd like to do is flip over to the next page if I may. Most of that on that outline I think is there. Controls on the next page is what we said the other day and I would like to go down to II please on page 3.

If you had a course in geography many of these concepts are not new to you. Most principles of urban geography begin with these basic concepts. Obviously, there are many different theories as to why communities locate where they do and how they relate one to another. Some of this is historical accident and some of it is obviously a rational and conscious decision as to the economic efficiencies indeed of one point rather than another. And in other cases it's a matter of institutional accidents if, for example, trains traveled at a certain speed in the 19th century and train brakemen and so forth could so far in half a day and then back so far in half a day to where they were then at home, you had to have a changing station and a watering station for the locomotive at a point that represented 50% of a day's travel for a brakeman and train crew so that they could change and move across the country accordingly. And, as a result, towns got scattered across the landscape representing the range of 1/2 work day on the railroad. And points then where you refueled or at least rewatered the boilers of the train and change train crews and sent the crew back to wherever home was on the train going in the opposite direction. So that, in some cases, it's a rather fleeting technological phenomenon that causes a community to be established and then an agglomerate over time. The variety of answers, of course, are never very simple. There's always multiple constraints on why a community goes where it goes, but among the predominant ones in the industrial age were first of all the weight gaining process that characterized the industry of that community. If the product which you created gained weight as it approached the market, obviously it was desirable to have it as close to the market as possible. If you made Coca Cola syrup, shipped the syrup to the market, added the water and the effervescent materials as close to the point of utilization as possible, in order to avoid shipping the weight from one point to another. By the same token, if it pays you to make the taconite and knock all the rock off of it and come up with a much more rich ore, that function occurred very close to the raw material and the idea was to reduce the bulk and weight as quickly as you could before you shipped the good. And as a result, manufacturing processes tend to move either toward the point of raw material production or toward the point of utilization depending on the weight gaining process in the mean time. And that becomes a very significant factor in all matter of urban processes. Prefabrication has never worked out very well in this country because the more you accomplish in prefabbing the house within the plant, the more bulk and weight you have to move and, therefore, the shorter the distance you can move it economically before the cost of transportation has consumed all of the overhead in industrial efficiency of building the house in the plant and moving it out on the site. And so the weight gaining process or the weight losing process provides a very tight trading area within which a particular kind of establishment can locate.

The second element, of course, is that there's a distortion to that through our institutional devices from one time or another. For example, the base price costing in the steel industry, which instead of charging everybody their fair share of the freight weight, tended to average the freight costs meant that plants could be located farther from the steel mills than economics might otherwise have dictated and as that type of institutional friction is removed, why you have some very decided shifts in the location of where things go and whether they want to be close to their raw materials or their market. It's true, of course, that a firm can locate anywhere along a straight line between their raw material and their finished market if they live in an abstract world but, by in large, their key executives want to live close to whatever enhances their life quality. Remember, we're always talking about an organized undertaking enterprise. An enterprise is typically run not for profit, but to enhance the life quality of those that are in charge of the enterprise. That's why universities are run for faculty members, not for students. That's why businesses are run for the comfort of the executives rather than for the poor guy at the end of the line who is doing the work. We're not suggesting that's the way it should be, but that tends to be the way it turns out to be. And as a result, the natural economics of the firm becomes distorted when management decides that they would rather live closer to the north end of town where home is or where the country club is or whatever, or mama's gotta live in the town in which there's a parochial school for the kids and adequate department store shopping and so forth. There's a tendency then to begin to distort the natural quantitative, economic decision as to where the property should locate if you were using a linear programming process to make that decision and bend it to accommodate the decision maker's bias. A number of years ago when I was first starting in this, I had a chance to work with FANTAS, a factory location service, and I remember we went through the whole drill for an auto parts manufacturer in Chicago whose plant was being ripped in half by 494 going around the end of the city and he had the chance to decide where it was he wanted to locate. And we went through the whole drill from Michigan City, Indiana down into Alabama and found a town in Alabama where he could locate that would improve his rate on return on capital to an astronomical 40% a year because Alabama was willing to underwrite the cost of building the plant and retraining his work force and on and on and on and on. And Michigan City, Indiana was probably the worst with high unions, high labor costs and so forth, maybe a return on his capital of 10%. And fine, he said, I'm going to Michigan City, Indiana and we looked a little blank and he says, that's where my boat is. He says, "You can't yacht out of Redstone, Alabama" or whatever it was. And he says, "Mama and I can't spend all the money we're making now so who cares about a 40% rate of return on capital." Probably a rational, living, decision, but nevertheless, suggesting that if you take only the economic imperative and the highly quantitative linear programming model it may not result in the location decision of the enterprise and that there are other elements which are attractive from an aesthetic standpoint or a life quality standpoint which begin to attract and agglomerate establishments into their orbits. And that begins the community, of course, of development.

There are also, of course the fact that multiple markets may require multiple warehousing networks that the object, obviously, is to reduce the total aggregate transportation and marketing costs and that we may locate on a fairly complex linear programming model of multiple locations. We have a course here in the quantitative department on location analysis which figures out using linear programming and operations research methods how many fire houses do you have to have and where should they be located in the community, given a whole set of different factors in terms of traffic patterns and incidents of fire, construction patterns and age of buildings and on and on and on and on. And we can have the same kinds of fairly elaborate models in terms of where is the best place to put 12 warehouses to reduce or control the shipping costs of all of our product lines for all of the markets within the U.S. in which we serve. Or we may find other kinds of networking models - very complex quantitative decision. And there is one case on record of that operations research had to come up with a wrong answer and the marketing firm went out of business and sued their operations research consultant for millions of dollars as the result of a small bug in his program which led to all 12 warehouses being in the wrong place. So that we can get, you know, fairly sophisticated in terms of rational decision systems, just as we can be reasonably flexible in terms of irrational but individual value systems.

Urban areas also evolve in a whole series of exchange processes and that begins to determine the pattern. Do we, for example, are we involved in a coming up the Mississippi by barge, transferring to trains? Are we involved in coming across the ocean in panelized shipping with transfer to truck and so on. And those break points in the transportation system become very key elements in the location of urban development. Naturally as the technology of transportation changes or where those break points work most effectively have pronounced impact on the economic vitality of the community. So New York harbor, for example, with its port authority which squandered its resources at the International Trade Center lost out to Baltimore which invested heavily in preparing for the containerization and Baltimore, as a result, became a very vital trade center on the east coast. And the areas around it as far out as Columbia Maryland, have become major wholesaling centers because of their convenience to that particular break point in the transportation in the Baltimore harbor. And New Jersey's side of the New York harbor, in particular, has been very badly damaged by their inability to maintain their competitive position. So as technology changes, so do the break points. If we used more air freight, obviously, those airports that are capable of international trade and freight handling become more significant in the economic base of the immediate region.

Another type of enterprise is what's called the foot loose enterprise. Foot loose enterprises simply look for life quality. After all, you can take the entire annual production of microchips from a given plant and ship them anywhere you want in a piper cub and it isn't really a function of transportation costs on that kind of product - or for software such as blueprints and designs of complicated equipment. You can locate that anywhere that the talent would like to live. So all of you I'm sure are aware of the story of the magnet computer company based in Chippewa Falls, WI because the resident genius in design of magnet computers computers chose to live in Chippewa Falls, WI. There's simply a life quality factor which allows you to market that community to certain kinds of selected industries. And that's becoming of course a major element in the competition between communities today for new industry. Can we find a foot loose industry that is not anchored by economics to a particular location in terms of raw materials or technical pools of talent or whatever. Because really, when you get down to it, it is only the foot loose industries that can be relocated from one community to another. And who are the targets for economic base competition among cities.

The way station theory is another traditional pattern. Of course the classic one is the California mission cities all the way up from Mexico to San Francisco and each of those whether, Santa Barbara or Los Angeles or, you know, all the way up the coast, each one was one day's horseback ride from the previous one. And the churches were located at the terminal point of a day's travel and provided the inn keeping function as well as a settlement function in the development of Mexican California. And as a result, in fact, rather even spacing up the coast of California has determined its current location of major communities. But the way station function continues to change and many people have lost their shirt as they get caught in that technology. When we had two lane highways the number of hotels and inns was relatively high. It was necessary to serve your driving across the country sort of thing. When you went to interstates suddenly you could travel two or three times as far each day and as a result the way station got considerably spread out. And as people moved away from trains and could now travel by airplane and go to Washington DC and come home in the same day without having to use a hotel there, the character of the way station function has changed and the critical points of termination for travel are constantly shifting. In any event, each of these kinds of elements begins to identify historically why towns started where they did. And what agglomeration and capital investment is made there the cost of relocating to achieve a more desirable place to be becomes something that is very very difficult to overcome and if we continue to stay where they were historically, even though it might not be the very best place to be. Dallas, Texas is a classic example of a town which has certainly no reason today for where it is where it is other than that nobody can afford to leave - too much invested in infrastructure and buildings and so forth and so they hustle to find very good reasons to stay. Singapore is a classic case in point, it does not have any recourses whatsoever. In fact it has to import its water from Malaysia in an aqueduct that comes across the little water area between it and the mainland. And therefore exists entirely on trade and has to simply hustle to continue to support its independent city/state existence. And if I suppose you were to do it differently, you might not have located there at all. But historically now it's at the significant navigational track through that particular area. Fairbanks, Alaska is another classic case in point that if you were to do it again, you would never do it there. Probably if you picked an area for a community that had nothing going for it other than the fact that there was a lot of gold in the riverbed at the point at which Fairbanks was initially established, you have to pick Fairbanks. The weather is rotten, the mosquitoes are the kind you keep out with a chain link fence. It is grossly humid in the summer. It has a frost ice in the air which you get to inhale in the winter. There is just nothing attractive about Fairbanks and it's just one of those nice places to be from. Yet now that it's there, it continues on partly under its own momentum and those who can afford to typically motor out five or six miles from town and live in the next valley over where the climate is considerably more accommodating to man than Fairbanks itself. So quite often the historical accidents simply perpetuated forward because the capital investment becomes an unacceptable write down to relocate. Occasionally communities have a chance for a second guess. Little Soldier's Grove here in Wisconsin located on the Kickapoo only a few years ago had that chance for a second guess. At the time that it was built, it was built adjacent to the water for mill development and electrical development and transportation and so forth and periodically got flooded out by the Kickapoo and finally it was cheaper to relocate the town to high ground than it was to build dikes and levies and a water system that would keep the floods off the main street. At that point the U.S. Corps of Engineers paid everybody off so their remaining values of their downtown properties and allowed them to build new in an area that was better adapted. And very seldom does the opportunity for a town to second guess where it is it should have located in the first place come along.

Assuming then that the urban clusters make some kind of sense and that they are spaced out between themselves according to some sort of economic logical at the origin, the question that remains, of course, is; how do we want the highly structured pattern to begin to evolve? Obviously, there are some kinds of uses that are relatively incompatible with others. Stink of oil refineries and sulfite paper productions suggests that they will be relegated far from the suburbs and hopefully well down-wind of the residents. Another dimension, of course, is the kind of density that people would like and would find useful for their enterprise. At what point would you rather live in a high rise apartment building than a single-family detached home and what kind of ratio of people per acre is most comfortable and accepted. And that changes with society and it also changes with opportunity for alternatives. The communities, most of the major urban areas have sociological topography maps indicating the relative density at different points in the community and that density by property type. Industrial buildings would have a certain density of employees per square foot just as residential units would represent a density and a more residential characteristic area, and so on. And quite often value patterns in the community follow that topographical sociological density. The more people that are willing to be at a particular point at a particular point in time, typically the higher the value of those areas. So that the land underneath the Empire State Building or the Sears Roebuck Building typically has a greater value than, let's say, the land under the 2-story dental building in the suburbs. And we can begin to shape that topography of value and, through the planning process, alter it, if that's what we wish to accomplish. And, by in large, most of our second tier cities have a gradual showing topography of density while most of our first class cities have a rising topography of density. The major viable entities like Los Angeles or Chicago or New York and even Denver have very high density points evolving as more people want to be at a relatively central point. And maybe they need multiple nuclei within the community. In effect, density is becoming a three dimensional concept rather than simply a two dimensional concept of your original little doodle. The urban land economist, of course, was always assumed that the separation of land use is both desirable and one of the objectives of that highly structured density land use. And yet we're beginning to see that perhaps some of our standards of the urban efficiency are questionable. Efficiency is usually taken to mean that the aggregate expenditures have been reduced to the community by some configuration for the community. We've reduced our internal transportation costs or whatever as we mentioned the other day. Franklin says, however, that real efficiency is when there are no longer any rental differentials from one part of town to another. That the number of choices available to the consumer that are equally satisfying is so great that they are unwilling to pay a significant premium to be at one point or another in the community. That ability to satisfy the diversity of choices and preferences of the citizenry is perhaps a better measure of efficiency than what the ultimate cost of the transportation system is or whatever. We can begin to set up different value judgments as to what represents an efficient, structured density for development. For example, we could look at fiscal profit and we will later on in the semester. Let's assume we're a subdivider and we have the choice of doing all single family homes or some single family, some townhouses and some garden apartments. Single family homes tend to produce the most children per household. People tend to move into the single family home during the child rearing period. They tend to start out in an apartment when they don't have any children and maybe as they move toward retirement, they go to a single floor townhouse or something of that sort where they don't have the yard to maintain and so on. Well, if you're the community and you're looking saying, "Gee, how many kids can I handle in my elementary school system or my junior high school system and so forth." And the developer comes in and does all single family homes, it may be very efficient for him and maybe very attractive for the home owners, but it may be a fiscal disaster for the school board who is now not able to handle all of those children without temporary classrooms and without raising of tax in order to finance additional building and so forth. If one of our measures of efficiency is to permit the government to provide its services in a stable and fiscally solvent way, then we begin to change the kinds of densities that perhaps the market would have suggested or perhaps tradition would have suggested for that particular area. And we would encourage the developer to have a mix of garden apartments and townhouses and single family homes so that the tax base created by the garden apartments helps pay for the kids that are coming out of the single family homes in the same general school district. And so we begin to change our definition of efficiency from one of simple transportation economics to the larger service package that we may want to provide. Social integration may be something that is very, very important. In fact, probably one of the most critical issues that is before us in the next five to ten years relative to real estate is the gradual social disintegration of our urban core because of the unwillingness to finance higher educational costs at this point in time. A very, very false sense of efficiency. We probably should have teaching ratios of one to three in our urban core - one teacher, three students. Our big money isn't willing to do that. The chances are very good that the cost of that 15 years from now may be the entire value of their real estate. Keep in mind that currently somewhere in the neighborhood of 25% of all the babies born last year were born to mothers of 18 or less who are dysfunctional as a parent. It doesn't take very much knowledge about child psychology to have some sense of the hostility and frustration and isolation of those 20% of our children 15 years from now. The real urban efficiency may be to invest heavily in the educational system today so that those who were left out of the system won't burn the rest of it down around our ears fifteen years from now. Our perception of what is efficiency in terms of urban layouts is becoming much more sophisticated than a simple linear programming of transportation costs between raw material and ultimate market. Flexibility, obviously, is a critical element in measuring efficiency. Probably absorbed changing life styles. How do we absorb the fact that more and more of our population will be over age 65? That we'll find it more difficult to drive longer distances? That we'll need additional supportive and personal services during their elderly period? What kind of arrangements can we make to accommodate that changing demographic pattern or will, in fact, parts of our cities becomes obsolete because there aren't enough people in that age bracket or with that set of needs to require them? For example, Shorewood Wisconsin in the 30's built the premier school system probably in the country. It attracted people from around the world, to look at their campus plan high school and their elementary schools that were integrated neighborhood by neighborhood into it. But, Shorewood was a very nice place to live. And after everybody's children grew up and went on to live their lives, the parents continued to stay there. But there were no more children to take advantage of that tremendous public infrastructure in place. And, as a result, a number of the elementary schools were closed and converted and there was obviously tremendous under utilization of a fine plant. Now Shorewood has moved through that life cycle with the elderly and again younger families are coming in. Now the school system is inadequate because the capacities that were there have been converted or removed. How does the community become flexible so that it doesn't under utilize its infrastructure and then find itself short of the same kinds of services and infrastructure as the demographic cycle shifts within that community? So that becomes a matter of efficiency and locational preference and so on.

And what about control and external costs - noise, industrial pollution etc. A good classic case in point was Oklahoma City a couple of years ago wanted to have a new General Motors plant - the environmental protection agency ruled that Oklahoma City had all of the particulate pollutants, elements in the air that it was acceptable to have and that, therefore, they couldn't introduce another increment of pollution from the General Motors Plant. They thought it expedient to go back on all of their other industry and enforce very strict standards of pollution control so that they dropped significantly the actual elements in the air that were obnoxious and left a sufficient absorbing capacity to allow General Motors to build their plant without exceeding that which was regarded as an acceptable level of pollution. That becomes a level of efficiency by creating economic base and creating jobs and creating new tax base for the community.

Then, finally, there may be a desire to create a certain life quality - a somewhat romantic image of the good life. Certainly that's something that's transpiring on the Square presently with the planting of trees and providing of any number of sitting areas and the various kinds of European bric-a-brac that make street life in Europe or the more romantic parts of Denmark and the Netherlands part of the American street scene. And, again, perhaps no economic imperative to do that other than simply a romantic hope that we can recapture the textures and sounds and ambiance of another area that, perhaps, grew up accidentally to be attractive and now we try to recreate that on purpose. Not certainly an exhaustive list for measuring urban efficiency but we're suggesting that we're moving away from the quantitative methods that perhaps dictated a highest and best use in terms of absolute wealth maximization toward a more sophisticated set of standards of efficiency for that highly structured cluster that meet a variety of tests of how well we're doing and whether we're, in fact, moving in the right direction. And most of those tests are qualitative. Most of those tests are concerned with life quality in one form or another and this is the way that we begin to evaluate them - the city beautiful.

With that I'm going to quit for today. See you Monday. Dan Knox is going to take over and I'm going to run down to a meeting and fight for the convention center on the Square.

And, obviously, is an argument that is based on equal money time and money time equals space time, the drive wheel, the energy, if you will, is money changing hands. And the question of course is what causes money to change hands at a certain location? And that has to do really with the employment function or service functions of that community. And the key premise that we're going to be looking at and which really is the key to much of the debate that you see in the newspapers as between cities is this basic key proposition which you should write on your collar or your cuffs or whatever. And that essentially is that the level aggregate of demand as reflected by income, output, employment which we're going to call “y” is the sum of household consumption for food and everything else, household investment, such as building a home or remodeling, business investment, government consumption, government investment such as building schools or infrastructure of one form or another, plus all the net spending by people living outside the city, in effect coming to town to spend their dollars or sending their dollars along with you to school. And, of course, we'll call “net” as the exports of dollars in exchange for things relative to the import of dollars. And therefore the basic community's income is y = CH the household expenditures, household investment, IH, business investment, government consumption and government investment and finally what we'll call our export/import balance. And if you have to import everything, essentially the income of the community is going to be the balance of the exported goods and services. We'll think of Prudo Bay, for example, in which there is only one product going out, that's oil, that's the export. And that export of oil pays for everything that goes on in Prudo Bay and those people's incomes, however, are not really spent there although there are some convenient outlets for food and minimal services like barber shops and so on. The great majority of their income is spent then outside of Prudo Bay. So typically towns begin with a virtually pure export base and often related to exploitation or resource base - a copper mine, an oil well, limestone, whatever. And ultimately, there is enough net income brought into town that stays in town that you begin to build a service base around it in terms of baking the bread there instead of hauling it in or providing some level of recreation in town and so forth. But we begin then with a really, virtually a pure export economy. And the only way a town can grow or even survive is for it to export goods and services and import cash. Otherwise, all it's doing is taking in each other's wash and there's always somebody who will do it for less and somebody starts saving money and you have a gradual leakage out of the system and a gradual running down of the system. So notice what happens when a mine closes at a mining town in Colorado, there are a few people that linger on indefinitely and perhaps run a saloon out of nostalgia, but the rest of the town goes away. And that's not just unique to the old 19th century. If you ask our mortgage guarantee companies in town what their biggest problems are, it's in Colorado and Wyoming where the oil shale industry was coming on strong, they started to build a couple of new towns and when the oil shale industry shut down because the price of oil came down and didn't justify it - supply of water wasn't adequate to produce it at a reasonable price, people simply handed over their keys to their brand new homes to their local lender and left town. And you now have some very fine cities out there with one or two custodians wandering around waiting for the next boom in oil shale. So we begin with that basic premise - that we have to import cash and export services and the degree to which the town can grow is that we have some sort of net balance that stays behind.

Those elements which import cash and export services are called our base industries - our economic base industries. Now they are the town builders. They are the ones that attract capital into that community and provide that net surplus to invest within the community. Now, at one point life was fairly simple, we have a resource industry like oil, it's clear, we're shipping out oil, bringing in cash and so on. Today we're much more subtle about it. An insurance company that is bringing in premiums from all over the country and hiring the local clerical work for us to process it and handle the claims and do the administration and so forth, is economic base to the degree that its number of people employed in that business exceeds that which is average or typical for a community. So in Madison you could have a barber shop at the Inn on the Park, which gets 75% of its business from travelers, is really part our economic base industry in that it's importing dollars from people that earn those dollars somewhere else. They spent them here and then go on about their trip. On the other hand, if you have a barber shop far out in the suburbs, that would be a service industry because virtually none of its customer base is coming from out of town - they virtually all live in close proximity to the barber shop or the local grade school or whatever.

Now, therefore, we really need to look at what we call basic sector activities to find out whether the drive wheel of the community is moving forward with force or gradually running down. And then we want to look at the nonbasic sector. Those are all of the service activities or town fillers which are prompted by the demand of consumers for diversity of services. Initially those services are quite simple, often related to weight related items. For example, if bread doesn't travel very well, obviously, you'd have a baker nearby to produce fresh bread. Once Gardener Bakeries figured out how to pump enough air into a loaf that it can survive virtually any kind of trip, it becomes cheaper to create it at central points. Notice what has happened with the growth of the interstate system, better semis, bread which had total resiliency to virtually any catastrophe, we can produce virtually all of the Gardener's type bread right here in Madison and ship it all over the state. Whereas at some time in the past each town was dependent on the local bakery and a variety of other services of that kind. And so there's a constant shifting because of our technology, because of the kinds of goods that we have and so on, as to whether a good is a service good or whether it's an economic base good.

And, of course, the strategy of any community is to capture as much of the economic base as possible. For example, one of the hot issues is going to be that you're going to be very much involved in, is whether the university should shut down some of its junior campuses and concentrate those funds on providing for the influx of students to Madison and Green Bay and Milwaukee and other major campuses. And you're going to find tremendous resistance in the legislature to any sort of reduction in these other campuses. Well, why? Because essentially a university campus is an economic base item. And if all you got going for you in Bairabou or Stout or any one of the other smaller towns, is, in fact, a government payroll that is being subsidized by state tax funds drawn from the entire base, and it employs people who then, in turn, spend money in the local stores and so forth and bring students who spend money in the local stores, that becomes a key element, maybe the only element of economic base in that community. And when you're asking the legislator from that area to say, "Yea, we’ll close that because it's good for Madison." You can guess what the answer's going to be. You're talking about life blood at that point and as a result, tremendous resistance to anything which would, in fact, cause the economic base to contract. Even though from an institutional standpoint, university standpoint, it might be better to concentrate our resources on a somewhat more reduced number of campuses. From the standpoint of the decision makers who are talking about undermining their economic base in their constituency, that is not a good idea at all. As a result, economic base elements become critical factors. How should we treat Oscar Mayer? Oscar Mayer is our single largest base employer in the city of Madison. Now we can be very tough with them and say we don't like the smell of the slaughter works and we think the chemicals they're putting in the sewer system are unattractive and so forth and so on. And what's more we don't approve of a roll back on worker's salaries and so forth. But a firm that is now national such as General Foods and now their corporation on top of that can say, "Fine, you don't want it, there's a lot of other communities that would love to have an economic base of 2,000 primary workers and knows what that will do for economic value, growth and home sales and everything else in that community." And, as a result at some point you have a Mexican standoff between those that control economic base and those that would just wish that it would cleaner or that maybe the workers would be less rough or whatever.

The nonbasic sector activities are also a function, obviously, of the income, education and demographic characteristics of the community. Down in Huntsville, Alabama where a large part of the early missile program was concentrated a very, very high educational level. As a result, Huntsville invests heavily in their school system because they have largely a constituency of people who have Ph.D.s who want their kids to have an equal education to what they received and so on. And, therefore, the infrastructure package in Huntsville is very much tilted toward the high education, college bound type of market. And the stores and the line of goods are very much tilted towards that upper end. Where if we're going to create an oil shale town and so forth, you may have a blue collar level oil land roughneck and so forth where a couple of good country bars will take care of the educational and recreational needs of the community. And, so obviously the way the service industries grow up, becomes a reflection, in part, of the kind of folks that are in the basic sector activities.

Now, if the community becomes overly dependent on a single basic sector activity, it's very, very vulnerable. And, of course, many communities today are very tied to the defense budget, for example. Where was it? Last night on 60 Minutes, you have a classic example of a boon doggle of a tank and personnel carrier being built in a California town in which FMC is the major employer. And the fact that the thing is loaded with bugs and it's probably not a really great idea at all, is irrelevant. congressmen come in and say, "Well, we'll solve the problem eventually, but we're not going to shut down the plant. We want to keep those people employed and we'll keep building an inferior product simply to stabilize the economic base." And if the congressman sits on the right committee in Congress, he's capable of throwing that kind of economic base into his constituency. Which is why Wisconsin does so poorly, we have a lot of honest, fairly able congressmen trying to doing the job right and as a result, don't do much for it, in terms of economic base. The congressman from Oklahoma can have a canal dug from Oklahoma City to the Gulf of Mexico and make Oklahoma City a seaport. And we all paid for it. And similarly, in Mississippi, and so forth, they've been able to dig a seaport canal from the Gulf to the Tennessee River, and so on. And national heroes like Mr. Baker are going to fund that sort of program but our congressmen don't seem capable of that kind of graft and, as a result, Wisconsin is the lowest state in the country in terms of federal help to its economic base. Not maybe a good thing in some ways is that we're not, therefore, dependent on the mortality of our congressmen and senators for our economic stability. On the other hand, if you're in Seattle Washington and 25% of your economic base is Boeing and Boeing doesn't win the contract for the next bomber, you got a real problems. And, as the result the political game is played obviously to be damn sure that they get the contract in order to sustain their economic base because the economic base sustains the price of a single family home in that community and is the prize spring of virtually everything else that transpires in that community. So when we're talking about economic base, we're talking about really a gut issue.

Virtually any kind of a graft, anything is fair in securing economic base for a community in order to sustain its lifestyle and its aspirations and expectations for its security. Consider for example, should a company be permitted to relocate its economic base? Norge for years was located in - what's the little town in Michigan on the coast there, I can't think of the name of the town but, Norge was the principal employer building refrigerators, stoves and a variety of appliances. And they were highly unionized, their work force aged, their cost per hour was creeping upward continually and a little town called Zenith, Arkansas right out of Fort Smith said, "Gee, guys we'd love to have your plant down here. We'll build you a one-floor plant has all of the latest innovations in terms of material handling and so forth. The state will train folks from Arkansas how to operate the machinery and build refrigerators and washers and dryers and all that type of thing at a much more competitive cost. And so what do they do? They simply say, "Oh I know Muskegon." So they said, "Fine, when the union contract comes to a vote in June, we're closing the plant and moving to Fort Smith, Arkansas." They had worked that out very quietly with Fort Smith and the plant was ready to go. They took the executives with them that they wanted, the foremen and designers they wanted and left Muskegon without its economic base. Well, if the town wants to pick up and move with the job as they might be permitted to, under labor law, who are they going to sell their house to? Who's in a position to buy a home if 20% of the major workforce are out of work? What's happening to the price of the home relative to the mortgage? What's happening to the little storekeeper who's dependent really on that last 50 guys that walk in his store, really provides his total profit - everything else goes to cover his fixed charges and now he loses those 50 people. Who's he going to sell his business to? What's going to happen to the clerk that he employed and so forth? How do you gradually trench in a graceful sort of way because all of the elements in that town were driven by the cash flows created by that payroll. Because as we'll see in a moment, there's a very significant multiplier effect as those payrolls from the economic base drive through the community. Why should Janesville, for example, General Motors be allowed to move a pickup truck production thing to Fort Wayne and invite the people who for three generations have lived in Janesville to pick up and go to Fort Wayne if they'd like to keep their jobs or cross their fingers and hope that maybe GM will find something else for the GM plant in Janesville to do. Now we have to have mobility of capital presumably to get efficiency of that plant. By the same token, our accounting systems don't take stock of the secondary and tertiary impacts of that kind of move on the revenues and balance sheets of all of the establishments that are related to it and dependent on that economic base employment. In any event, economic base employment is the heartbeat of the community in terms of its ability to sustain what it has and its ability to dream about what it could be. And for every community there's a relationship between that basic employment and its nonbasic employment and, furthermore, between that nonbasic employment and its total population. There's some sort of multiplier.

For example, you might have two nonbasic service workers for every one in the economic base. As the community grows even more diverse in its tastes and broader in its base, that ratio spreads out. For example, in Chicago the ratio is closer to one to three. At that point in Chicago you can have folks that do nothing but say provide hairstyles for poodles and provide stores that equip the residential domestic cat with virtually any type of cat food and equipment that a cat could imagine. Well you can't afford to do that in a town of relatively limited population and so forth. The diversity of deeds and talents and so on, simply isn't there. So as the town matures the ratio of ancillary service employment to the economic base employment begins to expand. And the typical ratio is somewhere over 2 to 1 - 2.2 to 2.3 to 2.5. Every community has its own particular ratio because it's at a different stage in terms of its economic growth and diversification. Now that means that for every new dollar we can bring in by finding new base jobs, presumably we can begin to expand the other employment. And, by the same token, if we loose 100 jobs at Oscar Mayer and we find no additional 100 jobs in other base industries, gradually and almost imperceptibly the community will start to slow down and the number of dollars pulsing through the various businesses and establishments in that community will also begin to shrink. Therefore, we first want to look for that base multiplier - the relationship of base employment to service employment.

By the same token, we want to begin to look at the demographics of that community because of its age and characteristics and so on, to find out what the relationship is of total employment to total population. And so if we look down to IV there and we start out with the basic employment ratio here is 1 to 1.5 and that in addition, the base employment to total employment therefore is a 1 to 2.5 and the total employment to total population is 1 to 2, then a change in base employment will change our total base population by a factor of 5. So for every additional base job, ultimately our demographic move will increase by approximately 5. Five hundred employees in new employees at Oscar Mayer as a result of improved sausage demand or bologna at the university perhaps, you can calculate the resulting impact in population which will occur over maybe a one to five year span. For example, when Chrysler went to Belvedere with their brand new plant, initial impact on Belvedere outside from a few more saloons and maybe another grocery store was relatively quiet. People drove to work from 50, 75, 100 miles away but as they became convinced that the job was here to stay and that they liked that job better than perhaps whatever their agricultural employment had been or their job in a small town.

They began to think about moving to Belvedere. And so the third or fourth year after the plant opened you began to see a spurt in home construction. And then as people began to perceive there were more families in the area, then there was an increase in supermarket construction and other retail services. And then pretty soon dentists and doctors started to move into the community to service the increased population base that was there. All of that took a certain amount of time so that it's not an instant transformation. But the process is realizing that as that economic base begins to build, you can forecast with a fair degree of reliability where the population will be three, five and ten years hence and begin to plan for it in terms of providing the proper infrastructure and school system and other obligations that will be on government. By the same token, when you begin to look at a proposal and scale it the other way, I can remember a couple of years ago being a planning charette (?) in Anchorage, Alaska for a project called the Tudor Center which was approximately 70 acres. And the general partner of the land owning partnership had decided that office buildings were certainly financially viable and that, therefore, you should make more of them. And had figured out with his designer that you could put a million two thousand square feet of very high grade office space on this site and they artfully crafted a model and a very elaborate blueprint and so forth of the whole thing and then invited a group of us in to critique it. Well, this was supposed to be like a three day session and the conversation died after about five minutes because it went something like this. Yours truly said, "Gee, a million two hundred thousand square feet - if you have 200 square foot per worker that means we're going to have 60,000 new office folks in Anchorage over the next ten years. What percentage of your population are office workers now?" "Well, maybe 20 percent." "Gee, that's really neat, that means you gonna have 300,000 people coming into the employment force if 20% are going to be housed in offices. And if that's true, and if they all come from families of 2 1/2 persons per family, those 300,000 workers really mean that we're going to have something like 750,000 people move to Anchorage in the next ten years. That's really exciting. How many people do we have now?" "Well, we have 160,000 on a warm day." "Don't you think maybe we maybe go into housing if we're going to have to take care of all of those people before the snow comes?" There had been no thought at all to look at what the interrelationships were between the aggregate demand for office space and all of the other implications to the community. They simply said, "Gee, the square foot of office space will make me a dollar and a half a year, how much would a million two hundred thousand square of office space make for me?" Just make more of them, you know. How can you lose? So you have to really go back and scale the character of your real estate to the character of your economic base and the service industry which will result.

Now, as we begin to apply that principle then, we can also see what the political stakes are in attracting a new General Motors plant to your area or hopefully stealing somebody else's company to your town and so forth. And it really doesn't matter at what scale we're talking about. Madison is fighting hard with Middleton to attract industry to Madison's industrial park so they build on our tax roles rather than Middleton's tax roles and by the same token, Madison and Middleton were sulking when Oscar Mayer introduced their new chemical extraction plant in Wannakee. While Wannakee obviously was gloating at the tax base. And there's a continual tug of war between the university in Madison that would like to attract new research firms to Madison and the Milwaukee industrial base that says, "Why in the hell do you have to have specialists in robotics or steel working when you don't have any industry like that in Madison, that's all located in Milwaukee." Pretty soon the regents are fighting the state itself as to where they should locate various research labs relative to the economic base and so on. And so that interesting work goes right up the scale until the north is fighting with the south and the U.S. is trying to keep General Motors inside the boundaries and General Motors is trying to leak over into Mexico with encouragement from Mexico, of course, to create new jobs on the other side of the Mexican border and so on. And so the issue really is jobs, because often those jobs we finance everything else that we want to do with the city beautiful.

Now, obviously if we have some understanding of what those dynamics are. If we spend some time studying them, why 1.) we can begin to anticipate direction and character of the community's growth. We can begin to scale the need for new space to house offices, or retail, or housing populations. And we can begin also to formulate a growth strategy for our community which will hopefully stabilize our economic base and perhaps avoid the roller coasters and the panics that characterize the one industry towns. So if we look at, for example, Wichita, Kansas a few years ago - totally dependent on the light aircraft industry. Cessna, Beechcraft and Piper were all located with their main manufacturing plants in Wichita. Now, obviously it would be desirable for Wichita to see them grow. But, on the other hand, if corporations suddenly start to pull in their belts and adjust to a recession, the first thing that goes is the corporate plane. And when the corporate plane goes, so goes Wichita. And so their growth strategy was really was to find those kinds of industries that were totally unrelated to corporate capital spending for relatively marginal kinds of items like airplanes. And they had succeeded in reducing the light aircraft industry from say 55% of their economic base to about 15% of their economic base with tremendous stabilization of their employment base, by the same token, making it much more attractive for the individuals that were lending money. For example, mortgage lenders in the early days of the mortgage guarantee business got badly burned in Wichita when the light aircraft industry shut down, engineers had to pick up and move away. Homes went for sale. Retail prices of the homes fell and suddenly the mortgage guarantee industry owned hundreds of homes in Wichita and really it had no real market to sell them in. So that, as a result, interest rates in Wichita went up. There was a higher risk to lending on a single family home in Wichita than there would be in a more diversified economic base. And the lenders that were there obviously wanted to get their funds out to some area with somewhat more stable in the repayment record, a little more predictable. So by stabilizing the base, they also made it possible for everybody to borrow money to buy a home or to make plans relative to their little business - a more acceptable, less risky kind of enterprise. Maybe you saw that famous cartoon in Seattle when Boeing was at its low ebb - there was a huge billboard up on Interstate 5 that said, "Will the last man out please turn out the lights." Not true with Seattle any more. Seattle has done a fine strategy job of attracting different types of industry so that they're not dependent on Boeing. Now certainly Boeing is still a big factor, but still less than 20%

of their total economic base. That really requires, obviously, coordinated effort by all of the citizens.

Texas, for example, analyzed each community as to what it does best. For example, San Antonio is well known one for a large labor pool, largely Mexican Americans at a relatively low cost and a long history in medical research because of the major military hospital, and so forth, that are in the area. And therefore San Antonio's growth strategy is built around further medically related kinds of industries that may be labor intensive in terms of drug research and medical preparations and so forth and if somebody comes to Texas, if they don't get everyone pulling them in 47 different ways, the state of Texas and all of the communities in Texas try to pitch San Antonio. On the other hand, when the new computer labs were being considered Austin is the center for silicon chips research and computer research and that area and, as a result, the governor and Houston and Dallas and San Antonio all pitched in to say what do you want in Austin? They weren't killing each other for the contract. And Houston, obviously, is very much related to petrochemical industry. Dallas is very much related to some light manufacturing but more banking and financial elements and so forth. And so there's a coordinated strategy which, rather than cutting each other's throats to pieces as they fight over the prospects of another economic base element, they worked in a concerted way to put it in an area which has a tradition and a growth strategy relative to serve them. And the growth strategy is integrated. When they took the computer, cryogenics labs for the third generation computers which is a consortium of all computer makers in the U.S. so that they can afford to compete with the Japanese, told Austin, the first thing was the state said, "What can we do for you?" And they wanted certain kinds of state investment aids in terms of creating the facility. And the university said, "What can we do for you?" And they said, "Well, for one thing, we would like peer research at the university that was coordinated with our efforts." And the university instantly created 20 one-million dollar endowed chairs for support of that particular effort. And, you can march right down the line. The City of Austin said, "What can we do for you in terms of facilitating this?"

Now notice what happens in Wisconsin. General Motors would like to encourage a robotics engineering section here and we have some very capable people in the engineering section so they give $450,000 to the engineering school to enhance its robotics staff and if that isn't a clue as to what General Motors would like to see us doing as a state, I don't know what is. So what do we do? So we go out and say, "Wonderful we'll give you $2 million shares in robotics so that we can pursue a research in a pure research base that supportive of what you're trying to do in the practical apply area." No, no, our heroes come out and say, "Hey, we're going to do a $35 million dollar athletic center to house the hockey team which is already housed and the basketball team which is sort of housed. Isn't that terrific?", you know. And General Motors says "What, what kind of decision is that?" General Motors maybe ought to convert maybe to the production of skates and basketballs. So that we really have no growth strategy. And I think Governor Thompson has pointed that out very well. We have like six different agencies gallivanting around the world selling Wisconsin but none of them know what the other one is doing. A growth strategy relative to jobs is the critical underlying base element. We've got to address that problem first or nothin' else is going to work.

Obviously, once we have some sense of what that strategy is, then we also have some sense of what kind of public infrastructure we need to support that. What kind of school system are we going to have to have. Where Lockheed for a long time was the center for metal repeating (?) machine tools because it had such a fine technical school teaching the operations of the most sophisticated kinds of milling machines and lathes and all of the other types of equipment on which a highly refined metallurgy industry was so dependent. There was a direct interrelationship between the technical school system and the industry in Milwaukee. And that occurred to a lot of people to put their plants in Milwaukee where they could get that kind of support. Here we have the same type of support to a degree between MATC and the community. What do you need? Do you need computer operators or do you need beauty operators or do you need food and resort management types and so forth. That kind of integration at the technical college level is critical to the state. And yet, we see a university here at the University of Wisconsin trying to remain aloof from that. Trying to say that, "Gee, everybody really wants culture and we'll put all our money in the liberal arts department and if you want to go to the School of Business, tough luck, you know, try the tech school." There's obviously the idea of a growth strategy with the state of Wisconsin has not percolated yet through the consciousness of a good many of those that have to do with university administration.

Finally, when we first begin to look at economic base we realize that it does not appear over night - do we need to encourage our sea industries? Do we need to encourage those little firms? - because most of our growth in the last ten years has not been among the biggest employers but it has been, in fact, among the little employers. The guy with the idea that hammering out in the back shop of his garage some place and comes up with a new universal widget of one form or another. One of the reasons that New England probably is the driver's seat in terms of our current post industrial technology was two factors; one, a banking system which under the leadership of First Boston said, essentially, that a loan officer could not turn down a loan application from someone who was in high tech research development without permission of the senior officers - now that's the reverse of us, here there ain't nobody going to stick his tail feathers in his sling, he's going to say no first and, you know, the loans we didn't make are the best record we have for our local banking system. In New England they were willing to gamble at a time when they were on the ropes - when their industry was, obviously, moving south of technologically obsolete and they gambled on the little firms because that was going to be their future. And second of all they had large amounts of industrial space that was vacant. And, as a result, they were able to lease a little corner of an old woolen mill and allow the firm just to grow all the way down the first floor and then come back across the top floor at very very low housing costs - cheap, cheap, cheap. __________ University is currently sponsoring an industrial park up on the west side in which the idea is not to produce the cheapest space, obviously, but the most expensive space possible. It's run by an architect who gets paid by a percentage of cost. Come on guys! There has to be a growth strategy and you have to observe economic development and what's working in other areas, aggressive banking, low cost operations in terms of real estate taxes and space costs and so forth, if we are going to alter or stabilize our economic base.

By the same token skill mixes change and we have to anticipate today in a future shock society and the necessity of retraining many of our people. Much of what Milwaukee has done so long for so many years can be done equally well by a good many companies around the world and we can't export machine tools any more that are necessarily competitive any more with those from Germany or Japan and so forth. We need to find other ways to harness that talent, that expertise, that craftsmanship and invest in that convergent process on an ongoing continual basis rather than simply in a flurry of crisis from one recession to the next. We have to anticipate that as our base ratio changes, so does the need for certain kinds of retail space, service space and recreational kinds of things. And, finally, by the same token, as we do that, we have to recognize that there is a natural aging process of the population which goes through a cycle and that we have to facilitate that process. For example, consider the little community of Monona here on our east side made up of primarily working folks, many of whom who are now reaching retirement age or are well past retirement age and still living in single family homes. Economic base development there in the development of the community may be involved in perhaps providing elderly housing, congregate housing that their old residents could live in and having the City of Monona buy their homes to facilitate liquidity and give them some additional investment funds and then resell that home to, let's say, a young family with children at a discount. And as they resell that home and bring in young families with children, now they have a new children child base to support their elementary school system and to perhaps support their retail store base and so forth in the lines that the elderly would not necessarily support. In other words, it's critical that the community maintain its demographic mix and yet there’s a natural tendency for a community to age or perhaps become a whole series of young families with nothing but children under the age of six and adjust all of their facilities to that only to find out that by the time they've made their adjustment the kids are all now 15, and so on. And so it requires a great deal of skill and finesse to match the public and private effort relative to what's going on in terms of the economic base. OK. I gotta quit there today.

. . . essays at the end. He still has the old fashioned idea that students should be required to write and use the English language, capital letters at the beginning of sentences, periods, spelling is always appreciated and you'll probably get some credit inadvertently for handwriting or, otherwise remove credits for that as the case may be. But, it's an old fashioned idea that came out of my background in Cambridge, and I haven't gotten over that handicap yet.

The subject for today really is the social disorganization of potential for staying in the real estate process. And there are, obviously a great deal of behavioral issues other than economics in the determination and character of the city. And as Mr. Churchill has said and we pointed out earlier, "First we shape our buildings and then they shape us." That's true both as the individual structures begin to determine behavior as Ogg Hall tends to be claustrophobic and tends to generate the highest level of vandalism on campus, let's say, compared to Elizabeth Waters which is more spacious and otherwise nominally less efficient in its spatial allocations but, in addition, in terms of the total neighborhood of the community is affected by its layout and its format and how people perceive the spaces and enclosures around them. So that truly we are building the terrarium and the terrarium begins to interact with its residents to determine, really, the stability and the character of the social entity contained. But whether we're talking about the individual family or we're talking about the neighborhood or whether we're talking about some larger social unit. And that may affect not only our basic social behavior, but our political behavior as well and the degree to which we participate in our governmental processes and the degree to which we identify with various political elements. There have been any number of books on the sociology of space and certainly the beginner in real estate is urged to take a look at some of those. Some of the best known are The Hidden Dimension by Paul who also wrote The Sign of the Language if any of you are into sociology and The Hidden Dimension really has to do with the cultural differences in terms of how much of a spatial envelope people expect. The Euro cultures, for example, enjoy being jammed into small areas and whispering your ear and it's real vague. The English are brought up early on in group kindergartens and, as they say, begin to cultivate what T.S. Eliot referred to as his inner garden - the ability to be alone while being in a crowd and sort of becoming relatively introverted into themselves. And the Americans, on the other hand, are very territorial, they want a lot of space around them - more and more, you are permitted to have your own room from a early age on and you become very sensitized to any encroachment whether it be noise or visual or simply somewhat claustrophobic spatial attributes of too much warmth or not enough air movement or whatever the case may be. Defensible Space by Newman is another book that we'll look at. Newman himself was kind of an irascible character, but he came across a computer data base based on all of the public housing in New York City which had spatially identified all the different types of social misbehavior that had gone from rape and muggings to minor league vandalism and then he then went back and correlated that to the design characteristics of the project which led to that type of thing occurring where and at the frequency at which it did. And, came in with a great deal to say about the redesign of housing complexes to control and minimize that kind of behavior. And one of the more basic folks which really alerted and sensitized people to the kinds of spaces we create was one called Community and Privacy by Shirmiaff and Alexander. Christopher Alexander was, at that time, a student of Shirmiaff at the Harvard School of Design and Christopher Alexander has gone on to do a number of things in design theory which have become more and more esoteric as he grew older. He's currently at Berkeley. But Shirmiaff was more of a practicing architect and was really concerned with how we zone our spaces and our buildings in order to achieve certain social controls in the process. And so looking at that book initially which came out of the mid-1970's we really want to talk about the domains of urbanity initially and then begin to analyze buildings as you go into them and see if they don't have this same hierarchy - whether we're talking about a single-family home or something more elaborate such as a school of business or a public library. To see whether, in fact, the progression that you move through isn't essentially the same kind of spaces that are identified here. The first is essentially what we would call urban public.

These are the places in total public control and ownership. Certainly the highway, the roads, the paths, the parks and so on in which anybody can enter at any point in time within their rights and can take the benefit of those kinds of space. Nobody has a proprietary claim on those spaces and, therefore, they tend to be vulnerable to whatever kinds of activity that may go on there.

The urban semi-public kinds of zones are areas of special public use where there is some control of entrance - the city hall for example, courts of justice, public schools, public parks, hospitals, transportation things like bus stations, airports in which your access is reasonably public but nevertheless controlled. There may be certain areas you can go freely, other areas where you go by permission and other areas which are excluded all together. Parking lots, garages, stadiums, theaters all have an element of qualification to them. You can't pass this point without your ticket. You can't enter this area without a security badge etc. While they're all in the public interest, nevertheless, there is some degree of control of entry and certain limitations on the kind of use both in time and in character.

Then we move into what we would call group public. The meeting ground between the public service and utility area and the private property that requires joint access. For example, consider the problem, how do you handle the meter reader. Where do you put the meters so that he can come on your land and read the meter - without having to go into the basement or enter the more private parts of the house or building. And, what rights does he have to enter those areas and move on and so on. What about garbage collection? How do you handle the garbage collection area? Is there an area in which the public garbage man can encroach or do we simply solve the problem by saying you're going to have to move your garbage out to the apron along side the curb which is public property and in which they need no particular permission to encroach. It looks kind of messy but, on the other hand, it is a fairly simplistic answer. What about utilities control? How does the utility company get to their transformer? Think of a subdivision, for example, and let's say whenever you put a lot to the transformer should you have the transformer at the back of the lot buried in a utility quarter if the truck has to come in now he gets to back down over your rose bushes and your hedge and so forth. Or do you put that transformer out on a little pad right along side the street whereby a service truck can come by, lift the transformer off the pad and not do any damage to your side yard or encroach on your back yard and so on. How do handle those kinds of interchanges between the public sector and the private sector.

Then we have what we'll called our group private area. This is an area that is really under the control of management acting on behalf of the tenants or some other occupants. For example, let's assume we're building a medical office building. There's a reception area which is a group public area in which anybody can come. But at that point you're sorted out and those of you that are going to x-ray or the blood lab and so forth are sent to one waiting area, somebody else is going to some other service are sent to another area and now what kind of interaction do you want between the staff in that medical building and the patients? Patients may have a very sensitive personal problem and they don't really want to really be observed going in to see their family Psychiatrist and so forth. Do you have a relative access and egress for that patient that maintains his privacy relative to all of the other friends he might meet in the reception room at a particular point in time? And do you want the patients and the doctors to be able to observe each other or do the doctors have a separate circulation route to the treatment room and so on? Is it important that doctors be able to visit with other doctors out of earshot of the patient or are the doctors going to be discussing personal cases in the hallway where they can be eavesdropped on by someone with really no need to know and so on. Certainly a very interesting problem of how do you channel the circulation within the building to protect the privacy of the individuals to the extent appropriate to what's going on. How do you control let's say the antisocial group from coming in? How do you position the control counter at the library in such a way that they can observe anyone who's leaving with books they didn't check out or going into the bathrooms and so forth to harass people or for whatever other antisocial activities that may go on and how do maintain some element of social control over that? That becomes part of that whole group/private layout in such a way that a minimum level of observation achieves a maximum amount of security. What about playgrounds? what about laundry? A real problem in a major apartment building is laying out a laundry in such a way that it doesn't become a trap for the individual who wants to go down at 3 am in the morning and do their laundry and yet being isolated and all alone vulnerable to mugging or any other type of other unpleasant encounter. How do you open those up so that there is what the sociologists call the random incontentination of social contact that polices that on a more or less accidental but, nevertheless, effective way because of the people going by. What about storage? How do you handle that in such a way that it is private and yet it can be observed and so on. You know the chicken wire storage cabinet in the basement in some ways is, obviously, a violation of your privacy but, on the other hand, is a marvelous way to provide a very quick view of security in that area and to really observe who is there appropriately and who is there inappropriately because of the visibility of each of the storage rooms and the content. The chicken wire may be cheap and look a little shabby but, on the other hand, in terms of its social control it's a very effective enclosure for that type of space.

Finally what's the family private area. Obviously, there are certain areas that once you are within the home are family areas - such of the living room, family room, kitchen, communal family activities of one form or another. And areas that are shared such as bathrooms and so on. And finally you get down to the individual private zone - the room of one's own that is the ultimate sanctum from which you can withdraw and get away from the family and the noise and the stress and the other elements. Now each building has this kind of hierarchy which may be very, very apparent or may not be as apparent or maybe the building doesn't work well because it doesn't have one of these critical elements. For example, the performing arts center that they spent all kinds of money on - was a fancy New York architect. They had two problems, one, there was no way to get the garbage in and out without bringing it through the lobby and second of all there was no wall between the men's room and the ladies room. That's obviously a refinement that doesn't affect them in New York but obviously created a problem here. So as a result our zoning was not quite as appropriate as it might be in terms of the activities that go on within an area or whatever.

Now, how does this begin to affect the design of buildings. Well, for example, looking at apartment buildings they discovered the hard way that if you had a rise apartment building with children in it, the first problem was that nobody identified with the playground - it was a nonproprietary area and therefore, anybody could drift in from beyond the perimeter of the property and the parents were never sure who was there with their children, whether they were there legitimately or otherwise and as a result, the playground wasn't used with a sense of family security. And if you asked people what they wanted they really wanted low rise apartment buildings and they wanted their children playing right outside the window where they could see them instead of playing with any one of ten thousand kids within a mile of the place, that they were playing with two or three or four or six kids that came from the immediate families around them. So you began to design the project from that standpoint. You could create psychological barriers that would tend to encroach on the flight zone of those with less than socially acceptable objectives and you could exclude them. You can hint by the design of the building where they shouldn't be, and you should make the intruder uncomfortable to have penetrated that far in and then not be aware of what his flight zone is should he be discovered. The same would be true on an apartment building in, where you have a long corridor and 50 doors are accessible to anybody who walks in off the street. The opportunity for the burglar to "jimmy" one of those doors while somebody is at work and away is relatively high. And then again, if you design your residential building so there's only four or six doors on a corridor from an outside entry, virtually all of those residents in those six units know who each other are and often know who their regular friends are and, therefore, those who have legitimate reasons for being in the corridor and who's the interloper? Who's the intruder? Who's there without legitimate reason? And it becomes a self policing kind of turf which then establishes a social control inherent in the design itself. By the same token, if you open up that stairway with glass windows to the outside so that anyone in that stairwell is observable from outside, and you go to an open railing so there's no place one can hide without a hint of, you know, to those coming up the stairs so they won't be taken by surprise and so on. You begin to control all the activities in that stairwell there very tightly. As a result, begin to critique a building to see how it evolves, how it bridges in from what is openly space to that which is totally private space. These become heated issues often in urban planning. For example, the Fauerbach condominium on Williamson Street when it was initially programmed, the city moved to continue the lake trail that comes along Law Park and continue around the lake on Monona to link up with several parks that are further to the east. The developer widely refused to let them do that. Many people thought that that was a rather narrow minded view of life. But the fact is, if you make the front lawns a public park, then those whose sliding glass windows on their living room open up onto the lawn in essence have absolutely no control of who is sitting outside their living room window looking back in. And they have a great loss of security and control of the environment and the neighborhood. Anybody's welcome for any reason and, as a result, they won't buy those kinds of condominiums. You need to, perhaps, set the building up on a podium to create some sort of clear distinct line between that which is public park and that which is the first floor of a residential unit. The Capital Center townhouses were required by some of the bright lights in our city council to have the center plaza public space so that technically anybody can wander in there. Notice how carefully they have hidden the stairwell that go up to the area to create a concrete arches over the top and try to give all kinds of physical signals that, OOPS, this is semiprivate space, you're not welcome unless you live here and so forth. But nevertheless, the fact is that the security problem in the townhouses is a very real one because if somebody wants to sit in front of your sliding glass window and look in the door, your only option is to close the curtain and that, obviously, is not a very good design characteristic for that particular project. But you always get these, you know, bright-eyed liberals that say that since we paid for the parking lot underneath the building the public should get some benefit and we're going to make that a public park. Well, I'm sure that if it was in their neighborhood, and somebody said, "Well, we paid for the street, and there's a vacant lot there so we're going to build a public park next to your house in your back yard," that they would scream just as loudly about encroachment into their privacy. Begin to critique urban spaces. Begin to see whether they work in such a way that they control, provide safety and comfort and a sense of security to the individuals that are affected or whether, in fact, they do just the opposite and begin to encourage antisocial behavior because of their layout and so on.

Well, when you get to look beyond the building, you begin to look at the neighborhood in general, there's probably no better primer than Jane Jacobs very famous book, The Death and Life of Great American Cities. And her basic premise was that cities are self policing as long as there is a variety and diversity of human activity going on. That socially unacceptable and undesirable behavior typically occurs in social vacuums where there is no activity and there is not a sufficient number of people to imply social control and discipline. And she uses as one as one of her examples, Philadelphia, which, when it was laid out by William Penn, had a capital square in the center which, still to this day houses the famous city hall of Philadelphia. But then there were four additional squares which were to be residential in character around that. And over the years those squares, obviously, since the early 1700's have evolved very differently depending on their particular use. One of them has become entirely devoted to office buildings and, therefore, is what we call a time ghetto in that from 8:30 on Monday morning until 5:00 on Friday evening is a very active vibrant place to be. But immediately upon quitting time, everybody leaves and goes someplace else and, as a result, there is virtually nobody in the area. And, as a result, the center of the square, the park has become quite a center for social deviance and social outcasts in reference to real estate development. Because there is really no social activity going on over the larger part of the week. The opposite is - one of the other squares by which was obliterated by a traffic circle so there's a beautiful old fountain in the center which you can't get to unless you want to cross about 8 lanes of traffic moving at the maximum speed without tipping the car over - so that's lost. But the very famous Britton House Square survives and it survives as one of the most attractive and viable areas of Philadelphia because of the diversity of uses on the square. There are hotels, apartment buildings, some retail, there are condominiums, there are office buildings, there's a little theater. And, as a result, these different activities take place at different times of day and there's a constant flow of people on the sidewalk and through the square. And, as a result, it has a very, very low street crime rate. There's almost no incidence of street crime since the general flow of activity itself controls and polices the behavior that takes place there. And, as a result, it's also, therefore, a very attractive place to live and to go, because you feel secure and comfortable there and gradually it has modified the neighborhood all around it. While the old townhouses and so forth have fallen into great disrepair, it became an area for its reputation and remodeling and renovation of the old houses. And, as a result, the impact of Britton House Square has spread out over many, many square blocks around it to create a very stable and desirable residential neighborhood, ironically, that has no exclusives going in it at all. It is desirable residential very much because of its heterogeneity. The fact that you may live next door to the office in which you work and the grocery store might be just down the corner on the first floor of your apartment building and just down the way to the restaurant or hotel or small theater and so on. And what's you're really doing is you're attacking the 20th century American planning idea that we have to have zones of use. And this was all single family residential here, we painted that light green, and this was your retail strip here, and we painted that some other color and this was the office and this would be industrial over here and so on. And the tendency to come up with one use classes for our land gradually led to a type of segregation which was not only social segregation or economic segregation in terms of whether you could afford it, but, in fact, led to a ghettoization of the uses in time so that we lost that ability to naturally police the area by having large levels of social activity at all hours. Langdon Street is a relatively safe street to be on because there's people out at virtually all hours of the day or night in one way or another - coming home from the saloons or library or classes or fraternity parties or whatever, and so on - and that's a good thing. Those streets that have activity on them are the ones that you feel safe on and the way you encourage that kind of activity is, obviously, to have diversity of use. Hence, for example, the great debate in downtown Madison. The fear that downtown Madison would wither away led the state to say, all right, we'll build all of our new state office buildings downtown. Well, that brings lots of people downtown and that helps folks in the luncheon business and so forth, but it is very much a time ghetto when GEOF or JEFF (It’s an acronym for the government office buildings but I’m not sure exactly what the acronym is.) one, two and three are closed the number of people on the streets and on the Square are obviously drastically altered. If we allow certain kinds of uses like retailing to drift away or we allow other types of uses that contribute to say evening activities or weekend activities and so forth, we gradually reduce the vitality, diversity, safety and security of that area. And therefore we really need to overcome our traditional concepts that if this is all residential it's safer because that really isn't true. The same is true to say, "well we put all of our industrials here because industrial is obnoxious" - really isn't going to the gist of the matter. Some industrials make good neighbors, some industrials doesn't make good neighbors and we need to have a degree of sensitivity in our planning process.

The other illustrations he points out is that a lot of the traditional laymen's myths about what constitutes a slum really isn’t so, North Boston, for example, has some of the highest densities, greatest diversity and some of the oldest buildings in the country and yet as a social entity it works extremely well. There's an old Italian neighborhood in which industry and retail and residential are all mixed up in lots of old buildings and yet always in the window some place is grandma rocking who is looking for her grandchildren on the street or who knows when she's seen old so-and-so that he's dangerous for the kids or is about to break into somebody's apartment and so forth. And the result is that because everybody knows everybody else there's a very high degree of social stability because you lose your anonymity in that area very quickly. And what is required really for socially unacceptable behavior is anonymity. Because if people can identify you in the process, obviously, very quickly you're apprehended and inconvenienced as a result. Indeed, in many of the new towns - and we'll look at it at the end of the semester - one of the real problems that they've had with the young teenagers is that having been there only a year or so they're anonymous. They don't have the same sense as someone who's lived in a small town all of his life that when he goes into the butcher shop, the butcher knows, "Oh, I knew your dad in high school or I knew your grandpa or we shared a fishing shack with your uncle Louie" and so forth. All of those little networks and webs that create identity and destroy anonymity are gone when you move into a new town and the oldest resident has only been there four years. And therefore you don't have the who begot what and who kind of system that creates 1) a pride and sense of belonging, a proprietary vested interest in the community and you take away all of those kinds of social restraints that are so subtle and really a part of the brick and mortar ultimately and you have the society breaking down. So even if you have a high income area like Columbia, Maryland which is virtually all yuppies and has one of the highest college education rates in the country, you also have one of the highest delinquency rates in the country because you have not been able to establish that very subtle sense of proprietary interest and identification. You have not been able to remove the anonymity that is critical for social control.

The physical design, obviously, of buildings we've talked about before and we won't belabor that again. Let's talk a little bit about the psychology of the group spaces such as a shopping center. Retailing ultimately is a very simple strategy. The object is to get you to return often, stay long enough that you gradually increase your average expenditure per visit. Obviously, anything that contributes to the frequency with which you visit the shopping center or anything which contributes to your sense of satisfaction at having spent some money at the shopping center increases that average expenditure per visit. Now, what kinds of things would discourage that. Anything that would discourage that type of thing, obviously, is not in the long term interest of gross sales at the center. Now, the first element of the person that comes in is that you need some sense of arrival. You need to know if you're coming off the expressway, "how do I get from my off lane into the front entry of the center?" and therefore, it should be highlighted in some way with a boulevard entering something other than just stop lights - perhaps a pylon with the signature of the center on it - some of those pylons get to be fairly original, some are old water towers, some are maybe silos and they converted a specially center in Rouse and so on. You need to be able to tell the driver quickly, within a few seconds of time, yoo-hoo the entrance is over here and you can pretend to know what you're doing so that the kids in the car aren't concerned like, you know, daddy you're on the wrong side of the road and all of the cars are coming at us at 60 miles an hour and so forth and it kind of takes away from the fun. So you gotta feel like he knows what he's doing. Now you've got him on the premises and as he comes into that little boulevard entrance he's got to say, "Gee, what end of this damn thing do I want to be on?" You know, it's several blocks long. So you have some really goofy architecture with high fake walls that says, "Over here's Penney's and over here's Gimble's and over there's Sears and pretty soon you've got a pretty good sense of the general layout. And the entrances are highlighted with some really extreme architecture. If you're looking at it aesthetically the entrance to a Sears Roebuck is about as ugly as you could possibly design it. But, on the other hand, it does get the message across. It's not a little subtle, little violet hiding behind the bushes. It's saying, "Here's where you come in, park as close to this entrance as you can get," and so as to immediately reduce the confusion. Compare that to somebody coming up to a building that maybe architecturally - win all kinds of awards - but the rhythm of the architecture is such, you're not quite sure which way the door is in. You're not really quite sure if you're supposed to be on the east side or the west side of the building. You're not quite sure where am I supposed to park to be close to the entrance and so on. Once you have confusion, that is stress and anxiety. And once you have that kind of stress and anxiety that underlying the person's self esteem, pretty soon you don't want to go there again. I'll find someplace else that's easier, someplace that doesn't quite so overwhelmingly confuse me. And, as a result, they begin to reduce their frequency of visiting.

Now, we got on the site and we're going to park the car and now the businesses is - they're cutting kitty corner across the parking lot and there's a car cutting kitty corner all around them as well. All discipline breaks down. Is that the kind of thing you want to get into? No. You begin to find other places where the parking is more carefully controlled, the lanes of traffic are more recognized and observed by all the participants. Now we've got the car parked and we want to usher the kids across the street into the center. As you're walking down toward the center and you got cars whistling between you and the center and they're moving right along - they've done their shopping, they're on their way - and how do you get the kids and the packages and so forth, across the way. Obviously, you want to discourage cars from getting between those who are now pedestrians and the center. So you design the center with a loop road around the outside so those people who want to get to the back side or the east side or the west side have a way to go without separating the pedestrian customer from his intended goal of getting in the door. You also take those kinds of uses which are, say, high frequency short stay things - like your deposit windows at the savings and loan and the bank and your fast food areas and your tire, battery and accessories types of garages - you put those out at the periphery. Keep those kinds of short term visitors away from the longer term shopper. And now you take the shopping center and you divide it with all kinds of little corners so that there's no way you can go more than four miles an hour around the shopping center perimeter, so it discourages you from trying to make any kind of distance along that route at all. It king of encourages you to get out the perimeter route flow as quickly as possible. And if they don't do that they put in what sleeping policeman - a sleeping policeman is one of those big tar bumps, knocks the bottom out of your car if you're going more than three miles an hour. Notice they're doing everything possible to give the advantage to the pedestrian and to condition the motorist to get out of there, to move out to the outer circular perimeter area. If the site’s the right shape, it works very well. West Town, for example, works very well that way. But notice Hilldale. Hilldale site was too small and as a result the cueing lane coming in off of Midvale goes all the way up to the store building because that's the only way you can feed that many cars out of a single lane on the Midvale. And, it had to invent other exits onto that center. So your approach zones aren't all that clear. And the movement of cars on that site is not good in terms of the general sense of safety of the people who are coming to shop there and so on. And compare that, as I say, to West Town or East Town in which the perimeter road is much more elaborate.

Now, we've got them inside. And now what do we need to do? Well, first of all we need to make them feel comfortable. We don't want them to have to walk too far to get where they're going. And so we control the humidity and the temperature in order to release that claustrophobia. That interior mall with the high ceiling is a tremendous release to your claustrophobia. You come out of a small shop and suddenly your ceiling doubles in height, sunshine comes in the clear story and you begin to take the pressure off that was beginning to build up while you were in the back corner of that little shop with the low ceilings and the groups crowding in on you and some confusion because you don't know a woofer from a tweeter and the clerk is looking at you a little oddly and suddenly all of a sudden you decide you want to retreat into somewhat more free turf. By the same token, if it's a different kind of merchandise in a high tech society that you're not familiar with - if you had to walk through a door and have it closed behind you, and then sort of smile weakly at the clerk and say I'd like to see a personal computer please. You know, tremendous sense of insecurity. You don't want to have to have a confrontation right away and explain that you really don't know 16 bytes from 8 and so forth. And so you really want to edge in, so you paint a stage front door with the whole front of the store lifts up and you can kind of edge inside a lane and pretend to be looking in the first counter while you get your courage up to go a little deeper into the store. And nobody really has to pester you at that point, you're kind of invited in. And the good shoe store puts one left shoe out there on the front stand and pretty soon they've led you down the primrose path so that you're halfway into the store. It's all done very carefully articulated so that you can get over your shyness of being in new turf or being perhaps in a store that you think is too expensive for you or that's too high tech for you or whatever the case may be in terms of your insecurity. But, now, again, once you have accomplished that and you have set their mind at ease, how do you handle the other side of the confrontation? What if you don't like the other shoppers. Well, one way to do that, of course, is to have wide enough turf out of those malls that you really have a great deal of space around you to call your own. And then to suppress the noise, you create, in effect, white noise with fountains, with music by Musak and a variety of other things which begins to fuzz the noise, perhaps the language that you don't like of other folks in the center and the children crying and so on and you begin to be - creates kind of central envelope around that customer in terms of what he can see, in terms of color and so on. We move very quickly from industrial surfaces in the late 1960s in which we had terrazzo and metal ceilings and rather hard plastic ______ around you to virtually all domestic materials. It’s carpeted, you use small brick patterns and you allow a lot of wood patterns. Notice what's happened in the department store where they have gone from this massive display of merchandise in which you can see across four acres of merchandise to enclosing it all in, creating small boutiques, giving you the feeling that, gee, the only person the clerk really cares about is you and you've discovered this small intimate little spot within Gimbles that nobody else knows about. And that old element is __________ on the staging of the presentation of merchandise in order to control your behavior, make you receptive to that sale. This is what we call social control. And it's a positive kind of social control, rather than necessarily having to do with crime and so on.

The family private areas are critical in terms of design. There's some very fine books out on simple single family home design but any number of the features are critical to the success, believe it or not, of the marriage - for example, the master bedroom. The master bedroom, obviously, needs to be private and quiet and enjoy auditory privacy as well as visual privacy from the kids or pretty soon that relationship between the couple breaks down. By the same token, the kids needs to have some place to be able to retreat at some point and to get away from their siblings, as well as their parents. And you may need just intelligent conversation areas. You don't want the living room to be the main traffic artery because just about the time father and son are having a little private conversation, two brothers and a sister come traipsing through and break it all up and that opportunity for quality time is lost. By the same token, if the kitchen and the family room become the control point - the design of the home should really reflect that value system. And builders are getting very, very good at understanding what kind of statement a home makes to the value system of those who buy it. A number of years ago I was lecturing in Denver, arguing that appraisers really didn't know much about the home market because they didn't stand around listening to buyers after they left the model home. One of the places you really learn about the building business is standing around and trying to look innocent in the parking lot and as husband and wife get back in the car, the wife will say over the top of the car, "Did you see that five bedroom house and white carpeting. They don't know anything about children. Obviously, that builder's an idiot." Well, I was the builder they were talking about! I was an idiot. That was the code that people got, I had a five bedroom home, beautiful home, but white carpeting - with five kids in it, that's not going to work. You immediately have to remove the carpeting and come back with something that is much more consistent with the type of entity you're trying to house. But by the same token, George Writer who was the builder, and was one of our distinguished graduates came back and he said, "Look, I'm building in the Denver market. That's about 15,000 homes a year. Me, Charlie and one other builder he named, are doing 2,200 houses a year in this market in the $100,000 to $150,000 price range which I dare qualifies as sensationally about the subject. I'm getting the guy from the head shop, Charlie's getting the button-down collars, and Herby's getting the pendletons. He was then able to profile each of his family units in a social unit simply by the clothes they wore. Those who made a statement with their clothes bought the high style modern home, typically had the foreign car and made a statement with their house. And most of his advertising was directed to that social group via a direct mail that he garnered from the charge accounts at the high style men's and women's clothing shops in the Denver market. On the other hand, the button down crowd was really the accounting type that says, "Colonials always held their value in Boston and I better get a colonial even though I'm working for Arthur Anderson in Denver." So there it is, you know, beautiful New England colonial with the Colorado Mountains right behind it. And the third guy in the pendleton, he's the kinda guy that would come in the house - the living room is 12 feet square and if you don't like him, he doesn't like you, you get to sit in the living room. But if he does like you, you then you move through the living room into the family room which is about 45 feet long, mom's in the middle cookin' up brownies, there's three dogs running loose on the place and the pop-up camper's in the back yard with kids playing in it for a play house. The lawn probably needs a little cutting and so forth, but, you know, that's his style. The whole structure is reinforcing that set of codes, that source of values and making that family work as a unit and not fighting with the family style or being, in some ways, counter sink. As a result, family life, the way in which, even in public housing they have found, for example, in certain ethnic areas, which are matriarchal the whole family unit is the kitchen. Mom runs everything from the kitchen and so rather than having one of these tiny little apartment pullman kitchens in which there are no windows and so forth, it's imperative to open that wide open. The kitchen becomes part of the whole living room area and everything operates out of that control. And as a result, the family unit works much better simply because of the reinforcement of the design of the space to the kinds of values and activities that you want to express there.

The private spaces for offices as well as for homes become critical. There are a number of new offices buildings which aren't doing very well among the medical folks that they were intended for because they leak sound over the top of the partition. And who wants to be at his friendly psychiatrist in one office while his next door neighbor is at the pediatrician in the next office and they’re listening to the sound come over the top of the partition and so forth. Privacy of all forms is a critical element.

In addition to looking at how the building contributes to the family unit or the work unit and the work location there are obviously other by-products that we create inadvertently - some unacceptable or undesirable social consequences. For example, the wonderful FHA loan program which took hold immediately after World War II game everybody the opportunity to have a single family home in the suburbs, but one of their basic tenants was that homogeneity of the neighborhood was a critical element to sustain the value of the home. And, therefore, all of the homes were virtually the same price. In those days they were maybe $16,000 to $17,500 with your choice of features and so on. But the house, of course, gave almost no opportunity for a statement of individuality and virtually everybody was in the same age group, same social group, same educational level and so on. And, as a result, we encouraged a kind of social disintegration in this country that had not characterized our residential neighborhoods before. Pretty soon kids could grow up their entire lives and never see an elderly person on the street. Or perhaps they were identified with different classes and different colors and different backgrounds all together. We had homogenized the American suburban scene to a point which really led to a good many of our misunderstandings and difficulty of the 60's and 70's simply because the value systems had been so smoothed out. And yet it grew out of the perfectly virtuous program which said that everybody should be assisted to the ultimate in buying their own home. But we have certain rules about where you can buy, what it's going to look like and how much you can spend of your income to purchase that home and so forth. The unwillingness of mortgage lenders to lend what they perceive to be declining neighborhoods. Neighborhoods which are going out of style, the houses are old, not very well maintained and so forth, suddenly begins to be counter productive and the neighborhoods really do decline because there's ability to regenerate and remodel and readapt those spaces to current lifestyles or current work requirements. The change in loan restrictions can lead to sudden price inflations. A couple of years ago they ruled that a veteran could buy a four unit and pay up to $70,000 for it in the state of Wisconsin lending program. Instantly all of the four units in the state went up to $70,000 because brokers knew that that's what they could sell them for and so get them financed by a veteran. The result was, of course, that you had to raise the rent in order to cover the payment and so now you have a very fine stock of housing in which the rents rise above which simply to cover as a lending program which, in itself, certainly had no intent of doing anybody harm. They were trying to help a certain group start to build a savings program and an equity. By the same token, if we begin to scatter our housing units throughout the community, maybe we'll get a better assimilation. Rockford, for example, was one of the first communities to have a public housing program in which the duplexes were scattered on scattered lots throughout the community in the hope that rather than create some kind of social impact of what was clearly recognized to be subsidized housing or subsidized welfare families, in effect, was built to the standard of the neighborhood and the hope was that the residents would be more quickly assimilated and would pick up the presumed desired middle class values. And, in many ways, it has worked and in many ways it was made possible by the computer. So as the property management problem became one that was manageable from a monitoring standpoint, which was not possible, they had no computers and no two-way radios. The tendency, however, has been to perhaps move away from concern for how our building and how our clusters of buildings and how the agglomeration of our cities begins to affect behavior or reflect value systems that are relatively short term in character. And, we quite often lose sight of that in judging the success with which a building works or a project works in evaluating the architecture and in evaluating the ongoing operating characteristics of the project. Certainly Ogg Hall and Celery and so on, they be complimented in terms of efficiently housing a large number of students in a relatively attractive way if you look at it from the exterior. But if you have to live in Ogg Hall with its acoustic problems and its relatively tight quarters and relatively low ceilings and so forth, perhaps it's not anywhere near as successful as Elizabeth Waters which from an aesthetic standpoint probably isn't going to win any great prizes, but from a livability standpoint it may be very, very successful. We have to be able to gauge the efficiency of our city building, not only in terms of what it does for the economic base or what it does for return on investment, but what it does for the activities or the social stabilization for the folks of live there, or whether in effect it contributes ultimately to the social disorganization and antisocial behaviors of the residents. OK. Pick up again on this another day.

. . . space employment and the fact that as industry is free to chose where it will locate, it is ultimately is a conservative factor in the case and character of our community and the little piece on the sort of real estate tax system will become more relevant as we complete the lectures for the next couple days on the real estate tax and the outline for the real estate tax lectures will be in your hands as well.

We've been talking about the cash cycle of the various parties involved - the consumer, the producer in May we'll begin the first look at the cash cycle to the public infrastructure so that we can begin to talk about the simultaneous _______ that need to be solved in terms of revenues and benefits to the infrastructure versus the consumer versus the producer of the real estate. And certainly the majority of the cash cycle for the public infrastructure of the city and the school board and so on begins with tenancy of the real estate tax. And, to some degree, today I'll also call users' dues or exactions. And, to some degree, and certainly to lesser and lesser degree on federal grants. But the real estate tax today provides more than 80% of the base revenue for a local community. Unfortunately, the real estate tax is probably one of the most controversial, least understood taxes in our system. There's only one federal income tax - and that's confusing enough - at least it's standardized. And there are about 50 state tax jurisdictions to which one must accommodate and understand. But relative to real estate there are over 14,000 real estate tax jurisdictions - typically none bigger than a county and in many areas, no larger than a township. And in each of those areas there is an assessor and a system of sorts which is somewhat mysterious ________ black box and which is often run in a rather unprofessional basis so that the result is obviously a good deal of friction between the property owners and the assessment process. The lack of standardization, the lack of skill, is compounded by the fact that, the unlikely income tax, the taxpayer doesn't get to compute his tax. There is some mysterious process by which an assessed value is attached to his property and another mysterious process by which a mill rate is determined. And, lo and behold, at the end of the year a tax bill arrives that says, "you owe "X" dollars." And the taxpayer 1) is quite sensitive to that and 2) has really very little perception of how that number was derived and so he's immediately suspicious of it, since he did not participate in it. And the third element, of course, is that by and large politicians don't like to fund a collection of taxes. It's something on which they're dependent, but, on the other hand, neither do they provide an adequate administrative budget to collect it. And of all of the various tax systems, probably the cost per dollar of actual revenues, in terms of administration is lowest, in terms of the real estate tax, relative to any other type of tax system that we have. And as a result, we do not have a cadre of well-skilled, well-trained and well-compensated tax assessment people and there tends to be a sink going on in which those best able to do valuation and real estate analysis, and so on, gravitate out into the private sector and find more lucrative ways to employ their real estate skills, leaving behind a bureaucratic system which is less than average talented skill. There are some dedicated assessors and there are some jurisdictions which are very fine, but out of the 14,000 they represent a minority. Ninety percent, of course, of the taxpayers believe that if the assessment value placed on their property is less than they believe the property is worth, that somehow they're getting away with something. That if the assessed value is $80,000 and they know their home is worth $100,000, they don't say anything. They say, "Ha ha, I beat the system. Those guys don't really know what they're doing. They don't know what my property is worth. Presumably I'm getting away with less than my full share of the tax." And, as a result, the largest number of people don't squeak because they don't realize that the assessment value may, in fact, be deliberately intended to be less than 100%. The real critical element is what's the mill rate? There are two elements to the real estate tax. One is the numerator in terms of how much revenue do we have to raise from the tax? How many dollars do we need to run the schools and the fire department and the police department - all of the other agencies that have been on the real estate tax? That revenue is divided by the total assessed value of all the real estate in the tax jurisdiction to arrive at the dollars per thousand, or the mill rate which will be assessed per thousand dollars of value. Once upon a time we talked about mill rate which were essentially one one-hundredth of a penny. And we talked in terms of a dollar. So that if you had two mills per dollar, that essentially was two-tenths of one percent tax. That got to be a little awkward so we typically express our tax today in dollars per thousand. $38.25 per thousand as the tax rate. And the thousand is the assessed value figure. Now, the assessor may, in some jurisdictions, try to make that assessed value figure 100% of market value. In the state of Wisconsin, that's what they are instructed to do by law. They don't always achieve it. And, therefore, it tends to flow around 90% or 95% as a matter of fact. In other states, however, they use what they called an equalization rate that says, take the market value of the property, multiply it by 60% or 25% or 30% and that's the assessed value. So the fact that the assessed value is quite different than your perception of what the value of the property is worth, it should come as no surprise, it was intended to be that way. But notice what happens if you cut the value of 100% of market to 50% of market, the only thing that happens is that the mill rate doubles. They haven't gotten away with anything at all. The mill rate simply doubles. You always have to look at it in terms of the ratio of total dollars collected over the assessed value. So that basic function of a real estate tax assessment is to establish your pro rata share of the revenues to be raised with the real estate tax. The number does not have to be a true replication of market value. It simply has to arrive at a fair and equitable pro rata distribution of the tax burden among each property owner. So if your property is worth $40,000, his property is worth $80,000, and you're the only two properties in the assessment district, you're going to pay one-third of the total assessment and he's going to pay two-thirds of the assessment and no matter which set of numbers you have, as long as you arrive at that relative incident of taxation, it's a fair tax. So keep that in mind as we begin to develop that assessment system.

Now, today we're not going to spend much time on the numerator. How do we arrive at the budgets that people want to raise with a real estate tax. We'll be talking about that as the semester progresses. But, we have attached to your handout, a couple of for instances. The city of Madison's 1986 budget and what proportion is raised in real estate taxes. A little letter of explanation from the mayor that comes with your tax bill. Also, a little letter of explanation from the school board that comes with your tax bill. So Barbara Arnold explains, you know, why are we raising our tax and so forth and so on. Notice they're serving more students, federal aid is less, the school population is more complex in terms of state requirements to handle the disabled student and the student with disability learning problems and dyslexia and so forth and you have to have multiple types of programs for all those kinds of things. And so then she goes through and explains where your money went and why the increase, and so on. Well, obviously, there's a number of these various tax jurisdictions which will accompany your tax bill. But it will give you some idea anyway as to where the numerator comes from.

We're going to spend the rest of our time today talking about where the denominator comes from. How and why do we set up a system for determining the assessed value of each property on the tax role in the community?

The historical origins of the real estate tax, really, date all the way back to medieval England in which all of the land was owned by the king who then, in turn, bestowed the use of it on his dukes and lords and then, in turn, bestowed the use of some of that on the yeoman. And in exchange for the use of the land, they had to pay rent. And if you'll recall from your English history that ranges from any where a rose, from the house of Rose to the king, to some percentage of the crop, and failing the crop, why you had so many months of service to perform for the king, generally as one of his soldiers, but maybe as his road builder or bridge builder or tallis builder or whatever. And it is called a socheage rent although some people even feel they are being soaked even today. And when the US was initially discovered and founded, as you'll remember, the great trading companies really owned the land. The king gave the large grants of land to the trading companies who, in turn, leased the land to the colonists. And the colonists were expected to provide various types of products from the indigenous area in terms of whether it might be tobacco or timber, or whatever, as really the payment for that. And as they evolved and became a more sophisticated colony they were allowed to work that obligation off by working so many days on the roads or so many days on public improvements in one form or another. And so there was a basic tradition of the fact that the land tenure system required you to take a certain part of the productivity of your farm or a certain number of days of your time and contribute that to the public pot. And, of course, the revolution broke that tenure system and said, "no, you're going to own your own land, you're no longer a tenant on the trading company's land. And the trading company is no longer beholding to the king, etc." Those were abolished by the nature of the revolution and it was one of the major reasons for the revolution and the result was that while the tenure system that had created the soakage rent was gone. The tradition of financing local government, based on the agricultural productivity of the property owner, or, in certain case, of those that did not have farms, let's say the blacksmith and the merchant and so on, so many days of his time, remained as the basis for financing local government. So it really comes out of that historical tenure, tradition and continues on to this day obviously much more elaborate, as our economic system became more elaborate in the process. But the development of cities and the fact that we could no longer say that, "all right we will assess you so many cords of wood on your wood lot and so many bushels of grain on your feed lot and so many animals on your pasture and so on." We obviously had to find a new common denominator for allocation of the tax base. And they came up with what was called the ad valorem system. In effect, establishing a value for each property, summing those total values, and using that as the basis for pro ration. So if your building was worth one percent of the total value of all the buildings in the village, you paid one percent of the real estate taxes that were to be raised for that particular tax entity or community. Now, initially that was done on a very hit or miss basis. It became a scandal in the east coast, of course, in Tamity Hall and Philadelphia and so forth where for the right payment, for the right individual, your property dropped off the record all together and others, obviously, undervalued and so on. So that by the end of the nineteen century, the real estate tax system was in shambles. And it was a highly discredited politicized type of tax and there was a very real effort in the Northeast to correct that. And one of the leaders of that was a gentlemen named, Summers, who was an engineer out of Milwaukee and Minneapolis, a city engineer, who came up with certain basic principles for establishing a tax assessment system that really prevails today and which really provide a standard accounting whether an urban area has a truly legitimate assessment system or not. Summers wanted, first of all, to get the political interference out of it so that the number was as objective and fair as it could be. And, second of all, he did not want it to be too discretionary, because once the number became too discretionary, there was too much opportunity to influence those who had the discretion to exercise. And therefore he wanted a fairly arbitrary, mechanical, industrialized kind of systems that would churn through a certain number of objective kinds of things like square footage and how many fire places there were, and so on, things that could be factually established in order to arrive at a value.

And so the first element was to separate the assessment from the municipal budgeting function. The assessor has nothing to do with the revenue raising. Now that's a very important thing to remember. The assessor has really nothing to do with the revenue raising. All he's doing is establishing a base number by which the revenue needs, determined by others, will be pro rated among the taxpayers. That's his function. That function gets compromised when as in the City of Madison the assessor reports directly to the city finance director and treasurer. That was not the intent originally under Summers. You don't want a tax field board say, looking at the owner of a major building and saying, "We know we're too high on his assessment, but he can afford to pay it." That is not an income tax. That is a tax on the productivity of the land and building. Whether you like it or don't like it, whether you think he is too wealthy or not, and so forth, should have absolutely nothing to do with the system.

Second of all, you want to define as I say, a mechanical procedure which will always consistently arrive at the same number under the same set of circumstances on the property and reduce judgment calls to a minimum. Third, it has got to be simple enough that the public itself will understand the system as well as the field men who are applying it. The staff isn't going to be that well trained, that bright, etc. and therefore you've got to have a simple system for them too. And, because it's simple, it's possible for the citizen to defend himself against what he feels to be an inequitable assessment - very Jeffersonian in concept. The citizen should be able to go before a jury of his peers, plead his own case, without the lawyer, without the accountant, without all the elaborate expenses of a typical judicial system. And, in many ways our system has accomplished that very well.

Fourth, it was obviously to recognize that the assessment was not to necessarily to protect the actual market price of a particular property, although it will certainly be evaluated in terms of how close you come, but it was in fact to establish this base number for allocation of the revenues to be raised from taxes.

Now, what are the duties of the assessor under that particular process? Well, the first thing the assessor is charged with is creating a map of the community which identifies each property entity and, at the same time, identifies certain key characteristics of that property relative to let's say the paved road going by, sewer and water services available, the zoning characteristics, etc. And the maintenance of that assessment map, itself, is a major task. There are probably in the city of Madison alone over 100,000 property entities to be tracked on and as everybody makes their real estate deals and one guy sells a foot off of his lot and gives somebody else a wider driveway, gives somebody else, you know, leases the back of lot for open space conservancy, and so forth and so on, these hundreds and hundreds and hundreds of transactions that take place year have to be identified, the map adjusted and the data base, if you will, corrected to reflect this dynamic process of gradual subdivision that takes place in the urban area. So that's a major responsibility and becomes a major data base which, if done correctly, can be useful for not only for assessment purposes, but planning purposes, market research and a variety of other elements to either the small businessman those, for example, a little builder in the northern part of Milwaukee. The first thing I decided I could do was garages. By going down and going to the assessment roles, I could find out who had garages and who didn't. I took their addresses down and mailed them a little letter and see if they would like me to build them a little garage. It can become a market research tool, it can become a planning tool and so forth. Different states have different degrees of privileged information controls on the data bases. But the trend across the United States, essentially, is to make the data base created by the assessor, public knowledge. The state of Wisconsin is one of the slowest to accommodate that, but it too is coming around. So, as a result, that data base becomes a key element which can be purchased and partially self funding today as a result of the computer and various kinds of access devices via the computer to various levels of detail. Now most people can get detail about the outside of the home, the size of the lot, and so forth. Many jurisdictions still retain privileged information as to interior fittings. They don't want a broker sitting there saying, "gee, I wonder if they've got built in whirlpool and subzero freezer and so forth. Gee, here's one that comes with a sub zero freezer. We'll wait and drive up the van when they're gone and haul it all away." Obviously, there's some limit as to how much, you know, information you want to provide to anybody that has access. Now, once we have the basic map, the next thing we need obviously, is to begin to develop then a system for valuing first the land, and second of all the improvements to the land.

Drop down to roman numeral III on page 2. In Wisconsin, the agricultural block has been very jealous of maintaining control at the very local level of the real estate tax. As a result, we have slightly more than 1,100 assessment districts and probably no more than 50 of those have people who were trained to be appraisers and who were trained to be assessors. Most of them were simply elected on the township level based on the good ole' boys school of politics. Wisconsin has tried to pass legislation which would consolidate assessment at the county level, which is where it is at in the states with the most advanced systems, such as California and New York and others. But again, the farmers fear that if farms are assessed at full value which is not a problem right at the moment, obviously, that they will end up paying too much of a real estate tax. Wisconsin law does permit consolidation at the county level if you have a referendum. And if you do that the state will pay most of the tax costs of the county. Kenosha is the only county to do that and Kenosha does have a superior system relative to most of the counties in the state.

The third element is to state, in terms of providing some standardization, creates a so called tax assessment manual which presumably provides a minimum standard of procedure and performance to the local investor . . . (tape broke - had to splice it) . . . the manual prevails or is only suggested as to what the assessor might do. However, there is a continual war in the court between the taxpayer, the local assessor and what the state manual says the local assessor should be doing. Because the complexity of industrial appraisal is beyond the skill level of many assessors and because the philosophy of many assessors was to soak the rich to benefit the poor and they regarded the corporate taxpayers as the rich, many corporations found it expedient to leave Wisconsin rather than try to carry the real estate tax that was being imposed on them. And so a couple of years ago the state took over responsibility for taxing industrial properties and business-type property. And the result has been, of course, horrendous to certain communities. For example, West Allis, Wisconsin was dependent largely on the assessment of Allis Chalmers, Kerney Trekker, ____________, Chain Ballasts, the heavy industry paid most of the taxes in West Allis and the possessor was an elected individual, and he obviously realized that the executives of those companies didn't vote in West Allis, there were a lot of home owners who did and so the more that got loaded on these major, heavy industry corporations, the better of you were, since less tax was paid by the home owners and that was the kind of situation where the state stepped in, just cut the assessments to much much lower levels and economics came along and wiped out Allis Chalmers and certainly reduced the economic power of the heavy industries in their area. With a tremendous shifts in the taxation toward the single family home and so on and even today in West Allis, the assessor is still fighting in court about the legitimacy of the state's assessments and whether in fact they're too low on the industrial properties, too much attempting to maintain our heavy industry base by favoring them, as it were under the tax law. But, in any event, the state has taken over for industrial real estate, wherever it may be found. But in any event, the state has taken over for industrial real estate wherever it may be found.

The statutes established 7 categories of property. One is agricultural, second is industrial, third is commercial, fourth is residential, fifth is retail, sixth is mining and the last is conservation areas. We'll talk about the significance of that categorization a little later. But we'll start initially talking primarily about residential properties as a way of illustration.

Once the assessor has developed his tax parcel map, each property is given an identifying tax parcel number and that tax parcel number is, in fact, a spatial code as to where that property is located and its general characteristics. So the first two numbers are the township, the next two numbers are the range, then the section, then quarter section and then if it has been platted as a subdivision lot it will give you the lot and block number. And the last number of course is the ever present check digit to see if there has been any errors in the first series of numbers. And this tax parcel number has to be brought up to date as of January 1st. The month says May 1st but the law has changed since that was typed, so it's January 1st. And by that time, all of the streets, all of the subdivisions, all of the changes in ownership have been recorded. Then for each tax parcel number the assessor prepares a tax card and that tax card is going to detail the critical pieces of information that the assessor needs to arrive at his value. While tax cards are public in most states, they are still private in the state of Wisconsin. Only the property owner or his agent can see what, in fact, is on the tax card and can review it for accuracy. The only information in Wisconsin that's available is the assessment placed on the land, on the improvements and the total assessments on the property for each year that it's kept up to available to immediate public review.

Now, the assessor is then told that given this data base he is expected to value the property at the highest price in which it be sold to another user in the normal course of business. That's a very innocent appearing line. Seems, reasonable, fair and so on. But ask yourself, wait a minute, hold everything here. What if we had to sell the Sentry insurance building in Steven's Point as of January 1st. Who needs $100,000,000 estate? Grossly, inefficient building, beautiful building. Grossly inefficient - has 350,000 square feet of usable area out of a million square feet of surface. No that's cheating a little bit - part of that is parking ramp but nevertheless, it's still not a very efficient building. When they spent $100,000,000 to build that, American Family produced the same amount of work station space out here on the east side of Madison by highway 51 and 30 going out of town for about $10,000,000. So you get some sense of corporate largesse there. OK? What would it sell for to the next user? It doesn't help us to hypothesize that Century Insurance Company would leave on January 1st and would be able to sell that to another user. That's a pretty tough problem. It's not hard to figure out what a single family home that looks pretty much like every other single family home on the block on which we have multiple transactions every year - what those will sell for. We certainly have enough comparable sales when you need to adjust for differences in units and reproduce what is the most probable price at which it will go to another user.

Now other states don't necessarily follow that. They say whatever you need paid for it baby, is it. If Sentry wants to pay $100,000,000 for that building - They're a one-time user, they're the market for that building and therefore we'll charge you $100,000,000 - New York State for example out of what is called the Seagrams Rule says that if you're dumb enough to spend that kind of money there must be some element of productivity that we don't know about that should be taxed. That was based on the Seagrams Building in New York City in which, at the time which it was built, was the most expensive building all time office building in New York City. And the reason for it was Mr. Promta (?) had a daughter who had just graduated in architectural history from Brandies University and he was building sort of a standard office box. She said, "Oh Daddy, how can you do that? It's so ugly," and so forth and nagged the poor guy to a point where he finally spent twice as much on the damn building as anybody else in town. And once he got it up, the assessors came in and said, "Hey, if you want to spend that much money on an office building we're only to happy to assess it." And he tried calling and he said, "Wait a minute, that's not fair because if I was going to rent that to somebody else like all the other buildings around me I would only get $X dollars per square foot, and therefore it would only worth so many dollars and not what I paid for it." And the New York Supreme Court said, "We've never known you to make a bad business decision and obviously there's a lot of publicity value in that quality of a building and employees are happier working in that type of building. So you have less turnover and so forth and so on. So that it probably was a good business decision, we just don't see it all adding up in terms of rent dollars." And just about that time a study had come out on the Lever Brother's building which showed that was true. The dramatic architecture improved employee productivity, reduced employee attrition and turnover, and produced a great deal of publicity because everybody wanted their new car taken with that building in the background or whatever. And publicity is the game for consumer products like bourbon or soap or whatever and so the New York City Supreme Court said, "No, if you spent that much for it, you are a market of one for that kind of package and therefore that is market for that building." So the Wisconsin rule isn't necessarily the rule followed by everybody but it does create a very interesting problem for the assessor. What will this building sell for to another user? Now, that works two ways. If you got a really good buy and you sold it from a senile old lady who didn't know what she was doing when she sold it to you. That price doesn't set your assessed value either. It does if you come in and say, "You got a really good buy and that house was worth $100,000 easy and you only paid $60,000 for it. And he can assess you $100,000 of course, if he can show that that's normally what it would sell for. So it's a two way street.

Now, the courts have determined that the preferred way of determining value for assessment is by market value and by market value comparisons. Assessors of course resists that because it's a fairly difficult thing to do as you will see in a moment. But at least they begin to feign or try to at least imitate the the market process. In order to set up the assessment system the first things you do is divide the properties among those seven categories and then within those seven categories, try to identify those that you could call class buildings - buildings which are of sufficient, repetitive character, particularly homogeneous that we could come up with one formula for the whole group. And then what falls out are the buildings which are sufficiently unique that each one must be visited by the assessor and appraised individually. Now, to the degree that we can have them fall out into particular classes or clusters of properties of a high degree of similarity. We're beginning to discover that we can use a variety of statistical and mathematical techniques to produce very reliable estimates of value without having to go through a more individualized objective process. But for the larger buildings it's still a very subjective analytical process of one of a kind sort of a building that has to be analyzed with respect to its revenues, operating expenses and its future resale price. Now, if we are looking at class buildings you could look at what we call the tax manual. And the tax manual was divided into two parts; land and buildings. There is a tendency to move away from this in terms of let's say single family homes because people say it's really silly - you can't separate the land from the building - the value of the land is still vacant when it isn't vacant is obviously going to distort your result. But, let's take a look at the traditional way, then we'll see to accommodate the computer they're starting to move away from this and value the total property and arbitrarily allocate something to the land just to make the problem easier and more manageable. Traditionally they would establish what is called a unit foot of land. A unit foot was essentially one foot of frontage in the depth of the lot. So in downtown Madison which subdivided initially to be 132 foot deep lots and 66 feet wide, a unit foot would be 1 foot wide and 132 feet deep. And in the good old days, the assessor and a couple of the local real estate hot shots would walk down the street and establish what a unit foot was worth along each block of commercial and residential land.

Now obviously not all lots are 132 feet deep and not all lots were inside lots, and so it became traditional in appraisal to set up some tables that would adjust the unit price according to a mathematical curve. So they had what they call depth tables. And a depth table really said, "Hey 50% of the value of the lot is probably on the front third of the lot and another 40% of the value of the lot in the next third of the lot and then whatever is left can be attributed to the deeper part of the lot. But the closer it was to the street the more valuable it was and they would construct a curve and that depth table would then be applied to adjust lots that were not 132 feet deep. And we therefore had an automatic way of correcting for differences in depth. By the same token, if your lot was on the corner as opposed to the inside of the block, the premise was that a corner lot was not as desirable for residential purposes because the back yard now had less privacy - you had more sidewalk to shovel and so forth and so there would be a corner lot factor for residential lot that would reduce the apparent value of a unit foot. And on commercial properties they said that to have a corner lot was more attractive. And therefore you had more visibility and more store window space and people could walk by and more access to merchandise and so forth and so on. And so a corner lot factor in a commercial building increased the unit foot value of the lot. And they would go through a whole series of attributes of that sort. Whether it was flat or sloped down, the depth of the corner lot, depending on what kind of zone you were in and so forth. The assessors then could simply go through then, count up the number of unit feet in a site and adjust it for differences and presto you have the value of the land. And anybody that was fair minded that went through the process would arrive at the same number. It could be replicated no matter who the assessor was, in fact go through the computation. That was the critical element of the system. The opportunity for very much discretion simply wasn't there. And therefore the opportunity for graft, simply wasn't there. And the opportunity for error wasn't very much there either. You could agree if the taxpayer felt he'd been a little over or under underassessed, he could come in and go through the same series of steps and arrive at the same number as the assessor. It was a very important part of the system. It has led of course to a whole series of myths about property. There is still those who believe that corner lots are more or less valuable than inside lots and that lots which slope one way or another are more or less valuable. Lots that are more or less deep don't lose their value so that the utility company coming along the back of your lot and taking let's say, five feet for a hidden utility line is probably going to argue that their assessor or their appraiser that the depth table is still true and that the back end of the lot isn't worth as much per square foot as the front end of the lot. So a great deal of the mythology of real estate grows out of these traditional applications of the assessors manual tables which were designed for the convenience of the assessment process and not necessary because it was a very scientific measure of the values phenomenon that it was addressing.

Relative to the improvements the manual also provided for virtual photo identification of different classes of property. And you might have, first of all, different types of construction - wood frame, masonry, reinforced concrete, bioresistant steel frame buildings. And you would, as the assessor, categorize the building, turn your manual to that particular section, and then in the manual there might be a dozen or two dozen photographs of typical kinds of structures in that category. And you would say, "Ahhh, looking at the building I've got and looking at the photograph this comes out to be picture "E" and I now will look at it under the table that go with picture "E" and find out what the square foot and cubic foot values of that particular factor are. So the only discretionary call I had was to really decide the category of structure within a class of masonry or steel or whatever and at that point then he was led into a a second level of the system. And generally what they did was they specified a typical building of a single family home of a class three, for example, might be presumed to have one bathroom, one kitchen, one fireplace, hot water boiler, no air conditioning etc. And he would then go through his inventory of building attributes and would say, "OOPS, wait a minute, the one I'm looking at has two bathrooms, now what do I do." And the manual would say, "What you do if you've got a second bathroom is you add $1,500." And then it says if you have air conditioning on an auto furnace, instead of hot water heat, add $200. And so for all the variances between the structure and the the standard structure of the class, the assessor would add or subtract for the presence or absence of that feature. And at the bottom of his worksheet he would then take the net total and arrive at the assessed value for the improvements. And he would do that for each building on the property - the garage, the house, the barn, the chicken house and so forth. You can go through that little system and come up with a number. The result then was a very, very objective kind of process which could be replicated or duplicated by virtually any assessor. There were very few discretionary calls to make, if he had any questions on his income tax, the addition of, you could go in and appeal that type of error.

Now, today statistically we're beginning to find that we really don't need all of that detail, that there are probably a dozen variables that will allow us to predict differences in price between one single family home and another, with a high degree of accuracy using set theory and statistically theory and computer methods of analysis - then we only need another 40 or 50 variables that are there, not so much to predict the value of the house, but to make the taxpayers feel that the differences between his property and somebody else's property have been fully considered. So there are some variables today which are used for actual prediction of difference in value, and other variables which are simply there as a psychological comfort so that when somebody says, "Did you consider, the assessor can say, yes." The fact that it didn't carry very much weight in his decision is irrelevant. He can simply answer positively yes, I considered that and the model takes that all into consideration. And it's pretty tough to argue with a computer model that looked at 60 variables to say the value of your home is $185,000 plus or minus one. And so as a result, we have computerized this process to a great degree and, particularly for single family homes and class property.

Now, let's assume that the notice arrives and you're in shock because it says that it's worth $100,000 and that you're going to owe $2,800 in taxes this year and you thought it was worth $80,000 and had budgeted accordingly. Today you would have essentially three steps to the appeal process. The first thing you can do is just go down to the counter of the local assessors and ask to go through the assessment with the fellow who did the assessment on your property. How did you get at that number and what did you consider? What is it you think you know about my property that I don't know about my property and so forth? And just find out if the tax card is correct. If the dimensions of the property are correct - all the basic numbers. If you don't find any arithmetic or factual errors and you still think you're over assessed. You can ask for a review by what is called the Board of Assessors. And three other assessors in the office will get together and review the assessment on the property to decide if they would have concluded the same as the individual who, in fact, was assigned in the assessment of that property. If that gives you no satisfaction, then the next thing you can do is appeal to the tax appeal board in the community. The tax appeal board is one of the most marvelous elements of citizen participation in government that I know of. It consists of seven citizens appointed by the mayor to represent a cross section of the community. They typically are not paid for their services. They typically represent a student, and a realtor, and a housewife, and a small business man, and a farmer, and whatever. And they go and listed very carefully while you as a taxpayer say here's why I think I'm overassessed and there are certain rules to the game - you have to indicate that you're at least 10% apart from the assessors, you're not arguing over the last 1 or 2% difference in the system which isn't that accurate - second of all, you have to show that you've been treated unfairly or unequitably relative to other similar property in your area and three, that there's perhaps a theoretical error in the appraisal system that doesn't apply to your property. And the appeals board can then make an adjustment to your tax and instruct the role to be corrected accordingly. Even if you come in a year later and argue about last year's tax and they decide there was in fact an error, the reduction would be applied to this year's assessed value even though the error was a year old - so there's some opportunity to catch up as long as you can discover what kind of an error was made. At that point, if you decide you still ain't been done justice by your peers, you have two alternatives. One alternative is to appeal the process itself through what's called tersiory - it goes to the circuit court. And the circuit court reviews the record you made at the tax appeal board. In other words, there's no trial in the traditional sense of you again going through your spiel and the city going through their spiel, all that the court does is read the record that was made at the appeal board level. They can read the appraisals that were submitted, any other types of documentary evidence and so forth and the court will decide whether, in fact, the assessment was done illegally because of some failure to observe court precedence or procedure that was used or wasn't used or a fact or a critical piece of information was neglected or overlooked. If they decide it was done illegally, it simply gets sent back to the appeal board for review and another decision. Now, obviously that can get pretty circular - the appeals boards knows about a point because you challenged them in court and now it comes back in their lap, they'll find another reason for doing the same thing they did before, you'll spend a lot of legal money and a lot of time and so forth that you may not get from that appeal board a fair review. You'll simply go through the motions and frustrate the tertiary board.

The alternative is to go for what is called a de noble(??) proceeding. A deal do(??) proceeding means we're going to start from scratch. We going to go into court and we're going to have a jury and we're going to go through the taxpayer's appraisers and then the community is going to present their assessment and the jury and the judge can decide what is a fair assessment on the property. That is obviously a much more expensive, time consuming operation and there are certain limitations as to what kinds of property and property owners are permitted to do that. Basically the little property owner is permitted to do that, the large property owner is not. Nevertheless, it is a very participatory system. It's designed to allow the person to be involved in the process and most home owners represent themselves at the board of appeals. Most home owners select their own data and go down and argue their own case and it works very very well, by in large. Where it doesn't work is where there's a big fat high target so if you own the biggest hotel in town and everybody thinks you're making money the appeals board is a little reluctant to roll back their assessment when it knows that every time they roll back the assessment on a large property, the total tax base of the community is reduced and therefore the mill rate for all the other taxpayers is goin' to rise. So each time you reduce the denominator the mill rate goes up for everybody and therefore there is a natural political reticence to do anything about rolling the assessments back. And as we get more sophisticated about that, obviously there becomes new different ways to rationalize the assessment process. OK.

The process as described calls for a manual type of property and individual. Obviously, historically was relatively cumbersome and involved manipulation and management. And when the market is reasonably stable and the community is not in much of a growth mode the assessor, of course, is capable perhaps of keeping up with the general level of market activities. Some fairly rapid expansion of the community at the hinterland along the suburban fringes shifts in value in the downtown areas of most communities has meant that the assessor has fallen well behind the marketplace. And, those types of properties which he is capable of tracking in the way of automation and statistical techniques, such as residential properties, are the most easily maintained at current market value, whereas those properties such as industrial properties, investment plants, shopping centers and so forth, which require considerably more people hours in order to have a current valuation on it, obviously, tend to fall behind. And the result is, of course, ultimately a shift in the tax burden toward those classes of properties where the assessments are the most easily maintained in market value with a falling away of the tax burden from industrial and commercial investment properties less easily adjusted for inflation or for shifting property preferences within the community. The result of that, of course, every once in a while is a taxpayer revolt. California, for example, with its Proposition 13. The homeowner in that essence wasn't angry because the assessor was wrong in his assessment, the homeowner was angry because the assessor was right on his assessment. The last thing he wanted to be told was that his home was appreciating at 1 or 2% a month partly because of land use controls, partly of in-migration into California, partly because land and prices and so forth were rising due to the shortage of lots, and so on for suburban expansion. And what was happening was that the assessors in California became very, very good with the computer in tracking on single-family homes and small apartment buildings and small commercial buildings because it lent itself to sophisticated methods of data management and with that there was a gradual shift of course in the tax burden away from investment properties toward the single family home owner. And the result was of course an oversimplified and disastrous rule which said, "OK, tell you what we're going to do. We're going to freeze everybody's assessment and whatever it was they paid for their property, we'll allow it to inflate at some nominal amount, say 1 1/2% a year but, again, your assessment won't change in any major way, until you sell the property." And the next person who buys the property will, in fact, have assessed himself because whatever he pays for it is indicative of what the market value should be at that point. And the result of Proposition 13, of course, was to make tremendous windfalls for people who were living in their house for 25 years because the assessment never caught up with market value and yet the individual who moved to California for the first time, bought his first home, was assessing himself right at the top of the market. And so you could have two houses side-by-side in which one was assessed at the $60,000 that characterized its value in 1965 and the one right next door was at $180,000 which represented the current market value of the property with a tremendous inequity in terms of the property owners. And that continues to prevail to this day.

By the same token, the landlord who has set his rent based on the expectation that his taxes would be such-and-such and now found that he was getting his taxes rolled back to whatever his acquisition price, really had no compunction at all in terms of refunding it to the tenant. It was just a tremendous windfall where he had over budgeted for taxes which never came to pass. And yet most tenants now had an escalator clause which said that if taxes went up, they would have to pay the increase. Most people weren't bright enough to negotiate an estimator that went down. So that the tenant never got the benefit of the tax reduction that might have occurred as a result of Proposition 13.

Now, the only thing that happened to California was that by arriving at this over-simplistic method of protecting the home owner against the tax, they drove out of the state virtually all of the capable tax assessors in the state. Up to that point, California had "the" superior real estate tax assessment system. It was organized by county. It was supervised by a state board of equalization. The state board audited each assessment office at least once every five years - analyzed what it was doing right, what it was doing wrong, came up with a list of particulars and instructed the assessor that those factors had to be corrected by the next audit. And within five years, they re-audited and if those deficiencies in the system had not been corrected, the auditor was out, fired and replaced by the state. And, as a result, they were making tremendous strides in coming up with an objective, effective, very contemporary assessment system. Once they had destroyed that by simply saying we don't care what the current market value is, we'll simply adjust it every time the property is bought or sold and allow the other adjustment to occur just on an automatic 1 1/2% - 2% a year adjustment, the demoralization of the assessment staff and the equalization system was drastic. Probably the one benefit that occurred the other 49 states had a flood of applications from California assessors to come into their jurisdictions and perhaps build a new system. So even Madison's assessor is from Orange County, California, and it really disseminated the techniques of contemporary appraisal throughout the country and hence significant improvement in the data management capabilities of assessment offices. Nevertheless, the system still remains somewhat backward in its ability to respond to a very dynamic, quickly changing market in which prices are shifting within the community, the community is growing at a rapid rate, adding additional assessment parcels, and so on. Nevertheless, there is a really interesting career opportunities in the assessment area, particularly if you're moving to a new community and want to learn about the community quickly in terms of its market characteristics and trend and variabilities and so forth - to begin at the assessor's office and to learn how to make use of that public data pool. Certainly that data pool will play more and more role in future market analysis in urban areas than it has presently. We're still moving into that interesting area of when does the public database become truly a public database and when are we, in fact, encroaching on the privacy of the property owner by sharing with the general public, description of that property and its appointments and equipment and interior finishes. So that you will see a broad array of alternatives state philosophy on that, but generally moving toward the realization that an adequate detailed data base on real estate inventory is really in everybody's interest, in terms of buying and selling there is more efficient market, in terms of equitably assessing the properties and in terms of market research as to what needs to be built or what doesn't need to be built - what kinds of properties are fairly surplus or in short supply.

The other aspect of real estate tax, that is, of course, getting considerably more press and the Union, Wisconsin is getting more press, the question is; what should be in the numerator of the tax? What things should we properly try to finance with the real estate tax? Currently 55% of the tax rate in Madison is the school board. But in California, the Serranto case, set everybody back on its heels, because it said that the constitution guarantees a child an equal opportunity to education and that if you have a community with a relatively low tax base because it's a relatively poor community or undeveloped community or its population density is quite low, it simply doesn't have the resources to provide the same opportunity of public education that, let's say, a Beverly Hills, California, has in terms of assessed value per child. And, as a result, California ruled in the Serrano case that you could not provide equal opportunity by funding education on the real estate tax and rejected that as a method of financing education in California. There was great fear that that pattern would pervade and the fact that the constitutional ruling would spread very quickly across the country. So Lucy and subsequent governors here in Wisconsin have attempted to avoid that, by providing a state aid school law which, in effect, provides additional aid from the state income tax to those communities whose assessed value per child falls below a certain standard. Now that's the state aid fund dilemma you hear considerable stats on. And at one time Lucy was even trying to go to a point where, let's say, that a community had less than $80,000 assessed value per child, they would get a certain amount of additional aid. But if a community has, let's say, more than $95,000 assessed value per child, they had to pay additional money into a state pool that would then be shared with the poorer counties. That was rejected as unconstitutional. You can imagine how Shorewood or Fox Point or one of the richer residential communities felt about putting some of their tax money into a pool to help let's say the poorer counties in northern Wisconsin fund then education program. Tremendous human crying over that, and, as a result, that part of the law was changed. But, nevertheless, still in Wisconsin the amount of state aid that you get is inverse to the amount of assessed value per child. Now that leads to some rather interesting kinds of problems. For example, if the community is growing, let's say, as a commercial center for a larger area, its assessed value with a new Manchester's Place and new shopping on the west side, and so forth, is going up but the number of children isn't changing and, as a result, its assessed value per child is going up and therefore, it may lose more in state aid than it gains in tax base. On the other hand, if you decide to build a mobile home park in which there's almost no change in the tax base, but you get a tremendous number of children because of the young families at relatively lower, income families to boot suddenly, POW, your assessed value per child drops and now you get more state aid. By the same token if we go into it, you'll see a little later in the semester, special features like a tax increment financing zone. TIF, tax increment financing is virtually the only way a community has currently, of getting special financial assistance to encourage redevelopment or to encourage commercial development of one form or another. But the impact of TIF is that the total value created is included in the state base for determining whether you get state aid or not, or how much state aid you get. But, in fact, the school board doesn't collect any of the taxes on the increased tax base. So, on the one side, the state aid formula reduces the amount of aid available to the school board because of the increase in commercial tax base created by the TIF program. And, on the other side of the coin, it gets none of the real estate taxes created by the increment in that TIF. And so the school boards are now fighting a gorilla war against the urban redevelopment types of programs which, in a sense, tend to skew the school tax for the benefit of urban development, redevelopment. We'll look at that again a little later, but the significant part here is what are we going to include in the numerator? How much education shall we finance? How much welfare shall we finance? Or should the real estate tax go back to being what it was originally, which was a way of funding that public infrastructure that everybody shared, the road systems, the fire department, the police department, the parks and zoos and those kind of amenities which were really ongoing responsibilities of government that benefited everybody in real estate in one way or another because it enhanced the living quality and so forth of the community. Should we try to finance our education and our welfare and our social responsibilities out of a tax perhaps which can be more progressively focused against the well to-do than the real estate tax. After all, if you have an $80,000 home and you have a $79,000 mortgage, you only have $1,000 net worth, you're payin' the same tax as the guy who has already paid for his $80,000 home and therefore technically is wealthier than the first one. So in some people's eyes the real estate tax is regressive when, in fact, it taxes the the total value of the asset, rather than the net worth of the owner. If that's true (remember there's arguments on both sides of that), then we really ought to shift social welfare burdens away from a regressive tax toward a progressive tax system and change the kind of things that are in the numerator of the tax.

Now the alternative to that, and the one which people most generally pursue because it seems to be politically easier, is to find exceptions to what should be in the denominator. Who is it that's going to be taxed? And at what proportion of their value should they be taxed? It's easier to do that than to correct the long standing habits of government in looking to the real estate tax for education and welfare and a variety of the other soft costs of our society. So let's look at lecture #2 of the notes that were just handed out and look at it from that standpoint.

Which properties should be assessed or how much should it be assessed is a perennial political issue in which, of course, the demagogues can find, you know, rich fare for stirring up election issues and presumably advancing their candidacy. Government owned property of course is exempt from the real estate taxes. That's true whether it's federal or state or local county and township schools and so forth. Here in Madison, over 40% of all the land in Madison is exempt, including the University campus and the Federal installations and the court houses and the state office buildings and so forth. And yet they nevertheless receive all of the urban benefits of fire and police protection and the other city services and certainly the benefit of the street system and so on. So there are a few minor adjustments attempting to provide some equity to the City. State office buildings pay a 15 cent a square foot fee toward the City for services received. Public housing, for example, pays 10% of its gross rent toward the community for its costs of operation and a fee which is called, "in lieu of". A fee "in lieu" is an attempt to regress the fact that the government property may be otherwise exempt. But, Eagle Heights, for example, has to pay so much a child toward the school system. But these are negotiated and the public agency doesn't have to do that. They may be pressured to do that for one political reason or another but, these amounts, once negotiated tend to be a little resistant to change. Very few of them are indexed to reflect inflation or whatever. At one point, it was assumed that university married student housing, for example, would be valued as though it were assessed and then only the school tax would be assessed. But the state supreme court said that was discrimination. You're either subject to the real estate tax or you're not. And Eagle Heights came and therefore they were not able to apply that kind of system, even though they recognized that Eagle Heights produces a tremendous student load for the city of Madison system. But other governments pay nothing. And, of course, the issue is that reflecting the fact that the government service, in effect, justifies itself and the citizen gets some benefit from it. Or is that perhaps too broad an exclusion? At what point should the University of Wisconsin start paying real estate taxes? Now as long as they call their farms out on the west side, experimental farms, they don't pay real estate tax. They can sit out there on Charmong farms, and so forth and so on, indefinitely. And never pay real estate taxes, never really experienced the opportunity cost of sitting on that land and holding it indefinitely and that leads to a certain inefficiency as we'll see in a moment.

What happens, to a township, let's say, in northern Wisconsin when a sizable portion of the land is taken by the federal government for a military base or for a wild river preserve or whatever. Who benefits and who pays as a result of that? For example, a number of years ago the federal government in what was called the Great Bong Air Force bungle took some 15,000 acres of Racine and Kenosha County for what was to be first of all, a defensive tactical air command base and then they got NIKE missiles and decided they didn't need that and so they made it a B-52 base. And they tore all the top soil off and they built a runway about 2 miles long and then they realized that it conflicted immediately with General Mitchell Field in Milwaukee and O'Hare Field. And a B-52 doesn't have a very steep angle of climb and therefore, whenever the planes would take off they'd go right through the airspace of O'Hare Field or Mitchell Field and that wasn't really the brightest thing they could have gotten. And so after ten years of pouring all kinds of money in this thing, they just abandoned it. Now, that was a large part of the tax base of the townships in western Racine County and western Kenosha County. The base for the school board had been just wiped out. The town roads which had been paid for and built by the townships had been assimilated into the government property and it's very hard to put the top soil back on and sell it for farms again. And, in fact, ultimately it was reduced to a wilderness area for duck hunting and bow hunters from southeastern Milwaukee but, nevertheless, who pays? Obviously, the landowners who actually sold their land to the farm got paid. But there was no replacement of the tax base for the community who had used that to equitably distribute the cost of services and so on to their residents. Ultimately, after many many years of suit, the federal government was forced to pay an indemnity to the school board and the town board that were adversely affected. But basically our eminent domain laws don't look at private property as part of the resource of the local government. They compensate the land owners but they do nothing to indemnify the government for the loss of its revenue base that was inherent in the land system.

Now with the inverse kind of rewards that we have in our state, state aids will almost make up for the fact that the government takes all of those cottages off the tax roll along the St. Croix and makes it a wilderness river again. And the county will get from the state equivalent amounts of aid because of our state aid formulas. But, in effect, the federal government is getting the benefit of the political credit for saving the wild river and the state and the local township citizens are the one who are paying the bill. So it probably becomes, you know, knowledgeable as to who should be exempt and to what degree should they be exempt? And do we have in fact a vested property interest in terms of government's interest in the tax base that should be compensated when another government agency takes that land off the tax roll.

Should government installations like universities or, let's say the Federal Forest Research Lab here, be considered economic base items for which we ought to be grateful, and therefore we give them a free ride, or should they, in fact, be part of the tax base of the City since they get the benefit of our fire department and our road system and our police department and the other services? If, in fact, that's true. How do we determine what the market value of Bascom Hall or the Federal Research Lab is? Who’s to determine what the market value “as is” sold on January 1 to another user should be? Maybe Marquette would buy Bascom Hall as a missionary outpost. Otherwise the market is relatively limited.

Churches, hospitals and private schools are also exempt so long as the property is contiguous to its operating center and actually used for charitable purposes. And then we get some interesting rhubarb. If one of the churches here espouses, let’s say, a tenant service group that the city of Madison recognizes as political but not charitable, the church may be taxed on a portion of its premises. When the YWCA leased out a floor of its building to a school from the east side of the state to offer night courses that was not regarded as not within the YWCA’s scope of charitable activities and therefore it was taxed on one floor of its building because it was no longer following its edi mosonary intent.

We get some very interesting kinds of definitional problems of when do you retain your exemption, when do you lose your exemption? And at what level of government has the right of taxation?

Recently Wisconsin voters attempted to address at least some of the land use mistakes that occur as a result of the real estate tax, relative to farmers and conservation land. Our constitution requires that all land owners be taxed in the same way. We can not discriminate by those things which we feel should be taxed more or less because of their social benefit. You is or you “ain’t” on the real estate tax. It was felt that the pressure of paying real estate taxes on wet lands tended to advance or accelerate their conversion to commercial purposes. That farmers who were paying taxes on their wet land tended to find a reason to fill it in sooner, or plant corn and so on with obvious tegragations to the environmental quality that farmers were on the immediately edge of suburban growth were taxed as though their land was subdivision land rather than farm land. Pretty soon the farm was incapable of paying the real estate taxes based on agricultural production because highest and best use was now considered to be suburb. And the result was, of course, was that you accelerated the farmer’s move away from the peripheral edge of the community causing the farm to go out of production sooner than necessary and perhaps leading to overproduction of lots and suburban land with obvious financial damage to that aspect of the business as well. Therefore, the voters stated that, in effect, for two types of land - wet lands and for farm lands immediately adjacent to suburban developments - that it would be possible to tax it on “use value” as currently used rather than on market if it were in fact accommodated to the development.

In California a similar act is called the Williamson Act. The Williamson Act says that if you’re willing to place your farm under the jurisdiction of the Williamson Act, that you will be taxed simply on its agricultural production and not on its subdivision potential. But you have to leave it in there for at least ten years and if you take it out of the jurisdiction of the Williamson Act, you have to refund to government all of the taxes you would have paid based on market value for the previous ten years plus interest - and that interest is typically a nominal 6 or 7 percent. So there’s a penalty, as it were, if you roll back the regulation and decide to sell to those developments. There’s also a roll back in the Wisconsin law which is modeled to some degree on the California law. But, nevertheless, the interest penalties and the roll back is relatively nominal so that there’s always the temptation for the farmer to come out from under the special tax category and sell it to that developer who’s ready to build a shopping center or whatever. I don’t think the voters were thinking very clearly about, you know, the long term policy implications of that - it was passed at the time in which environmental quality at all costs was being considered. And, in fact, the tax revenues lost by the township which had a large amount of wet land or farm land under this act is refunded by the state, from state income tax proceeds. Well, we have to ask ourselves if we abandon the benchmark of market value for some, then there's a political temptation to abandon it for everybody. Should we exempt the elderly who are living in their homes for their retirement from real estate tax? What about that - the veteran coming back, shouldn't we exempt him? What about houses that take care of college students, after all 15% or more of the gross rent that you pay in Madison is real estate tax and we want you to go to school here - to help you to do that by saying that 1,000 college students that it doesn't have to pay real estate tax. Certainly all of these people are deserving and certainly all of them represent significant voting block that would appeal to political demagogues who maybe get your vote by advocating some special benefit and dip in the honey pot for that particular constituency. And, as a result, we're beginning to erode what was thought of initially by our forefathers as a critical element that all landowners be taxed against the same standard - namely, the market value of the asset - that particular point at which the tax was to be applied. Whether they'll continue to encroach on that with special exemptions remains to be seen. There are backhanded ways of doing it. For example, in Madison it would be possible if you were a relatively low income elderly person living in your home to stop paying your real estate taxes and they would accumulate those with interest as a lien on the sale on the property, so that ultimately when your home was sold at the closing to the next buyer, the taxes in arrears would all be paid but you would not be considered in default in the mean time. Certainly solves perhaps the cash flow problem for the elderly individual, but, in effect, it's a very quiet way of causing him to consume the equity in his home and account on _________ really without being aware that they're doing so.

Obviously, a community that is concerned with its fiscal problems of maximizing the revenue in its numerator and perhaps making sure that it also expands the economic assessed value on which that would be collected, is going to have very distinct land use policies as a strategy to advance its revenues at a rate faster than the service obligations which it entails at the same time. So for example, mobile home parks that we mentioned earlier represent a very high service cost to the community with a relatively low tax base. After all the only real estate are the pads and laundry buildings and community buildings which serve the mobile home. The mobile home itself is assessed as personal property with a fairly rapid write-off - I believe it's a 15 year write-down to a scrap value on a mobile home. So it's a set value base declines very quickly and the older and shabbier it looks, the sooner it falls off the tax roles. In fact in Florida, for example, the mobile home isn't taxed at all as real estate as long as the trailer hitch is still attached. So if you ever go see a trailer park in Florida they have very elaborate installations - I mean these things are big homes - but somewhere peeking out underneath the rose bushes is the trailer hitch. And the fact that there's no wheels any more and it's on concrete footings and so forth, but there's still a trailer hitch and the law identifies that as a mobile home and therefore not subject to real estate tax. And so, in any event, obviously, the community would like to discourage perhaps mobile home parks, and the fact is that Madison does a very effective job of that. We have a very detailed statement of how mobile home parks are to be designed and where these kinds of things to be located at, near to and so forth. But I will defy you to find any spot in Madison that would meet those criteria. And so, as a result, we have not had any new mobile home parks in Madison for a very long time. Technically you can do this but practically you can't find any spot that would qualify. Large lot zoning, on the other hand, is one way in which you can encourage only expensive homes to be built with high tax bases and essentially expensive homes tend to have fewer children and older children and lower service needs and generally don't represent a welfare person on the community. They would tend to encourage suburbs or subdivisions which track the upper income yuppie and tends to encourage the lower income first time home owner who still has 3 or 4 kids to put through school, etc. and may in fact lose a job and need some service costs and so on in the peripheral community and keep the high taxpayer for homes.

During the days of urban renewal and even today there's a tendency to replace low income housing with luxury housing. You consider Chicago, for example, much of its urban renewal area cleared away the low income, low density types of housing that served a large part of its population and replaced it with high value apartment buildings to attract the middle class back to town because it provided a bigger tax base with a lower service cost and therefore more net revenue to the community.

Cities, obviously, waged war in order to achieve better fiscal balance. The way they can achieve that is to, of course, encourage the kind of investment which creates an increase in the ratable tax base with very little increase in the service charges to the city. To build a convention center, to build a new office building downtown, to build shopping centers creates, obviously, a high ratable tax base but doesn't necessarily mean that you're adding that many more citizens that have social problems or kids that go to school or the other types of expensive services that would be required of the community. And so their growth strategies tend to be what we would call fiscal zoning - attract those kinds of property which increased the ratable tax base faster than the service obligation of the community so that there is surplus revenue available to help finance their existing obligations and hold down presumably the growth and the mill rate for the voting citizens.

Public land use decisions must also be always made to concern, what the impact of a dollar of public expenditure will be relative to the tax base. Madison for years has had that kind of war going on. For example, at the time that the City was considering creating a performing arts center, at one point there was a very elaborate plan for a Frank Lloyd Wright designed facility down at Law Park on the lake shore. All of the area around it was already owned by public facilities such as the state office building, the city Madison Park and so on. There would be no immediate impact on tax base at all. One of the more interesting aspects of putting the city's performing art center in the old Capital Theater on State Street was the fact that by creating that kind of activity downtown, creating that kind of pedestrian activity, it generated a whole series of restorations in terms of restaurants and shops and so forth in that middle sector of State Street which didn't get direct benefit of the student area down closer to the Lake Street intersection and so on. And the result was, therefore, that for every dollar of public expenditure that went into the Capital Theater project, you've probably got at least one dollar of additional tax assessment base around it with which to help fund the deficit operations of the Center. In other words, you want to use your public money to stimulate additional private tax base. Use it as seed money, as it were. The location of Truax - the location of

MATC - at Truax in the middle of relatively low density value land or public land, in that case. There was really nothing to help the tax base of Madison if it hadn't been located along the eastern Washington Avenue site that was proposed downtown. It would have been supported obviously in the rental units in the downtown area and supportive of the shopping is downtown, the convenience foods and all the other types of services that are required by students and you would not have had the rate of decline in downtown Ismus real estate values that were reported, for example, by comptroller Riley about a week ago to one of the Mayor's committees. So you have to really begin to look at public knowledge in terms of their ability to generate equal amounts of private investment and, as a result, ratable tax base.

Government support of new towns can occur, obviously, from time to time, when the government chooses to add government installations to the site and so forth. Some time ago, as a result of the Great Bong Bob __________ was seen in Kenosha County, a blue ribbon committee of economists and land planners and so forth, determined that the Bong Air Force Base should be converted to a new town that would take advantage of this huge two mile long runway to become a tech center really to the aeronautics industry and the light aircraft industry. And perhaps, also to attract other firms to plant sites where those firms were dependent on air transportation or the ability to move executives from one plant to another around the country and so forth. And just as they were starting to bid for and attract a developer of the new town, Racine and Kenosha suddenly woke up and they said, "Wait a minute, if we had a new town on our borders that has only the best of the industry and can leave all of the welfare problems and the old obsolete infrastructure and the old plants behind, who's going to move there? The folks in Racine and Kenosha are going to move there and leave us with a major problem." And so at that time we had Senator Mulenaro (?) from the Racine, Kenosha district who was, perhaps, one of the most powerful state senators we ever had - chairman of the finance committee - and he with a single stroke abolished the Bong Air Force Committee who had the title and the power to market this project as a new town. And he got the D & R to come in and announce that this was very precious natural cover for quail and pheasant for folks that like to go tramp in the woods and so forth and abolished the whole new town concept. But the obvious thing that was happening was that government was going to subsidize stripping away the best taxpayers out of the adjacent community and, in a sense, make the tax problems of Racine and Kenosha much worse than they were.

Another aspect, of course, is what can we spend public money on to stimulate tax base. And we run into a certain amount of demagoguery from time to time. For example, let's assume that one of our problems in downtown Madison is that we don't have enough yuppies living downtown in a high income apartment building to support a better class of grocery store and support better convenient shopping and so on. And then if we could have more residents living permanently in the downtown sector we would have a better balanced retail base and service base in that area. Well, what does it take to get folks back downtown? Well obviously we're going to have to be able to provide apartment house sites at a reasonable cost to developers that's competitive with that raw corn field out on the edge of town. And one way to do that would be for the government to acquire or the city to acquire, let's say, a square block of land along the lake - a number of lake lots. And let's assume for that moment each of those by the time you've torn down whatever was there and cleared the site and so forth, it might cost $3,000 per room for an apartment or $3,000 for say a one-bedroom apartment. These old numbers here at $3,000 are about half of what they are currently. You'd have to pay about $6,000 a unit for land and you'd pay about $44,000 to build a one bedroom apartment. For a total cost of $50,000 for a one-bedroom. $50,000 apartment will produce in terms of real estate taxes about 2.8% per year which is slightly less than $1500. Fifteen hundred dollars revenue to the City of Madison for only four years. We'll give them their $6,000 back, you call it 5 years and you pay the interest on the money as well. Not a bad investment if you've attracted a new household back downtown with their retail spending power and with their obviously proprietary interest in shopping and enjoying and making use of downtown resources. But can you imagine what our city council would say if you were giving the developer a check for $6,000 for each apartment unit that he built downtown for folks that had income of, let's say, more than $40,000 a year. Such human cry you would never hear. Why are we subsidizing the rich etc. Well, for one reason, we need the rich to support all our other stuff and if we can trick 'em into moving downtown here and rely on their general inertia of not wanting to move again for awhile, why then we'll have created a customer for all of the other amenities and so forth that we would like downtown. But we got a little political viewpoint about who needs help and how do we provide that help and so forth in the way. And as a result, we can't do that. We can't bribe the developers of upper class apartment projects. Instead, we can bribe only those who want to develop homes, let's say, halfway homes for the mental ill or those just coming out of prison and so forth. And everybody says fine, "I'll live in the suburbs and you put them downtown." And then, as a result, nobody else wants to move downtown. And, nevertheless, our value systems are such that socially we feel that we can subsidize those who are down and out without necessarily subsidizing those who have choices and those who can afford their choices up to a certain point. So we don't look at it as a land use issue at all, we look at it as a social equity issue and the result is that, in fact, we get an unfortunate social consequence.

To recognize the fact that the community has a long term interest in the tax base, we have developed one type of financing called tax incremental financing - TIF. It's really a two stage process. We first identify an area of one or more square blocks that is termed to be blighted. It's in decline, it's in decay for one reason or another. And we make that a redevelopment district. A redevelopment district is then generally in the jurisdiction, at least in Madison, of what we call our community development agency, which really houses all of our progressive activist kind of functions for urban renewal. They can condemn certain parcels to reassemble into larger parcels, they can help finance and subsidize developers that would like to come into the development project. They can bring to bear most of the city resources as part of that development area. Within that redevelopment area they can also create this tax increment finance district. T.I.D. is the district, a TIF is tax income financing the project. The first thing they would do in that district is determine the current assessed value as of a given date. Each of the individual properties obviously has an assessed value they would add those all up and that's the base. To the degree that they can stimulate new development that will increase the base, over and above the base, the tax revenues that will be generated from that increment will be the burden to a special trust fund. So let's say the value of the block as it stands, is $500,000. But if they are allowed to build a new office building, whatever, it will now be $2.5 million. The 2 million dollar increment means that there will be what? - a mill rate of 2.8 per thousand - $56,000 a year additional real estate tax revenue. That $56,000 instead of being distributed among all of the folks who have an interest - the school board, the county, the city etc. - will all go in a trust fund and be available to amortize a bond issue and that bond issue proceeds can then be used to subsidize the project that's going to create that increment. A million dollars of assessed value will create approximately $150,000 of bond value. So if we have a 2 million dollar increment, we have $300,000 bond value, we can use that $300,000 to assist that project any way that CDA chooses to do so.

Now, originally, the presumption was that those funds would be used only for public improvement. We'd improve the roads or the sewer or we'd extend a new water system to the area or whatever was needed - maybe do street lights or whatever. Then it was decided that we could also help subsidize it by what are called land write-downs. Let's assume the developer says, "Gee, I'd really like to build that project but I can't afford to pay more than $300,000 for this particular piece of ground and the seller wants $600,000. The project won't work from a numbers standpoint if I pay $600,000." The community will say, "All right, tell what you're going to do. We'll take the property by eminent domain, pay them $600,000, sell it to you for $300,000 and we'll recover our loss out of that $300,000 TIF bond." Called a land write-down - provides an incentive for a particularly preferred type of development on that block.

A third use for those kinds of funds might be simply to provide additional financing for the developer. The developer says, "Gee I need a million dollars worth of financing and they want to charge me, say 12% interest and I can't pay 12% interest. I can only pay 10% interest." So the community says, "OK, tell you what we're going to do. We'll loan you $300,000 at 1% they can loan you the other $700,000 at 12% and the average rate of interest will be exactly what you can afford." So they provide assistance in terms of financing. So there's a large number of combinations and ways in which the city now can be involved in the financing or assistance to the project. Called tax incremental financing and it's about the only way in which the community can, on its local resources, subsidize preferred development in an area that needs, or has been determined to need redevelopment.

Other states have become even more sophisticated than that. Minnesota, for example, doesn't even have to sell the bonds. They can simply put the money in the trust fund and then the trustee helps pay the mortgage. So, let's say that you build an apartment building and the FHA says well, gee, the income isn't quite enough to cover the loan. You need to build a project. They'll say, "OK out of $56,000 the trust fund will pay $30,000 a year for the first 15 years to amortize the mortgage." By that time, inflation will have moved the rents along to a point where the project can carry itself. So there's lots of different ways in which to use a TIF, but what it really represents is the ability to divert tax roll from a project, is the time of equitable ownership. And the TIF goes as far as we have gone yet to recognize that communities have an equity interest in a property to the degree that it can divert tax flow to get benefits. One way of diverting that cash flow is by, in effect, rediverting the real estate tax to the properties, per se.

The second way is called exaction and that's simply a fee charged to the developer in exchange for his building permit. And that money is then used. For example, in Boston and San Francisco, you want to build an office building, for every 10,000 square feet of office building that you're permitted to build, you've got to provide an apartment downtown. So that you create places for the workers to live downtown at the same time you create more places for workers to work. And that's called an exaction or fee - again, diversion of your value created by the community's cooperation in issuing the permit to advance or subsidize, as it were, another land use objective of the community.

OK we'll quit. See you on Monday.

First of all a number of social announcements - the exam will go forward on Wednesday as scheduled and I believe there will be a second class room for the exam on Wednesday? It will be posted on the board in front of our room and so forth. Question: Wednesday of next week? Chief: Yes, it's Wednesday the 1st - April Fool's Day, right? Yes. That's certain. Madness there somewhat!

Also, the Real Estate Club will meet this Thursday evening at the Union and our guest is Brad Venkowski, one of our alums, who represents Urban Land Interests. And they have, you've probably seen in the paper, they're doing a number of things around town including the Penney's building restructure - just got an option on the Emporium. He'll be talking about targets of opportunity for the small town developers. And his little firm has done very well, Tom _____________, his partner and he are both out of our master's program and have tended to work the small towns like Madison and Warsaw and Waukeesha and other major metropolitan centers of that sort and so he knows whereof he speaks and will be talking about targets of opportunity for the young developer in a small town. And that will be on Thursday. And we'll also have an announcement at that time of a one day field trip to Milwaukee for those who are not luxuriating this by going to Washington DC with the Real Estate Club. That'll be this Thursday at the Union. The room is always posted on the events of the day because they never tell us until morning of the day where they're going to be and it'll be at 7 o'clock, this Thursday.

I'd like to pick up and complete our discussion on the mortgage briefly and then go on into the interest and structure of mortgage lending. And at the very bottom of page 2 of your one-page hand out from the previous thing was looking at the mortgage as a risk management instrument.

Risk, as you've probably heard us say before is really the variance between your assumptions and your realizations. The difference between your pro forma and your actual historical accounting feat. And the mortgage is a magnificent document in terms of society's ability to allocate risk in the future of long term income, and to my modify that instrument to adjust to newly perceived risks. The original premise of a mortgage was that whatever the amount of the debt, it was adequately secured by the property it was pledged. And so primary concern was on the collateral value. What was the asset worth, if we lent a conservative loan, the value ratio of that, say 50%, that they did in the '20's. The premise was even there was a great deal of price fluctuation in the real estate it was never so bad that you couldn't sell the property for the principal who the interest had accumulated and any charges involved in the process of collection. And, therefore, the primary emphasis was always on collateral. Obviously, the collateral itself has a certain number of assumptions. One, of course, was is the title marketable? And is the property located where it's supposed to be? And has it burned down or blown away before we get a hand on it and so on. And so really the whole closing process of a mortgage became obsessed with weighing off the risk on institutions that were specifically designed to handle a part of the possibility of variance. So you went to the closing and the first thing that was presented was a title insurance policy that said that if the Indians can reclaim most of the eastern state of Maine, we'll give you your money back, etc. If there's any title flaw as you discussed when you're looking at chain of title, why the title insurance company will indemnify the lender for any loss that was a result of his not being able to acquire marketable title when the time came. And then the surveyor went out and he was bonded and he said that the property was properly situated, the building was set back according to the law and nobody could make you move it and it hadn’t flopped over onto the lot next door etc. as is often has occurred. And, therefore, if he’s wrong, his bonding company will indemnify the lender for having relied on that surveyor. And then the property insurance guy comes along and says that if the property burns down, blows away or blows up again we will make the mortgage lender a specific named insured under the policy. And, indeed, they developed a unique endorsement to the fire insurance policy called the mortgagee clause that says no matter what the insured does, you as a home owner to destroy it or even burn it down himself, the lender is, nevertheless, covered. So if you open up a fireworks plant in the basement and blow the house sky high, the mortgage lender would be paid even if the owner of the home was not indemnified under his policy under the circumstances and, indeed, might be sued by the insurance company for having to pay off the mortgage lender. But he mortgage lender had an iron-clad, nonbreakable insurance policy so long as he was willing to pay the premium that the owner of the building didn’t. And then finally, of course, the ultimate development was something called mortgage guarantee insurance which, in effect developed here in Wisconsin at the MGIC in Milwaukee, which said that if you don’t pay as a borrower, the lender will be indemnified by the mortgage guarantee company for the amount of principal, interest and collection charges that were due. And the mortgage guarantee company would then take the risk of being able to sell the property for the amount of money due or for, at least, recovering the large part of it. And the variance is on the collateral from that viewpoint.

As we mentioned in the previous lecture, FHA, Federal Housing Administration, and the federal government began to turn that emphasis around until we're really actually concerned with the asset. Why don't we lend people 90 or 95% of the asset value and put the primary emphasis on their income - their ability to meet a monthly payment over long periods of time - 20-25-30 even 40 years. And, at that point, the underwriter becomes concerned with your job skills and your job history. What kind of talents do you have that make you employable or not so employable - what's your family situation - if you're unskilled with 14 kids, you're not a real good risk, you know, for a mortgage, sort of thing. And, indeed, they began to modify the rules. How much of a life income should we include in the family income. And, how much of your commission sales should we include when you have fairly erratic income. And gradually the regulations began to evolve which became much more generous and recognizes all sorts of family incomes and all types of variation in that income because of commissions and bonuses and one thing and another that might cause it to vary. By the same token, they began to may realize that there were reasons for upset on that as illness or accident, perhaps unemployment and, as a result, what kind of insurance programs do we develop for borrowers that would inflate the income? And so now we have decreasing term life insurance which pays off the mortgage if the wage earner dies. We have illness or accident it makes the mortgage payments while the borrower is incapacitated. And we even have unemployment insurance privately available for certain types of skills and so forth as well. And now the lender is beginning to look into the economic base. What kind of community do you have in terms of assessed IT types of employment and how volatile or erratic is that and vulnerable to economic upset and so on. And we're becoming much more concerned with looking at the stability of income flows to the borrower much less in terms of collateral values because it doesn't matter what the collateral's value was when you bought it. The problem is what happens if your company goes out of business and there's no jobs for anybody in town and now what do you do? And, as a result, they're becoming much more skilled in that.

But they realized that many of the biggest losses taken by mortgage lenders in this country since World War II have nothing to do with either the property or the borrow but, in fact, reflected the volatility of 1) the interest rate and 2) the declining purchasing power of the dollar. That if you lent money on the 25 year basis, a dollar of principal that you got back in the 25th year didn't have anywhere near the purchasing power that you had at the time when you made the loan - and that you had actually lost ground in terms of growth of purchasing power. And to attack both of those problems, we're beginning to create very imaginative contracts which 1) allow variable interest rate contracts rather than fixed interest contracts. Contracts in which the interest rate is indexed to the cost of funds at the Savings and Loan, and provide a spread and are adjusted every six months or a year so that suddenly the Savings and Loan isn't locked into a contract at 6% interest when the market is 12% which has the same impact on the mortgage value as the result would be on a bond which had a fixed coupon rate that was half the current market rate and, of course, most of the bond would have evaporated in terms of its resale or market value. So we're beginning to look at ways of controlling the interest rate risk. One way is to have relatively short term loans again. We have a lot of loans that are amortized in monthly payments as though they were a 25 year loan but they matured 7, 8 or 9 years - or you have a multiple tier market. I was getting close the other day, for example, on refunding a shopping center in which if I wanted to go for five years, I could get 8 1/4%, if I wanted to go seven years it was 8 1/2%, if I wanted to go nine years - 8 3/4%, if I wanted to go 15 years it was 9 1/4%. But for the same dollar on the same shopping center, depending on how short a term I wanted, reflecting obviously the lender's expectation that interest rates were going to sail after we got out beyond six or seventh year from where we are presently. And so, as a result, lenders are beginning to become much more sophisticated in their layoff of the interest risk in a transaction and pushing it back on the borrower. Tremendous amounts of wealth were created for the average home owner during the 60's and 70's when they were able to borrow in the early 60's at say 7.5% and then inflation came along at a rate almost equivalent to that so the real rate of interest they were paying was maybe 1.5%. The saver who stayed at the savings and loan and continued to get his little 5% dividend really got ripped off in terms of negative purchasing power and a negative real deal. And the value of all of that shifted to the borrower. And so the premise that you could make a tremendous amount of money owning a home with a lot of debt on it was true in the 60's and 70's. But as that lender began to perceive what had happened and lender's aren't very bright. They don't seem to perceive that very quickly you know. And they get pounded with that for about 20 years and finally the little light went on and they said, "Hey, we really need a variable rate mortgage for a long-term commitment." And for a little while they did that? And now they're right back to making the same mistakes they did before in order to compete for loan deals -

they’re making it 8.5%, 8.75% 20-year deals on single family homes and they get killed again. Because, obviously, the interest rates aren’t going to stay that low. But bankers by and large aren’t the brightest folks in the world. If they were, then obviously they would be on the equity side. And so, nevertheless, the ability to begin to handle interest rates has improved. And now what you can do is speculate on interest rates by using the commodity market. Commodity market now uses Fannie Mae and Ginnie Mae certificates as a way of hedging interest rates over any where from 1 to 2 years term. So let’s say I was a home builder and I wanted to start a subdivision presently and I would be delivering houses starting six months or nine months or a year from now and I want to be sure that my buyer doesn’t have to pay more than 9% interest rate on a home because then he has affected demand to pay the price for my particular product. I can hedge the availability of home loans at 9% a year from now and build that cost of that hedge right into the product of my house. So that as a result I can guarantee my buyer that if he meets the credit department, and so forth, he will enjoy a 9% loan no matter what it is in market rate a year from now or 18 months from now and so on. So we’re getting very, very clever and beginning to hedge the volatility of the interest rates that are available to the mortgage borrower so that we can continue to make longer term plans as developers and builders and long term investors. We still can't do a real good job of looking down 5-10 years from now and hedging that. But they're even instruments now for at least reducing the damage of a rapid runup in the variable interest rate contract that you may be using to financing your project. And some of these deals get truly sophisticated. There's a swap across international lines, they have Euro-dollars or Japanese dollars and so forth. For example, the hot deal right at the moment with General Electric Credit Corporation is to finance your $20 million office building or $50 million office building by getting the Japanese to put up the larger part of the money at 6% constant since the Japanese cost of funds is about 4 - a 2% spread as far as they're concerned is wonderful and they don't plan taking the money home so they don't look at the yen risk at the moment and so they'll come in and say, "Well, Gee, out of that $50 million office building we'd be happy to have say, $30 million or $25 million." So GE says, "All right, we'll make a first mortgage for $45 million and you take two-thirds of it or $30 million and we'll put up the other $15 million and subordinate our claim to yours." So as far as the Japanese are concerned it's just like more equity in front of their loan. So they have a $30 million loan on a $50 million building and GE has the balance with, say, another $15 million but they put theirs on a variable rate and cover it with commercial paper. In other words, they'll buy all their money in the commercial paper market. They get a huge spread right at the moment on it. But even if it sails on them they have an adjustable rate. So, in effect, the borrower has some protection against the interest rate ailing on them, because the Japanese are willing to go 6%, let’s say, for 10 or 12 years on their part. GE has a variable rate on the second mortgage but the blended rate is still significantly less than the American market for a $45 million loan. So what they’re doing, in essence, is operating internationally to find the capital with which to finance major commercial buildings. In fact, even the new First Boston Bank is, in effect, collateralized with Euro-dollars that they had on the reserves over in Europe which in turn is banking a loan of Japanese yen, which has then been converted to a bond in this country and that’s how they’re financing the bank. So they went to Europe, back to Japan and then into the New York money markets in order to finance the bank building at a constant at which they can afford. And all of this built around perceptions of the interest rate and the volatility of the interest rate in different parts of the world.

Ultimate purchasing power of capital has lead to a whole series of hybrid type loans. SAMS are called share appreciation mortgages. And for a while out in California, particularly during the period of inflation, home prices were rising as much as 1% a month and yet the average guy couldn’t afford, let’s say, an interest rate of more than 12% or 13% on his home. So the lender says, "All right, I'll tell you what I'm going to do, I'll make you a loan at 12% and then every five years we're going to make up the difference and you have to pay me 50% of the appreciated value in your home." So if you bought a home for $100,000 and it went up to $150,000 in five years, you would have an appraised value at the end of the five years. They would say, "All right, it went up $50,000, you owe me $25,000". Now if you had let's say a $90,000 mortgage on a $100,000 house, at that point you would have to refinance with the same company. They would add the $25,000 to the $90,000. You would now own $115,000 against a $150,000 property. But in the mean time, his monthly payment was something that he and his family could afford. And he has to share the appreciation. We're valuing two things, 1) it recognizes the changing value of the principal dollars that have been advanced because of inflation eroding the purchasing power, and 2) it provides additional compensation over and above the contract interest rate for the lender in order to compensate him for the fact that there was an opportunity cost of locking himself in at 12% for 5 years when, in fact, interest rates probably sailed higher for them as a result of inflation. So the real rate of return to the lender is higher for both of those reasons.

On the commercial side, we generally don't call them share appreciation mortgages, we call them participating mortgages. Participation mortgages mean that the lender not only gets an interest and principal payment which will amortize the loan over, let's say, 25 year's time. But in addition, gets anywhere from 10% to 50% of the cash throw off from the deal. In other words, the cash available after the mortgage payment. And, in addition, gets anywhere from 25% to 50% of the funds over and above original cost realized on sale or as a result of refinancing the project at some point in the future. So, in effect, the mortgage lender has become a creditor on the down side when all the benefits of the mortgage foreclosure laws for collection of his principal if things don't go well, but he's also a partner on the up side. And, as a result, can offer something less than the nominal market rate of interest because he feels that his real rate of return will be greater as a result of his participation. Both finally have evolved into what are called convertibles. A convertible starts out to be a mortgage and ends up as being the owner. For example, let's assume that I'm a shopping center developer in Seattle and I'm going to build a $10 million shopping center and it's going to cost me about, let's say, $8.5 real dollars to build and about a $1.5 million increased value in the center. And I was going to borrow $8.5 million to finance the project. So, in effect, I was going to mortgage out.

Somewhere during the development process - something went wrong. Either it took me longer to build it than I thought or there was cost overruns or whatever and now I owe ten and a half million bucks and I can only borrow $8.5 million from my friendly traditional mortgage lender and I got a big problem - 1) it's embarrassing and 2) it's called bankruptcy. And I've put a lot of work into it, it's basically a good center it's just my timing was wrong. I really didn't expect it to take quite as long as it did and the interest rate got away from me or I had an indexed construction loan and the interest rate soared on me while I was under construction and so the whole thing's cost me more than I expected. So I go to my friendly General Electric Credit Corporation and I say, "Tell you what I'm going to do? You lend me $11 million and I'll give you all of the net income from the project for the first five years." And let's assume for the moment that the project is 90% rented at the time I build it. And then I'm going to renew the leases and at the end of the tenth year, you have the right to either take over the ownership of the center to some proportion or call the loan and make me repay it. Now, we will calculate how much you own of the center by determining that your overall annual yield should be, let's say, 15%. But the net income is only going to provide you about 10%. So the questions is really going to be; How much equity do I have to give you in the 10th year to make up for the count down and loss of 5% a year on your money while we wait for it to appreciate? And you can work out a formula that will determine what the future value share of the center has to be, to return the 5% interest annually that I can't pay now. So far so good? That's called a convertible.

Now, why would anybody want to do that. Well, 1) the developer gets to keep his center and true, now he now owes $11 million on a $10 million center, but he picks up first of all because he borrows more than it costs him - maybe a $500,000 development fee. So he's got money in his pocket for having to gone to all the work of building the center in the first place, 2) he continues to operate the center and that's worth 5-6% management fee, 3) he gets to release the center as the leases come due at the end of the 3rd year and the 5th year and so forth and to the degree that he can lease it aggressively and raise the income, he will raise the value. So that the value may be considerably greater than the $11 million he started with at the end of the 10th year after he's gone through 2 or 3 cycles of renegotiation on the leases. So he's getting the leasing commissions in the meantime. And to the degree that the income eventually committed represented 90% occupancy, if he can get the other 10% occupied then that also falls through to his benefit as well. So there's a whole series of profit centers there that he's perfectly willing to keep and gamble that he can maintain a significant percentage of interest at the end of the 10th year. But notice how we're beginning to divide up the profit centers in the real estate. The operating profit centers are still going to the developer because that's his game. The lender doesn't want anything to do with leasing and management and all of the other elements that are inherent in day-to-day operations. On the other hand, he is interested in the long term appreciation of the asset if, for any reason, inflation causes it to go up or the center is well positioned to take advantage of gradual growth in the neighborhood of additional households and a stronger retail market and so forth. They can participate in that. The long term gains will be shared by the developer and by the lender. And the developer can help himself a great deal by creating value through skilled management. The more he can appreciate the property, the less he has to give away percentage-wise at the end of the 10th year as part of the conversion process. So notice we're getting very, very sophisticated in the way in which we begin to divide up what we would call the ownership position versus the debtor's position. In fact, in most deals today you really can't figure out whether there's a clear creditor here, or debtor or whether they're partners and joint venture partners each taking their percentage in a different way. And remember it's very important for the developer to retain title so that he get's the tax benefits of the real estate. A pension fund, for example, has no interest in the tax benefits at all. So it's important that they have to structure their deals in such a way - that they appear to be creditors and the other guy appears to be the owner so that the fellow who appears to the owner gets the benefit of the tax losses. And he's willing to give away, obviously, a certain percentage of points to do that. Under the previous tax laws - it was worth about 200 basis points to be the owner rather than the borrower if you wanted to take advantage of the tax perks. Under the new law it's not so at it. OK.

At any rate, the mortgage instrument is rapidly evolving to recognize the shifting perception of risk. Once it had to do with property value, then it had to do with the income power of the borrower, then it had to do with the volatility of the interest rate. More recently, it's had to do with the declining purchasing power of the dollars advanced by the lender. And, obviously, there may be other risks as well. If you're working in California you have seismic risks and you may want to lay off one of your loan portfolio and trade it for properties in Wisconsin where they're less likely to get shaken down and fall into the Pacific. And, there may be other forms of technological risks and sociological risk as well. There's a whole problem in terms of long-term lenders beginning to look at old cities like New York City and you're saying, "Gee, can they really finance the rebuilding of their infrastructure?" or are they eventually exhausting their subways and their sewers and their water systems to a point where they can't afford to rebuild them - in which case obviously it's not going to be very pleasant to be there or it's going to be very expensive to be there as they assess all of the building owners. And can they pay for their social problems? Do we want real estate in which the only access is through Harlem where there's going to be a million people who are pretty sore about things and may take to pouring boiling oil through the grates over the subway and so forth. And those kinds of things represent some really long term mortgage threats and what do you do about those kinds of risks to the property, and so forth. So, at any rate, the mortgage instrument itself is beginning to become a very sophisticated risk management agreement in which a variety of risks are laid off and subdivided among the various parties to the agreement for a fee.

Now let's shift over and take a look at today's handout and I see that they have been folding it backwards so that the top page should be the last page. So we'll start on page 2.

In the last 25 years there's been virtually a revolution in the institutional formats by which mortgage money is accumulated and pooled and then made available to those who want to borrow to buy real estate. Each of these institutions and the newer institutions that are coming on-line have five basic characteristics however, on which they can be compared. And they differ among themselves on those five elements and I think it useful for you to have some sense of the subsystems which go together to make up a particular kind of lending institution. The first is what we'll call a marketing system to acquire savings. How do you acquire savings? For example, the savings and loan associations as long as Regulation Q was in force were always given a slight edge in the permissible dividends that they could pay savers relative to banks and mutual savings banks. And, as a result, they were relatively passive in terms of how they get people to come in. They were tied ethnically to a neighborhood or they were tied in one form or another to, oh, savings plans, you know, the Christmas savings plan - IRAs and various other kinds of payroll checkoff type of plans or simply establishing the savings habit by getting the little kids to take their nickels and dimes in when they were smaller and getting a pat on the head from pop and they gradually getting in the habit of accumulating down at the savings and loan without a great sense on whether they were getting an appropriate rate of return on their money - it's almost a social institutions as compared to banks, for example, who are more aggressive about pursuing certain kinds of accounts than others or compared to credit unions which have a whole different type of volunteer camaraderie about that creates a banking service for a specific group of employees and so forth.

Next is a marketing system to compete for loans. Now, savings and loans, by and large, were required by law to lend on single family homes. They talked to the local home builders, tie themselves to the local realtors and generate a large portion of their loans simply from the normal operation of the realtors and builders in the community. On the other hand, if I'm a life insurance company situated in Boston I generally have a network of what are called correspondents and these are mortgage bankers who generate a loan and then try to sell it to me on the basis that it meets my portfolio requirements and so forth. A third type may have their own agents out pounding the streets such as General Electric Credit Corporation which isn't a bank at all, but really is a subsidiary of General Electric, using General Electric's commercial paper borrowing capacity to finance real estate lending operations very successfully. Last year they financed five billion dollars in real estate and made $500 million in net profit and was the third most profitable division of General Electric Corporation. So there's a whole variety of different kinds of institutions. Notice, they don't compete for savings at all. They don't want anything to do with savings. They're simply using the credit power of GE's corporate surplus to operate on a very favorable rates in the commercial paper market and then structure their deals to spread between the cost of funds in the commercial paper market and whatever they can lend for on a specialty basis. And they're competing for loans by doing very special customized hand crafted deals rather than a cookie cutter deal like the savings and loans.

The third element is what we call transaction preference systems. There are some lenders that will not lend on hotels and others that will specialize in hotels. And some will say I want to loan only from half million to $2 million and they've got to be in 3rd or 4th tier cities such as, say, Rural Mutual or American Family and, on the other hand, you may have Northwestern Mutual that says don't bother to call unless you're at least $10 million dollars and a building of less than 5 years in age, etc. etc. etc. So each type of lender competes, finds a niche based on a specification based on what it is they will lend on relative to their portfolio objective.

The fourth element is liquidity systems. Since all of them have to obtain their capital from somewhere, the question really is how long do they get to hold the capital? A life insurance company is really using the capital to fund long term life insurance commitments - between the time you pay in the premium and the time you collect on your policy may be 40 years. And, as a result, they can generally take long term positions in very big types of property and not be too concerned about the liquidity. Now they found even to their own regret that the life insurance companies have liquidity problems when they offer life insurance loans at 5% interest, a lot of people go back to the well, take out their savings and do something else with it so that even life insurance companies may have liquidity problems from time to time - but certainly not anywhere near that of say a savings and loan association where each depositor believes he has a demand account and can get money out any time he wants - even though they're committed to 25 year mortgages. So they have to have some way to dispose of that. One of the reasons for the crisis of crash in the 30's was there was no way for the banks and the savings and loans to, in fact, get out from under the mortgage commitments they had made, return to cash, and therefore be able to pay out cash to the depositors as they wanted. So one of the major things that has changed is what we call a secondary mortgage market. Most lenders today don't retain the mortgages they make, they sell them into the secondary mortgage market which means that, in essence, people invest in mortgages who have nothing to do with the making of them or the servicing of them. They simply hold it as a passive investor generally in large pools. And they can buy different ways of doing that - they can buy bonds which are collateralized by mortgages, they can buy into collateral trusts which are really a participation certificate in a pool of mortgages - they can buy Ginnie Mae certificates and so forth and so on. But, in any event, the liquidity system has become a key innovation in our institutions.

And finally the safety system. Obviously, within a savings and loan or a bank you have the Federal Savings and Loan Deposit Insurance Corporation willing to give you as a depositor up to $100,000 of your money back if the institution should fail. Now this is one of the interesting weakest links currently in the system. The Federal Savings and Loan Deposit Insurance Corporation currently has about $2.5 billion dollars in reserve but unfortunately the savings and loans have been able to lose about $25 billion between them as a result of making poor mortgage loans and Congress is expected to have to step up and fund that. Since they don't want to do that and haven't done it as yet, the savings and loan deposit insurance corporation really isn't a very good piece of security and there's about 400 savings and loans in the country that are already busted that are being kept alive by creative accounting. My good friend, Tony Downs said there's GAAP accounting generally accepted accounting principles there's RAP accounting for regulatory accounting principles and there's CRAP which is creative real estate accounting for savings and loan associations. And, you know, as a result the safety system is suspect. Currently in the case of the savings and loan association although not necessarily in terms of the banks. But we begin to look at each one of those and decide whether the various types of lenders, you know, need to be concerned with that. The safety system, of course, dictates quite often what they can lend. One of the reasons GE Credit Corporation can be so creative is that they're a non bank bank. They don't have to be worried about depositories and they don't have to be worried about the consumer and so forth and so essentially the only safety system for them is the fact that General Electric isn't going to let them go down the pipe unless General Electric decides that, you know, that that's the cheapest thing to do at the time. And the only people that would lose would be the commercial paper folks and the general feeling is they're smart enough to look after themselves so we don't have to provide any government guarantees to them. So that where you want very aggressive, very creative lending, you obviously don't want a federal regulatory agency looking over your shoulder who is ultra concerned with the consumer and so on.

Now, until World War I there was no federal policy relative to real estate credit at all. Ironically, while we provided free land all during the 19th century and so on, the idea that banks could make mortgages was considered an optima. In fact, if you remember President Jackson and Nicholas Kidwell or something, the buy who founded the First National Bank in the U.S., pardon? Bittel, there we go, yea, Nicholas Bittel - and if you'll recall Jackson wanted him to make mortgage loans to help the pioneers improve their properties and their farms and so forth and Bittel said banks had no business making mortgage loans at all - refused to do so and as a result, Jackson wouldn't renew the second term of the First National Bank and that's where it lay. There was simply no national concern for real estate credit. Instead, there was a whole series of little boos and bumps in which local mortgage banking firms served as intermediaries like local savings - invest them in farms and the development of local property - and in effect almost all of them got wiped out at one point or another as the euphoria of land booms and busts swept through it.

Immediately after World War I with its tremendous urban expansion we developed a group called the mortgage bankers industry and it was their function, really, to bring capital sources in the East to really develop the areas in the West - and they were the intermediaries. And they served as correspondents to the major life insurance companies and some of the major investment families throughout the country. And during the 20's mortgages became the blue chip investments for the widow Smith and the orphan's inheritance and the premise was that that was the most well-deserved rate of return. And that, of course, got dashed in the 30's and a great deal of skepticism set in about commercial mortgages. The other element that was unique about that was the German socialist tradition of creating populist tools of capital. Of having 25-30 families sit together and begin to save in a capital pool which they manage and raise the money in order to help each one buy a home in time. And this was really the beginning of our mutual savings banks in the cities and our savings and loan associations in many of the northern states. In a savings and loan pool were extremely effective in spreading the ethic of home ownership throughout the Midwest and the West as opposed to the tradition of apartment living on the East coast. And, by and large, we are very efficient and effective in terms of what they did do. It was largely a volunteer organization. It was virtually, almost a form of populist, socialism to counter the banks and the money managers. So the problem was that initially they were giving short term mortgages, low loan-to-value ratios, and the need to refinance often and when in the 30's economic conditions turned downward the savings and loans were not able to refinance - they needed to pay back loans that had been made from the bank during their heyday. And the whole thing tumbled. And investors lost confidence in the mortgage form all together and savers lost a tremendous confidence in the intermediary since they were no longer able to withdraw their savings. In Milwaukee, for example, a number of somewhat illegal fortunes were made by savings and loan pass books at 20 cents on the dollar. You could go down to Water Street and literally get quotations on each savings and loan every morning and a number of people - loan sharks - that were paying cash to the savers who had to have their money on 20-25 cents were potentially going out of town in Milwaukee and settled around the country as real estate developers in and tycoons. More than one had his start leafing old folks out of their savings and loan deposit books.

In the 1930's as a result, as we talked about the other day, there was a remarkable takeover by the Federal Government of the institutions - reorganizing them - creating one, obviously, the Savings and Loan Deposit Insurance Corporation and enhancing the Federal Deposit Insurance Corporation so that banks once again could make mortgage loans. We created the Federal Housing Administration to insurance to insure lenders who would make loans the government way - the long term, amortize, high loan-to-value ratio, single family home loan. And got most of the infrastructure in place in time for the boom that followed World War II. The proof of the system really was our ability to produce housing at a tremendous rate - from 1946 to about 1956, maybe a little longer 1966. And, in the process, government discovered some rather interesting things - that you could control what was built when you controlled the credit that was available to build it. And, as a result, government became very much involved, as did Congress, in providing special credit choices to certain constituencies that they wanted to assist. First we had housing for veterans and we had very favorable programs for veterans - both at the federal level with the VA program and at the state level with a second mortgage program to assist veterans in acquiring farms, small businesses, single family homes and indeed even four unit apartment buildings. And the veteran, therefore, was able to acquire instant capital at a time when he was really just getting his career back together again, his life back together again, and it meant a tremendous economic infusion because suddenly here was a whole class of individuals considerably more mature than they might have been if it hadn't been for the service, highly motivated to get on with their lives and have their own business, have their own home, and have their own farm and suddenly the government is providing capital at maybe half the price that risk capital would otherwise have been available for them and it really accounted for a tremendous take-off in our economy.

There was money for college students - virtually all of the dorms you live in were financed by special government loans that were made at the rate of maybe 4 to 4 and a quarter percent interest over a fifty year term and made it possible for universities and small schools as well to suddenly expand their capacity for the live-in student. Virtually every dorm here on campus was financed under those programs. One of the ways in which it worked was that if they made a four percent loan at obviously non market rates and non market terms, where were they going to place the loans. And the government created something called the federal national mortgage association, Fannie Mae, and then the U.S. Treasury would pump funds into Fannie Mae and Fannie Mae would use those funds under specific directives to buy those loans at par. So that Fannie Mae became a repository for non-market mortgages financed from the U.S. Treasury. As the loans were paid off, Fannie Mae collected the money and refunded them to the Treasury. So there was, in effect, was a direct infusion of capital from the national budget directly into specific submarkets of real estate.

Housing for the elderly was the next special group. We’re still involved in heavy subsidies toward elderly housing.

Housing for low income groups has come and gone under a variety of programs. One, we have the public housing program there in the 30’s in which the government provided grants directly to the city with which to build publicly owned housing. There was a brief period of time in which it was felt that the federal government could not exercise the power of eminent domain to acquire sites to build housing - that they would have to do that locally. And so we got into a format of creating some kind of local housing agency which had the powers for eminent domain and redevelopment would actually go and acquire the sites and make arrangements to build the buildings and operate them. And the federal government would then advance funds out of the federal housing program - part of them as grants, part of them as loans with which to build and operate those units. Initially the public housing project was extremely successful because essentially it required 1) that the people living there have some sort of job albeit a very low paying job, nevertheless, they had to have work in order to pay the rent and 2) they were directly involved in the management of the project and the residents that lived there helped maintain it. And therefore they had a proprietary interest in the project. Ultimately two things happened following World War II, maybe three. One, the National Association of Realtors fought public housing, tooth and nail, feeling that it was taking business away from the private sector, which was a lot of crap, but, nevertheless, that was their attitude. What they were really objecting to was the fact that if you have a square block that, let's say, had 40 buildings and 100 apartments, that was grist for the mill for the realtors. They could sell those buildings from time to time, they could lease those buildings, they got property management fees from those buildings and so forth. Tear that down, and you reduce the turf available to the private sector and, of course, the public sector came in and ran it. So they saw this directly as a challenge to the number of business opportunities that they had as brokers and so on. And so they chipped away and chipped away and chipped away at it and ultimately, they got to a point where they said, "Look, we'll provide housing and you provide subsidized rent in privately owned housing." And the public housing became a social thing where people who did not have jobs, who for one reason or another through illness, addiction, lack of skills, lack of education and so forth were allowed to come to root. And Gresham's Law began to go into effect. As the least desirable neighbors moved in, the more desirable, more socially responsible simply moved out and fled the public housing unit. That was aided and abetted by the liberals who decided that you could not evict a tenant who was breaking up the property or whose children were causing havoc and so forth without a tremendous legal battle and so they essentially lost control of the public housing project and the social stability that it really represented in the 30's and the 40's, and in the 50's much of the public housing disintegrated as a result of being incapable of handling the social problems that were being pushed down on it and left on it as kind of a residual of other programs.

The second element was a series of subsidized housing programs and we went through a whole series of them, which you'll learn more about in Real Estate Finance, but in essence it was the lobbies of the National Association of Home Builders and the National Association of Realtors trying to find a way in which public enterprise could get all of the fees and all of the profits and so forth, and somebody else would pay the rent. And that got to be prohibitively expensive and ultimately Nixon put a stop to the final program that was called Section 8 on the argument that we were committing too many billions of dollars of future government revenues to the payment of rents on those properties. That, in fact, the present value of the payments that the government would have to make, exceeded the original cost of the units. That we would be a lot better off simply to create the unit for free and not have to charge rents for the capital costs and go back to some sort of public housing and so on. And finally the government began to create housing for those who were displaced by flood, urban renewal, highly development programs and so forth. Now, the government found that they could bring all types of lending devices by which they can focus money on specific selected groups that have the political clout with which to get Congress’s attention. And we’ll finish up on this in the next lecture.

TA talking on whole tape don’t transcribe: First I want to drop down to ????001 detention fund. Grasskamp has already talked to us about savings account banks. You know there’s typical things we think of as far as institutional lending, institutional setting. Insurance companies would be another area of institutional credit. If you want to go to the large development ????003 you can always tap into an insurance company. But another growing area is pension funds. Pension funds typically have invested in stocks, bonds - some of the little bit safer securities investments. But now they're trying to increase investing more and more in real estate. And it is a large source of funding - extremely large source of funds. And in looking at pension funds, and what I want to talk about today is getting to be a larger and larger amount of FCC regulations. OK. Since the pension fund now - well, one way a pension fund is working and let's say that ?????011 pension fund. OK. The pension fund is investing those funds - these ???012 funds for their benefit of their retirement at some future date. OK. So they're not necessarily their funds. In essence, they're a trustee of those funds.

TA talking about depreciation. In 1981 ATRS came about and what happened is prior to '81 we were using a straight line depreciation and specifically it was a 40 year life. Then in '81 ATRS came about and it was an accelerated method so instead of just taking the same amount each year like you would on a straight line, ACRS allowed you to accelerate it or take a lot higher depreciation in the earlier years. OK. The big benefit in that is what? We'll come back to what we just did with time value of money. OK. You have larger deductions in these earlier years. What will that do to your taxable income in the earlier years? Increase it. So you have higher tax savings in the earlier years. Time value of money says well that's to your benefit. OK. As opposed to have those high tax savings later on. So you're going to give a dollar closer to today is worth more than a dollar further in the future. With the ACRS they set up a 15 year life. Then they went to an 18 year life,then a 19 year life was the most recent one.

A few more comments on the risk management lecture before moving on into the government regulation which was just handed out. And we were at the end of the back side of the page, we had gotten through layoff of static risk via the closing process and all, of course, very much related to the due diligence process in which any institutional buyer would attack each of the underlying assumptions of the real estate in terms of its engineering, in terms of its legal contracts, in terms of effective demand, in terms of its operating characteristics and so on.

Another area of risk management which is now just coming into vogue is the effort to transfer the concepts of portfolio risk control in stock and bond finance to portfolio risk control in real estate investment. Real estate does not typically have the usual beta and alpha factors that might be available to help you construct presumably a stabilized investment securities portfolio that has a degree of variance that is presumably locked in through your selection of stocks for their systematic and nonsystematic risk characteristics, but we are moving closer to that in terms of a number of techniques. And that's probably one of the hottest subjects around as more and more institutions move into real estate equity ownership as a dominant position in their investment portfolio.

First it's clear that real estate investments - equity investments in office buildings, shopping centers and industrial buildings and, to some degree, apartment buildings, have, in fact, produced not only higher rates of return in than security markets over the last 15 years, but, in fact, have much lower levels of variance in terms of the performance of the portfolio. So if you were putting it in terms of alpha and beta, they outperform the securities and, in addition, seem to be contra-cyclical to the securities market. So in order to stabilize or immunize your investment portfolio you really want to match real estate investments against stocks and bonds. For example the interest rates, of course, have a great deal to do with the value of real estate and as bonds produced lower and lower yields, real estate produces higher and higher yields since it costs less to borrow money to finance the same project as before. And, by the same token, real estate because of its ability to release and adjust rents to rising price structures during an inflationary period and so forth, tends to outperform common stocks who have less control over their market pricing and so on to adjust toward inflationary increases in cost. Very few corporations enjoy escalator clauses which say that any increase in my cost over a base year will be passed through to my customer willy nilly and the customer is locked in by contract to accepting that. Wouldn't that be wonderful if you were a milk producer and as the cost of feed rose, you could just lock that into the price of milk and pass that through to the consumer. It doesn't work that way in most markets. But it does work that way in real estate. And the tenant is forced to absorb inflationary increases in cost and because virtually all of the market is working that way, there is very little opportunity for him to select an alternative source of supply and avoid that inflationary pressure on his operating cost. Instead he has to pass that through in his legal fees and accounting fees and however else he charges for his services and product. As a result, real estate is now being seen as a significant stabilizing force in portfolio risk control. And more and more study is being done to find out which kinds of properties, in which locations, and in terms of what scale of operation provides, of course, the best immunization of a stock and bond portfolio against wide market swings in the securities market.

One last area of risk management in real estate which is just now getting under way is really looking at the long term scenarios of urban environs. What's happening demographically? What's happening institutionally within the communities? What's happening in terms of technology that may, in fact undermine long term values or may, in fact, be creating significant pressures for graphic increases in values at a point in the future. For example, it has been a long-time favorite to invest in downtown New York City in major office buildings - much foreign capital as well as institutional American capital has always preferred the $20-$30-$50 and $100 million dollar office building in downtown New York. Now their analysts are beginning to look at it and say, "Wait a minute, what has downtown New York done with its infrastructure recently?" They're actually just saving - they're not putting as much into repair and maintenance as is required to maintain the efficiency and operating characteristics of that tremendous infrastructure investment. What if the City of New York was to, in fact, go back and refurbish all of its viaducts and its highways and its sewer systems and its watering systems and so on? What would that cost? How would that be financed through the real estate tax system in terms of who could afford to do it? And obviously it would be the special assessments on major investment properties that would have to carry the load? What about communities with very poor education programs? In a country which more and more is concerned with high tech in terms of preparing young people for relatively high skilled jobs. Do you want to invest in a Louisiana or Mississippi which has the worst educational system in the U.S.? Could you get your executives to move their children into that climate? And more and more the answer is coming back, No. And more and more people are saying, “I don’t think I can afford to invest in New Orleans, simply because of the political corruption, the educational decline, as well as of course the shortfalls in terms of governmental infrastructure systems and so on.” And that’s a very imperceptible by gradual corrosion of values in those areas which may be predictable, which may be forecastable and therefore fall into our first risk class of let’s avoid the risk, let’s not invest in New Orleans. As soon as you start to what is called “redline” the investment, as soon as you in fact begin to say, “I won’t lend money for refurbishment of buildings in that area because I’m not sure that rents will hold up and be able to repay it.” Or, “I don’t think that’s a good place to put my long term equity money because the long term looks shaky or perhaps even will be declining.” You have a self fulfilling prophecy because, obviously, unless you have a continual process of reinvestment and further upgrading of the investment quality, it can do nothing but decline. And for areas to suddenly become tagged by knowledgeable investors as being of doubtful long term value, in fact, will bring about the very thing that they were forecasting. Now we saw that in residential areas where the savings and loan lender that said, “Gee, I don’t think I want to go into the core of the city with a home loan because that neighborhood is declining, it’s an old bungalow of 1890s style which has less than effective market ability compared to, let's say, to a new house in the suburbs and so on." As soon as they cut off those neighborhoods, those neighborhoods really began to decline because there was no ability for the owners to refurbish and upgrade and improve their properties. And the result immediately is a disimprovement of the properties and a fairly accelerated decline in a residential area. We're beginning to see that being speculated on in the commercial area and therefore the investment that is necessary to support real estate investment may be relatively oblique. It may not be doing your lobby over. It may be, in fact, having corporate leadership in refurbishing the educational system or corporate leadership in investment in the infrastructure of that community or perhaps corporate investment just in the perception of social stability of that community. And there are many future facts that make some of the older urban areas extremely doubtful as long term investment. And this long term cycle of risk in real estate is just now being perceived by the portfolio investors. They know that on a five to ten year basis real estate can outperform the stock and bond market in terms of its stability. There is less confidence that real estate can outperform stocks and bonds over longer periods of time in which social institutional corrosion of the environment on which real estate depends can begin to take place and manifest itself. One, as we've said, is the education system. Another, is the public infrastructure and the third, of course, is the rise of a underclass of citizens in the urban core. And this may be ultimately the final impact on long term real estate values in the older cities. One out of five babies today is being born to a nonwed, minority mother, who’s dysfunctional as a parent in an area in which the educational system has already collapsed in terms of its ability to teach as opposed to simply police. Fifteen years from now those people will be on the streets, alienated, disoriented, frustrated - their expectations from TV obviously grossly out of joint with their realizations and that is the basis for the kinds of social unrest that can cut off the core of the city from the hinterland. And take a downtown Chicago or a downtown New York or downtown Buffalo, for that matter, either unreachable or at least an area in which nobody from the other 75% of the population wants to go. And if nobody wants to go there, the real estate is worth zilch.

So the risk to real estate are not of the character of the stocks and bonds that measure that in terms of their relative variance to some sort of market index but, in fact, the risk to real estate are those of society itself and its ability to step up and truly internalize the costs of the urban environment into the property. And that area is just now being scratched. We’re very sophisticated in our contracts, and our leases, and our ability to allocate risk among the parties relative to a short-term view of real estate. We really have almost no answers at all on a growing perception of what the long term, social cycle risks are to the real estate institution itself. So much for that for the moment but certainly in keeping with that then is the next lecture because that social environment is really the product of our political process.

Real estate is the most regulated industry in the United States and the governmental regulation of that real estate is evolving in an almost Marxson dialectic among three major forces. And over the next few days we want to begin to develop each of those. The historical tradition in the US is that real estate is a very local issue to be governed entirely by the local residents. The next door neighbor has almost as much to say about the use of your property as you do and certainly land use regulation is the function of the township or the village board, or the city council, or the various planning agencies within the smallest unit of political government that is working at the local level. Certainly growing out of the Jeffersonian idea that those who owned land in the immediate governmental entities were those that were entitled to vote, those who had a definition to the future, and that government's function was primarily to diffuse the ownership of land among as many citizens as possible in order that they had a vested interest in the democratic process and therefore became more stable as citizens and, at the same time, more willing to participate in government at the very local level. And that is our historical root in terms of control of real estate at the most parochial and local and self-serving level.

It became apparent by the beginning of this century that many of the impacts of real estate could not neatly fit our rather artificial political lines. River basins and metropolitan areas don’t necessarily stop just because you drew an artificial line that said that the township stops here, and the City of Madison stops here, and the town of Madison began there, and so on - that we really needed some methods of control that were not only spilling over the smaller fragments of political process, but indeed were regional in character that might cover multiple counties at one time. It might even cover a state all at one time. After all there are many states which are probably smaller than some of our regions. Southeastern Wisconsin regional area of 7 counties is bigger than Vermont or New Hampshire and covers probably as many, if not more, small than large urban areas. The recognition of the fact that perhaps legally we had passed through the entitlement of land use control to the smallest political level had gone too far - that we wanted to retract some of that authority to a regional level and maybe retract some of that authority maybe even back to the national level. Became a very difficult political issue. How do you take back a political power that has been passed through to the local gurus. The initial hope was that the federal government would be able to create entities that were such super agencies of land use control that it could have major impacts on what was happening at the local level. The general premise is that the federal government can use a carrot and a stick that the regulation element obviously is the stick with kerosene on the tip to prod you in the right direction, and then to bribe you to move in that direction there would be large federal grants. That's what happened in the urban area in 1954, the federal government wanted urban areas to become planned, they wanted them to have 5-year capital budgets, they wanted them to be sensitive to the process of relocating and regrouping citizens in the process of urban renewal and so the federal government, in effect, took over the burden of 90% of the local planning costs if the local community was willing to develop a fairly comprehensive urban plan. Now we're beginning to look at areas that, gee, maybe what we really need are regional plans, state-wide plans, and is there a way in which the federal government can, in fact, bribe the states into living up to the responsibilities in that area. We'll look at those in the next lecture and we'll see that the federal government for a variety of reasons and because of a variety of political forces in conflict, have not been able to do that. And, therefore, by default, the planning process is falling back on the states as an intermediate compromise between the very local Jeffersonian parochialism and the federalism that was presumably the hope of the 60’s and 70’s. After all we now have a federal government which is perennially broke and operating at a deficit and I don’t believe you’re going to see the federalism of urban renewal, or the federalism of conservation that characterized the 70’s in terms of legislation occurring again. They can’t afford it. And therefore the third lecture will be on the role of the state as it attempts to referee and to synthesize the conflicting interests of the little parochial districts within the state into some sense of public land use policy that, hopefully, will make some sense out of our network of roads, and land uses, and airports and all of the other paraphernalia of the urban process.

Today let’s begin talking however at the very local level and demonstrate really how Jeffersonian real estate really is. Citizens can participate directly in real estate matters at the local government level, perhaps more easily than they can in any other issue of public government. Certainly, even more readily than they can in the school system which is certainly with the PTA and the school board and so forth, a reasonably democratic process. First of all, the citizen can simply represent himself in direct administrative contact in a whole variety elements - the zoning process, for example - should someone decide that they wanted to modify something in their home in your block and it was for one reason or another not quite consistent with the existing ordinances, everybody within 1,000 feet would be notified as to what the issue was and asked to come down and comment at a planning commission meeting, accordingly. And any contiguous property owner would have the right to appeal the decision of the zoning board and take it to court, or take it to the City Council, and explain their view of it. And I would suspect 20% of every city council meeting has to do with citizen participation in land use issues. And some of them are silly. "Fourteen citizens registering a complaint against Mr. & Mrs. so-and-so because they're keeping four chickens in the back yard which is not zoned agricultural and represents a violation etc. etc. etc. and they can't sleep in the morning because one of the roosters is forever crowing at the wrong time and they want the city council to do something about that." That's direct citizen participation - I mean that's taking your cause to the highest court in the land - the city council. You can appeal your tax assessment. If you think your tax assessment is out of line, first you go to the tax assessment office and get a review by a board of assessors who check each other's work and decide whether, in fact, there's been an error. If you don't like that, you can go to the board of appeals. If you don't like the board of appeals, you go to the circuit court and you go to the circuit court (certiorari?) which says they did something illegal here judge - remand the assessment decision back and forth and make them do it again. Or you can go to __________ which says, "Hey, I don't even trust that board of appeals, I want a jury of my peers to decide what my assessment should be with a little coaching and assistance from the judge. And the system is set up that it anticipates that the average citizen will represent himself. Now it may be that from time to time you choose to take their attorney along to speak for you because you're shy or you don't feel like you really understand what your options are or what kind of evidence you can present, and so forth, so I suppose that in 30% of the cases the citizen is represented by his attorney and certainly where the big dollars are involved in big buildings, there is probably an attorney involved but the system was designed to operate citizen-to-citizen and the board of tax appeals is made up of 7 very hard-working citizens that represent a cross-section of the community and in most communities they do not get paid. There's a few in Chicago, for example, part of the political graft is a position on one of the commissions and so forth. But in a city like Madison there are a good many citizens spending a great many hours on these commissions and boards of appeals with no compensation what-so-ever. The city services, of course, you can call them directly and then if you get no satisfaction about your trash being picked up or your Christmas tree still lying at the curb, you call your alder person and your alder person goes and intervenes directly as ombudsman with the public services in the community. Those are all matters of land use control and they're all matters of very direct interaction between the irate citizen or the citizen with a particular need and the process.

The second kind of regulation is what we would call indirect regulation as a result of formal policies by the community. The community may have a public works policy which perhaps spreads out over five years. How they are going to be reinvesting in redevelopment of the streets, which areas have priority, and where we're going to extend the water systems, and the major storm sewers and so forth. And that public works policy may be deliberately intended to encourage development in one direction and discourage it in another. For example, a number of years ago they decided that they wanted Madison to grow more evenly but stay within the super highways and so forth. So the sewer and water commission has taken as a basic policy that they would not run sewer and water under the interstate highway. There has been two, I guess, infringements of that but are relatively limited ones. One is to serve the Holiday Inn on 12 and 18 and the interstate and another is to serve the truck stop on 51 and on 151 just north of the beltline because they simply didn't want the septic affluent moving into water tables at those points.

But otherwise they've had a deliberate public policy of constraining growth within the highway system. At the same time, Milwaukee neighborhoods, they deliberately built the storm water system - the boulevard and the elementary school in an area in which there was nothing because developers are obviously going to subdivide where the public infrastructure is already in place and where there's capacity for additional development. So, in effect, by determining where the public works money goes, you, in fact, determine where growth will follow and that becomes a major indicator. In fact, in the sixties and early seventies there was a firm in California called Property Research Incorporated which was essentially was a real estate brokerage firm. But their whole modus operanti was to have a man in Sacramento, California, another man in each of the various city offices of southern California and they would plot very carefully each day's decision as to where public funds were going to be spent on everything from storm sewers to interchanges to extension of the freeways and so forth and they would then buy raw land in advance anticipating the fact that the infrastructure would be there by a certain date given the capital budgets. And they sold to athletes, for example, who might be making huge killings in baseball or basketball at a particular point in time and needed tax shelter and they would sell them orchards and land and so forth on a high interest, low down payment plan while they were in the high salary categories and buy it in such a way that, let's say, they expected another five years in their pitching career that the land would come on suitable for investment about five years from the time that he bought it. And they made tremendous fortunes for many of the real estate, and theater, and TV people, and so forth by simply very carefully platting where the public works were going, what schedule was contemplated and which areas would then be suitable and ready for development with infrastructure in place at some point in the future - five, seven, eight, ten years out.

Second of all, building code enforcement and revision can have a tremendous impact on the desirability and investment quality of an area. In many parts of the US it was obviously not possible to simply rebuild and replace much of the old housing stock nor was it possible to perhaps reduce the densities of those units without going on a building code enforcement program that forced the landlords to upgrade the property, reduce the density of occupancy and thereby raise the rent. But as you raise the rents you obviously displace those who can't afford necessarily to pay those kinds of rents and so there's a direct interrelationship between, let's say, the quality of Miflan Street Apartments and how much students can afford to pay and how much code enforcement do you really want. And that becomes a very significant political issue. And there may be areas in which the code enforcement is a little lax if only to create a pool of units at the lowest rent scales for those who can afford nothing more than that particular rent scale.

Traffic control and parking can have a tremendous impact on land values and you can have a great deal of dialogue with the traffic engineer. When they come along and say, "Gee, we need ques for right turns coming back 400 feet from the intersection and won't allow anybody to have a driveway exit within 400 feet of the intersection." They have said a lot about the value of that corner property in terms of its accessibility for retail use or whatever. One of the rhubarbs on the railroad corridor, for example, is where are you going to have access to that wonderful corner lot on which the round house is located? And the city says there's only going to be two points - there's going to be a 20 foot wide apron immediately adjacent to the railway track near the depot and then you can't get on that site again until you get all the way around down Regent Street and a block down from the intersection with West Washington. So you have a magnificent site and no way to get there. Well, proximity is not accessibility. And if they want to accelerate development, well they may have to modify their traffic access patterns and where you may provide for left turns and so on.

Parking will have a tremendous impact on the development process. If you have to have one parking stall, as you do in

Madison everywhere but on the Square, for every 300 square feet of usable space and you were to alter that and say you only have to have one parking space for every 600 square or 1000 square feet, why you would have a higher density of building that you could place on any one site. Land values would soar because you would have to invest less in parking ramps and parking and so forth, and more in the kinds of things which, obviously, produce a rent profit for the facility. Now at some point, of course, it becomes so congested that there's no place to park, nobody wants to be there. But where that magic point is, is never quite clear.

The general property tax and the assessment policies may have a great deal to do with the public process. In many communities, not in Wisconsin, but in many communities the developer can go in and negotiate his assessment with the assessor beforehand. And say, "all right if I build this industrial plant to produce automobiles in the Township of Tennessee how are you going to assess me on that plant? What are my costs of occupancy going to be?" And the assessor will go through a mumbo jumbo and come up with a number that is obviously very encouraging for them to develop in Tennessee as opposed to, say, Wisconsin which the tax rules would be in the hands of the state and the state might be a little more hard-nosed with industry as to what the real estate tax might be. But again, it's negotiable in many areas and a direct one-on-one taxpayer and tax assessor as they hammer out what the policy should be.

And then of course the viewpoint of the Board of Estimates may be important in establishing what kinds of things they are willing to finance using the real estate tax rate. And some communities have very little real estate tax rates because they're able to find other ways of financing public improvements, and school systems, and so forth, and in some communities, of course, particularly areas like Madison, have no compunction at all about loading a municipal budget with a variety of soft costs and welfare programs which are financed through the real estate tax as opposed to some other type of revenue source. And that all begins to reflect obviously popular attitude and the voice of the alder persons, and the constituencies of those alder persons as they participate in the land use policy.

In addition, public administration policies not only are not stated just formally but represent perhaps mind sets of key individuals who are, in fact, administering the law. As a general principle land use control law in this country is more in the aggressiveness with which particular individuals administer the law, than it is in the black letter print in the statute itself. For example, in Madison for a long, long time and there's still some vesicle remnants of the attitude, the head of the former head not the current one, not Warren Sommerfield, but the gentleman before Warren believed that everybody should come downtown by bus and that the way to do that was to discourage parking downtown. And so he encouraged apartment buildings being built without parking, or office buildings being built without parking. And he encouraged putting pots and plants where parking used to be on the Square and so forth on the theory that if you couldn't come downtown by car, you naturally would come down by bus. Well, that's the mindset of one strong-minded individual and it had a pervasive impact on downtown Madison development for 10 or 15 years and yet there's no real formal policy - there's nothing written in the books that that's what's going to happen, but that, in fact, is what did happen.

What about attitudes toward annexation? Does the community want to expand or get along with its neighbors on the borders? That may be the mindset of one or two individuals in the administration and quite often you hear the township chairman crying betrayal as attitudes in the city council or the mayor's office change or backtrack relative to the aggressiveness with which the city will annex land. Annexation is a critical process because, for example, the city of Milwaukee has had almost all of its increase in tax base occur in the northwest district which it was able to grab before somebody created a tax enclave and created a new community like Brookfield or Miguanigo or any one of the other tax islands that surround the city and cut it off from any possibility of participating in expansion and therefore leave the city with a growing social responsibility and, at the same time, a relatively stable, stagnant tax base, which means that the real estate tax rates rise relative to assessable values which then encourages more people to go over the city line into another area and that may have a great impact on the growth characteristics of a community.

Zoning policies to promote a master plan, how firm are they? How tough will the city council and the planning department be in enforcing not only the current master plan in force but maybe the one that's coming down the pike. As the developer, planner, investor you always want to go and know very much what the mindset of the planning commission is. If you're one of the lucky ones on the border of the city that's been painted green for open space, even though there's no master plan - but at least that's what they're thinking about for your property, you're obviously running uphill immediately against the officialdom and the regulators of your particular tract, even though they don't necessarily have any official position on that property at all.

What's the action on the local government relative to pollution control? One of the big rhubarbs a few years ago was how tough should we be on Oscar Meyer? Oscar Meyer has a slaughtering operation which had residual waste which if any of you had been on the east side some years back, caused a variety of odors to eminent from the partial sewer processing plant there on the corner of Truax and the State was really adamant with Oscar Meyer in terms of getting them to clean up their operation to a point where they said, "Well, it's cheaper to have our slaughtering operation some place else and truck the meat product in for processing here and so they shut down all of the slaughtering operations and I forget how many jobs that was, but it was 550 or 650 jobs. The City of Madison, on the other hand, is trying to take the intermediate role of getting the state to cool it and get off their high Dutches about that and kind of find a compromise position because the jobs and the economic base are as significant to the City of Madison but not, obviously, to a D & R agency.

How about the efficiency of the public transit thing? One of the best ways to hold rents down on Langdon Street is to have really good bus service on Park Street and out Fish Hatchery and Rimrock Road so that it's almost an equal choice as to whether you take a suburban apartment or a Langdon Street apartment and at that point you put a lid on what downtown rents can be. Other areas become competitive and equally accessible. And, again, it depends on whether the community is willing to do that.

Housing Supply - a community that comes in with rent control is really saying that we'll take the short term view rather than the long term view knowing full well that all new housing will be built outside the community and that ultimately the housing stock will decline in quality. Madison is particularly vulnerable to a rent control ordinance so many of you who are tenants are only short term residents of the city. And rent control would probably provide a temporary boon to students at the expense, of course, of the long term citizens and you would get through school at a little lower cost than you might have otherwise have done but the next group will have housing of course will be tougher to find and at lower quality and so forth. Again, the community can set its own tone and it generally does through a variety of political participations by various groups.

The desire for new industry - Madison has had a tough time attracting new industry because we have a large political group that wants only clean high tech, you know, as far as they're concerned only industries which employs Ph.Ds or higher are acceptable. And that have a great deal of demagoguery getting in the way of the decision. A couple of years ago Pepsi Cola wanted to put in a very modern canning plant here in Madison that would serve the entire half of the state of Wisconsin. It would have represented at least a million and a half in real estate values and several million dollars of personal property tax base in equipment and operated only by 4 or 5 people so there's no traffic jams - it's a very clean plant and so forth, but the city council put the skids to it on the grounds that it was using aluminum cans and they weren't biodegradable and they were against that in principle, and so to hell with you. And so the plant went out to Waterloo for installation and providing the tax base out there. Well, obviously, that's a representative of a political viewpoint in which citizen values prevail over perhaps an economic view of life. We're simply stating that the citizen does have the opportunity to participate very directly in the land use decisions that are made or indirectly through the kinds of political organizations which they support.

In any micro situation all of these inputs often appear to be part of the democratic process, but over the years, if you look at political fragmentation of our communities, the results, in fact, may be counterproductive and, in fact, nondemocratic. It may be anything but public land use control. When, in fact, the power structure is able to subvert this process of participation to its own interest. For example, let's say a community wants those kinds of uses which generate tax surplus but not those which create necessarily a social responsibility. Clever use of the zoning controls may mean that there'll be no mobile homes in your area, or you'll have large lots only the rich can afford to live in your area, or you'll accept the high tech businesses but not the fuel oil dump and other kinds of facilities which get pushed down on somebody else. And, as a result, you get something less than the ideal network of facilities. You may have very definitely a justified fear of state or federal control, but, in many cases, they would be more objective. Take the issue, for example, of where shall we put our next sanitary fill site. And to solve that in terms of technical matters as to where the ground water is lowest and the possibility of toxic waste leaking into the ground, control of contamination, perhaps gradual leakage of methane gas into adjacent areas, and so forth - if you solved it from a most technical standpoint and got the best technical solution, it is probably pretty sure that there would not be an acceptable political solution. There would be somebody with political skills that would be able to block it because it was in his back yard or down the street from him or on his way to work and he didn't want to look at a sanitary fill site along that area. So ultimately you put it where there's the least political resistance rather than necessarily the best area of development. The ultimate in that, of course, if you're watching is the proposal now to put nuclear waste sites around the country because we have to have some place to go with the spent rods from our power facilities that are atomic. And currently they have found only three sites in which the political resistance hasn't been overwhelming - one in the state of Washington up in Hamford, one in Nevada and one in Texas. All of them, except the one in Nevada from an environmental standpoint are highly suspect. In

Texas the aquifers for a depth of some 15,000 feet would have to be frozen for 50 years so that there would not be a movement of radioactive contamination through the aquifer below the surface. Can you imagine a freezing system that would work reliably for 150 years? And, given our ability to run anything, you know, systematically reliable for very long particularly if it's federal controlled and in Hamford, Connecticut, not only is it in the aquifers, but it's on a seismic fault, I guess through no fault of their own. Only in Nevada is there a primary site called Yucca Mountain. And Yucca Mountain is right next to Yucca Flats if it matters. And the water table in Yucca Mountain is 14,000 feet down which is one of its prime recommendation areas and it's solid rock all the way down so they can have a boring going down to whatever depth they want and right along side of it is a $350 million dollar facility that is robotic in that it was designed to take apart atomic bombs that are now obsolete but highly radioactive and so forth. And they could use that then to process the rods for storage at the bottom of this boring. And the major inducement is that whichever state gets stuck with this facility will be permitted to tax it as though it were a private industrial facility and the question is what is the value of a piece of land which is suitable for radioactive waste? A firm has been hired to arrive at the value theory for that. One of the interesting theories is that they have spent $2 billion dollars in environmental research to locate the site. Therefore on the basis of substitution you would presume it would take another $2 billion dollars to find an alternative, therefore this one must be worth $2 billion dollars to somebody, presumably the Federal Government. And that would be a fairly sizable real estate tax bonanza for the state of Nevada. If any of you have ever been to Nevada, it probably is a good place to put a lot of radioactive waste. Someone described the highest and best use of this site was to hold the rest of the world together.

The local government, therefore, is the initial critical element and of that, simply have, what? somewhere in the neighborhood of three major cities in the Madison area and 21 villages, and I forget how many townships, all of which have their own sets on each of the issues that we've identified. Dane County, of course, is another good example of political fragmentation. Our one county has a board of supervisors which is part urban and part rural. We have an executive manager. We have a regional planning commission which covers only one county, and then we have various boards that are appointed either by the executive manager Mr. Berry (?) or by the board of supervisors, headed up by Rod Matthews. Obviously the viewpoints of the various rural/urban factions are significantly different from time-to-time on various issues. We have three major cities at the moment, Madison, Monona and Middleton with Fitchburg now in the process of attempting to become one. Each of them have their own wards with alder persons. They have a mayor, generally full time, but at least in one case part time. Each of them department heads and then all of them have commissions covering various aspects of land use as well. Obviously each of them not only have their official policy, but they have their unofficial attitudes and mindsets as well. We have 20 villages, each of them has a village board of three, the village board president and then subcommittees of the board. Even villages have fairly powerful controls relative to the land use. One of those which intriguing - we were working up in Door County on a project called - what was that little bay up there next to the park? - at any rate - discovered that the village board could define a port authority and so the developer got his friend who was president of the village board to create a port authority and, of course, the developer was named as chairman of the port authority commission and the port authority had the right to issue tax exempt bonds with which to develop the harbor and the docks and the marina for the developer. So many areas have had that type of thing. The entire Disney World Enterprises, by the way, is a water control district in Florida in which Disney went to the Circuit Court in Orlando and had three Disney executives made commissioners of the water control district, which gave them absolute control of 150,000 acres for Disney World. They can have their own civil court. They can have their own police force. They can issue tax exempt bonds to finance all of the improvements that had to do with water control and environmental matters and, in effect, their own little thiefdom as a result of township commission control at the water control district. So that many of these small apparently innocuous types of political fragments have very sweeping powers if you focus them correctly on the real estate issue.

We then have 25 townships. Each of them has 3 elected supervisors and a chairman of that and many of them have a great deal of power. I seem to remember a case outside of Stevens Point in which the issue was whether some land could become a subdivision and one of the appraisers testified that there was no cost to putting in the roads in a subdivision and therefore he hadn't made any deduction for that which in court seemed ridiculous and the jury rejected that concept and fortunately for the appraiser but I went on to investigate it and that was true. The largest subdivider in the county was also chairman of the county board and so he had passed ordinances that to advance economic growth of his county, the county would grade, and gravel, and tar all of the roads that were introduced into subdivisions. The fact that he was doing 75% of the subdivision didn't seem to be a conflict of interest - that was the happy coincidence. He justified it on the grounds that the village township share of the gasoline tax in the state is based on the number of miles of paved road that they got so they got, an extra 2 cents a gallon or something of that sort per mile for all of that paved road and so he was doing them a long term favor by subdividing and having them pay for the roads and the tar. OK we have to take a break. Bring your notes to the next lecture.

. . . Probably no better area to demonstrate the subject matter of this course than the impact of land use regulation on the ultimate consumer of space, whether it be the homeowner, the apartment renter or the business enterprise or, for that matter, a public enterprise such as a park or whatever that needs an allocation of land use and capital. And there’s a number of elements which tend to confuse what should start out as a fairly clear dichotomy in terms of who benefits and who pays. One, of course, is the fact that the media that is the public’s primary opportunity to sort out the issues tends to oversimplify and tends also to be an advocate of one person or another. I remember in my early days as a developer - [and I think somebody wants to turn that down just a little bit, there’s a ringing in my ears which may have something to do with my weekend. There. How’s that? - A little better?] The development days - I can remember if I wanted to get the Cap Times involved in it, all I had to do was threaten a tree or suggest that the other guy was threatening the trees and Mr. Epphugh(?) who was a dendriphyl - a lover of trees - immediately rose to the occasion. We were doing a subdivision on the far west side called Applewood Hill and originally it was under attack by a number of people on the city council who wanted to put a city sanitary fill site on the adjacent ravine and it was at that point referred to by the city council as pill hill, because all of the doctors lived there and a number of the alder persons were married to doctors and who had divorced doctors were really out to get anybody in the medical profession. So they kept referring to it as pill hill. And when I was able to show the folks at Cap Times that the city plan for the sanitary fill was to wipe out all of the trees in the ravines and fill the ravine up with [?????bad place on the tape?????] suddenly the batter changed and we were talking about the seminary site - referring to the Holy Cross Center or Seminary immediately adjacent to the site and we were able to reverse the vote of the city council. I think we lost initially 14 to 8 and won 21 to 1 with the only divorced doctor's wife holding firm against the residents. So the issues of who benefits and who loses are not typically presented very fairly or in a sufficiently detailed presentation. But if the public can generally catch on as to who's benefiting and who's losing in time.

Second of all, those then administer plans themselves. The planning agencies and the various enforcement agencies generally represent people that were trained at universities who never had a real estate course. Who probably have really no sense of what the economic implications are, that if you require a developer to do this and that and say, and exactly $2,000 for every lot that he creates for the park commission or the office developer has to provide one apartment in downtown San Francisco for every thousand square feet of rental office space that he has, then, in fact, that's going to show up in the price some place. And they're either going to get less house or less building and office space or you're going to pay a higher price. And it has been shown that something like 40% of the increase in housing costs are not inherent in the labor and materials of the process at all, but, in fact meeting the increasing array of planning requirements that go into the process and require greater dedication of land to green space, parks, open water or storm water and so forth and so on. That's not necessarily bad. It simply the fact that, that burden placed on it by the regulatory process is not very apparent to the consumer who wonders why he can't afford a new house, or has to afford a smaller one, or has to find some other compromise with whatever his objectives were in terms of real estate. So we want to really look at the benefits and who pays from the standpoint of the historical process of regulation.

If we go back and trace very quickly the evolution of land use regulation, the irony is that it began in Mesopotamia and as the development of the Euphrates/Babylonian area, as a way of achieving accountability for the way in which you use the land resource. The government had gone to great lengths and great expense to create an irrigation system that brought water to a great many individual plots and the objectives was to make each farmer use that water and those resources intelligently and with husbandry in order to produce the maximum crop. And by making that his little piece of land and he a primary beneficiary of his farming ability, you had accountability and benefit in terms of using the land well. And the concept of private property really began as the cheapest way of creating positive incentives for the proper use of the leasehold. And that's a very important thing to keep in mind. The private property itself as a social institution is designed to optimize the use of the resource. That was repeated again in North America when the Indians who had no sense of turf and private property, nevertheless, created it as a way of regulating those Indian groups and tribal family groups that were over hunting the areas along the Saint Lawrence estuary and, therefore, killing off the ability to have a breeding stock of fur bearing animals that would reproduce and recreate a new supply of furs and hides for the next round of trade with the French. And so even though the Indians regarded the food production characteristics and the supplies and materials produced by the port authority(?) as common property. The fur trading areas in which they could trap were allocated so that if they over hunted and took out more female than male pelts with the result that the breeding stock was an incredible pool of breeding stock was wiped out, that they bore the consequences of not having any furs to trade on the next round. So private property and the allocation of specific terms to specific individuals begins with the objective that that is the cheapest, most efficient way politically to assure wise use of the land resource.

The second step in terms of regulation as we moved away from really an agrarian concept to an urban concept was the realization that whatever you did with the land could in fact adversely affect everybody around you. You know, it didn't take many times for London to burn down until we had some very stiff building regulations about fire walls and fire proof materials and creating enough distance between each block of homes so that a configuration (?) couldn't jump the gap and cause the whole city to burn down. And then we needed water systems and we needed sewer systems that had sufficient capacity that, in fact, when we got a group of people together of a sufficient size, we didn't kill everybody off from disease. It was a fairly self-evidentiary kind of regulation. But, nevertheless, the regulations were very detailed in terms of safety and of health and that was really the next progression in land use regulation.

The third level was a sophistication growing out of the late 1800's in the US initially, that some uses were incompatible with other uses in terms of comfort and in terms of enjoyment and so on. And so the first original zoning ordinances really were attempting to scale land uses in the area of relative compatibility. It began with the upper end residential and decided we didn't want slaughtering houses there and we didn't want industrial enterprises that were noisy or smoking or smelly or whatever - or perhaps even introduced people that the safe rich people thought were fairly desirable, and attractive and safe, and so we began to create residential lawn areas that were exclusive of everything else other than, say, the mansion and the upper end townhouse and then we got residential II that admitted there could be some uses that were sort of ancillary to residential like shopping, grocery stores and family saloons and so forth. And we moved all the way down until we finally got to a very low level of industrial plant that covered fuel tanks, sewer plants and meat packing and fertilizer operations or something of that sort. And they were way out at the edge of town and isolated in the least attractive area of the community and so the initial segregation that was achieved by zoning really had to do with what was perceived as the comfort, and aesthetics and physical compatibility of different land uses. One was a mark in order presumably to make the upper end the most attractive possible and perhaps protect their property values and so forth, as well and there was a lot to be said for creating a certain sizzle value by being exclusive. If you can keep 90% of the people out - the other 10% would be a tribute to people that they shouldn't be. And that was really the next whole history of zoning.

It wasn't until we really began to develop a concept of urban planning that we could begin to organize our communities to optimize the desirability, the attractiveness of the community for everybody that we began to see zoning not simply as a prohibitive and constrictive control on use, but rather as a positive incentive to achieve certain desirable elements of the city beautiful. Now remember that's only about 1954 - whew the federal government actually decided to subsidize urban planning. Certainly cities individually began to have master plans before that. Madison had a master plan by John Knowles by the turn of the century and Chicago had master plans for its lake frontage and so forth, you know, about that time and so forth. But now they've the problem of how do we want to encourage development and so forth to be in supportive of that master plan and, at the same time, discourage other kinds of uses that would unfortunately, you know, make impossible or certainly impede the development of where we wanted the city to go from a master planning viewpoint. At that point, zoning took on a new function and that function was to prod the development process in the direction that the city wanted to go. And that acknowledgment that there was, in fact, a positive direction in which to move the city really changed the land use regulation process into a much more detailed, comprehensive and, in many ways, irritating politicized area of concern. Even then, urban planning as an abstract concept, which everybody could agree with, didn't really begin to impinge on the daily life of the residents until we had two other major trends occurring in this country. One was a growing awareness of environmental protection and the need to maintain and protect environmental quality. And environmental quality broadly defined not only being from a health and environmental, ecological system standpoint, but as well from a life quality standpoint. And, second of all, the idea of consumer protection. Consumer protection for getting a good deal, not consumer protection just for your health and your safety, but the idea that the consumer could be easily used and defrauded and disappointed by a process as complex as building a home or an office building or a shopping center or whatever. And these two elements of momentum, of environmental protection and consumer protection fueled, really, the political process by which we could begin to generate a tremendous array of land use controls. And that, essentially, is where we step into the scene today.

We want to look today at the impact at several different levels and some of the devices which are being tested or, at least, evolving presently to try and equalize this issue of who benefits and who pays. As somebody once pointed out, most of the troubles in this country lie in our accounting systems. Our accounting systems can handle very well those matters which actually go through the checkbook, that are internal to the organization. But accounting systems have a terrible time dealing with the externalities. And real estate has a very large externality segment. Whether we're talking about the storm water running off into somebody else's lot or the building casting a shadow on somebody, or just being ugly and offensive for 50 years after it's built. Our accounting systems aren't capable of handling that. And we're really looking for techniques by which we can internalize these external costs. Now where it's prudent (?) system would be to say, "Gee, your building is going to add so much to our storm water burden and that's going to cost us a hundred grand to beef up the pipes and provide the holding ponds so that we can release it through the existing system, and so forth and therefore, to get your building permits, you got to put a hundred thousand dollars in the public coffers to cover that increased burden. Or, if you want a stop light going into your shopping center, we're going to charge you $35,000 to put in the stop light." I mean, those kinds of things we can fairly quickly measure and if we wish to negotiate with the developer and internalize those costs on his project that otherwise would be the public burden. But there's obviously more subtle kind of things we are trying to achieve aesthetically that does lend itself to a cost formula that says it would cost "X" dollars to correct that from an engineering standpoint. And several of those things we're going to look at today.

A new construction probably only represents maybe 1 to 3 percent of the total stock of homes at any particular point in time - any particular one year. But these housing units really are the safety value in terms of the pressure of demand on the existing supply. And should we decide to overbuild, why, obviously the price comes down not only on new units, but on existing units as the tradeoff between the existing one and a new one becomes more favorable. And, by the same token, if we stop building all together the demands on the existing supply given the demographic process that maybe is increasing the number of families in the child rearing stage or the number of families moving into an area or whatever. It means that the supply of homes very quickly rises and is extremely sensitive, much like having an interest in a common stock on the New York Stock Exchange in which there are very few units in float. And if everybody decides that's a good stock to buy, what few shares are available could just zoom off the sides of the charts. That doesn't mean that the entire inventory of stock has gone up by that amount, it only simply means that demand is very quickly out of kilter with supply and it doesn't take much of a gap between the number of shares demanded of common stock and the number of shares that are available for sale before that price goes right off the wall. Well, the same is true in the housing stock area. It doesn't take very much of a gap when we're talking only about one or two percent of the total housing stock and so forth in fact housing prices very quickly get out of reach.

Now, what happens if we somehow impede new construction. For example, we could complicate the platting rule as to how we're going to get a new subdivision or where we could get a new subdivision and we can complicate the building permit rules to say, "Gee, we only want three hundred units a year," like Petaluma tried to do or Ramapoo(?) tried to do in your reading. It doesn't take very many of those kinds of regulations before suddenly the demand pressure on a particular point relative to the supply and available units is greatly out of kilter and prices soar. Now, should new construction fall while demand remains constant, first of all, housing quality is going to be polarized. A higher income consumer will see the value of his house continue to rise and therefore feel confident that he can invest more in that particular home in terms of remodeling and additions and so forth and his quality will continue to go up. Consumers in the lower income spectrum however are going to find themselves facing prices which they can't afford, downpayments which they can't afford, or rents which they can't afford, and that means they're going to have to skimp someplace. They're either going to have to buy shoddier homes which are built more cheaply, or smaller lots which means their spatial quality of life is declining or they're going to see that the maintenance of their apartments is going to gradually decline so that the rent level can hold and the operating costs will be reduced in order to maintain the profit margin. And as the absence of vacancies grows, of course, the landlord's are under less competitive price pressure and they can begin to push forward rents. And, obviously, either you have to give up something else because you don't want to give up the apartment, or you have to scale down to a cheaper apartment in order to maintain your spending somewhere else. So that given a fixed supply, the rich get richer, the poor get poorer in terms of the general quality of housing that's available. Now, by restraining production therefore, you mean higher values for some and lower quality for others and a very real breakdown in the market which presumably is going to provide you choice and allow you to, you know, choose different combinations of location, and space and quality of amenities that we looked at earlier. I believe we talked about earlier the impact in Palo Alto, for example, under the [?????tape fades out???250] called the environmental hustle where, in California, the residents of Palo Alto realized they had 7,500 acres of very developable land, hired a blue ribbon committee of environmentalists and land planners and so forth to map out a future for this 7,500 acres and then somebody notice that two-thirds of the taxes in Palo Alto were being paid by the semiconductor industry in the Silicon Valley area and that if you lived in Palo Alto, you got $2 of public services for each dollar that you invested yourself in terms of real estate taxes and that was a pretty good deal. And that if they had more residential properties coming in and therefore, more people to share those services with, they would end up paying more real estate taxes per dollar of education and library service and benefit of whatever kind they were getting from Palo Alto, and so so somebody said, "Jeepers, we otta keep that green space." Suddenly conservation became very holy and we had to protect the air and so forth. Somebody said, you know, "We really want to keep that green space but we'll make those large lots. Everybody can have a 6 or 10 acre lot and that way we can still have houses in the half million to million dollar category." A friend of mine speculates building million dollar houses in Palo Alto and sometimes he has as many as 3 houses underway at a time at

$750,000 to a million bucks a shot selling them primarily to folks coming over from the Far East. But, nevertheless, Palo Alto decided that maybe they'd have 1,500 acres more industrial park and the balance would be as close to green state as they could make it. And immediately by shutting off the production of further homes, everybody's home in Palo Alto doubled and tripled in value so that a very modest home cost an arm and a leg to a point where, in fact, people were buying the low income homes on the far east side of town and tearing them down just so they could have the lot to build a somewhat more expensive, more modern type of home. It was a classic illustration of using both consumer protectionism and environmentalism as an excuse for maintaining the status quo, stifling further construction and therefore, not having to share the amenities of the community and shifting the burden for long distance drives to work and shifting the burden of finding modest priced housing for the workers of the Silicon Valley, and so forth, to somebody else.

The production factor, of course, in recent years had been relatively poor in terms of producing housing units for the first-time buyer and the low income family. The shift to laissez faire then to severe restrictions often solves one problem, and it's a real problem in respectful use of the land, simply by substituting another. And the question is, of course, why politically do we let the pendulum swing as sharply and severely as we do? There's a number of reasons. One, the future consumer, of course, is never really represented at the bargaining table when land use compromise is necessary. Because at that point, the consumer doesn't live there. Politicians already speak for the constituents who are there and who already own a home and who obviously benefit from appreciation if the supply of homes is limited, and not for those who would like to move into the jurisdiction. Rawapoo and Petaluma legislation was not to be felt by folks on the outside surging in to do that, it was obviously in the vested interest of those already there and wanted to pull up the draw bridge and say, "I've got mine, let everybody else go some place else to find their little piece of the world."

The second major constraint, of course, is that labor and material suppliers have a real vested interest in the status quo. They certainly don't want to see fire codes change or building materials codes change because that's going to alter the demand for materials. It's going to alter construction job characteristics. That's going to certainly alter in the long run the nature of their particular industry. For example, there's no particular reason why two-by-fours have to be 16 inches on center. That, in fact, it takes less wood and the house is just as strong if you use two-by-sixes, 24 inches on center and have thicker insulation and so forth and so on. That means you've got to change the way window frames are built so that they don't fit two-by-fours any more, they five two-by-sixes and so on and so on. And it may change the way in which you frame walls for fire blocking and so on. But the net upshot of it is that you use less wood. Obviously, the timer industry's not in favor of that. You use less carpentry hours because you have to nail fewer things together and, obviously, the carpenter unions aren't in favor of that. And so just a simple shift in construction methodology from two-by-fours to two-by-sixes with all of the technical arguments that there are for it, cut across the vested interests of too many groups who either sell materials or install materials to alter that rule very quickly. And it generally takes a tremendous amount of politicizing starting with let's say the FHA in terms of construction methods that they will insure, starting with national building codes (?) promulgated by let's say by the fire insurance companies and so forth to, in fact, bring about over slow periods of time virtually geological time process, innovations and technological changes in the way we do things. Tax payers want to avoid infrastructure costs which they elect to be funded from their real estate tax. So if they have a choice of voting down a subdivision or expanding the school, they're likely to vote down the subdivision unless you can show them that by having more households that support the same fire department and the same school system and the same park land and so forth, so that they're mill rate will actually be reduced for those services. It's very difficult to get them to vote for growth when, in fact, growth means investment now in infrastructure which will add to the bonding load and therefore the mill rate of that community. And, of course, depending on the age group there's a very dominant factor. If you look at Middleton, how many times have they had to go to elections to get them to expand the school system and provide a swimming pool and some of the other more modern school facilities, when over half the community don't have children. If you have a large apartment base of folks that don't have children in the school system, their willingness to vote an increase in the school budget in order to pay for the debt, in order to create the facilities for folks that do have children is greatly limited. Saint Petersburg has an extremely weak school system in the city because virtually all of the folks said, "I'm 75, I'm not going to school and I don't think I'm having any kids. Beside that, I don't even have a 25 year long term forecast to look forward to. Why do I want to invest in that kind of construction. And what are we doing about shuffle board courts?" Then, as a result, taxpayers are very, very narrow viewed in terms of what creates an infrastructure that's in their vested interest and what they're willing to pay for. Households that already have what they want and are going to benefit from the price increase of monopoly are, of course, encouraged to protect that decision which is basically selfish by standing for something, generally, environmental protection. You know, "We want to hold down density." - and related to environmental quality. And people know better do that. Bayside, which has got one of the highest incomes in the Milwaukee County area and is a highly educated group had a major 150 acre farm called the Eline farm and it was right along the lakeshore alongside of the park up there, and so forth, and a developer came along with a very sensitive land plan which wanted single family around the perimeter to match the single family that was already there, townhouses in the core a little bit and then on a platform of land that was down by the water, he was going to put about a five-story building which you couldn't even see from Lake Drive. And these condominiums were going to be at the $250,000 class and the good citizens of Bayside turned out and turned the project down on the grounds that rental properties or condominiums of $250,000 were going to allow the riffraff to come in and create social conflict. Now, come on guys. Density they said, "Notice the density on those acres they said was as same as the density in the Milwaukee slums." Therefore if you've got, you know, 100 people per acre, obviously, you're going to have social difficulty immediately. And, Maple Bluff recently did the same thing, you know, absurd position. They had the Sherman School fight up there with which somebody wanted to build

40 or 50 condominiums in which there was already a market among Maple Bluff residents who need to move back from mansions along the lake in which at 85 years old they're tottering along in there all by themselves and they really need to be in a smaller facility where people can provide some assistance and care in their old age and so forth. And it was defeated on the grounds that if the condominium didn't succeed at prices of $200,000 each, it would go on the rental market and the Dane County Welfare Service would issue vouchers to welfare cases who would intrude into Maple Bluff. Now if that isn't the most asinine argument for land use control, and so they voted it into a park which is just fine with the owner of the largest mansion which is right alongside the park who is spread the rumor in the first place. Therefore, the political process does not work in favor of those what ain't got theirs already.

Oddly consumer by itself, however, to be fair and it's very difficult to represent, is really not a single entity in his value systems like the Sierra Club which can operate as a political monolith but instead represent the whole series of micro markets, a whole series of individual views as to what the city beautiful should be like and what each home should be like and what size home and what style home and what price range and so forth he should be in. If that wasn't serious enough, those who are really responsible for housing plans and regulations generally feel confident that they know what's best for the housing consumer. You talk to a city planner and he says what we're going to need is more townhouses and so they will zone for townhouses. That may not be what the market wants, but that's what the planner wants and, of course, that's what the architect thinks would be really snazzy and he had a course on that once that said that was a good thing to do to save land. And so, as a result, you tend to get the will of the physical planner being imposed on the consumer and a certain disregard of what the marketplace would want. Much, of course, like the current issue of the convention center. In any event, as somebody I think once said, I think it was Dave Gruen, was a very brilliant consultant on the west coast said, "If you have to choose, between the half assed concepts of a planner and a half assed democratic process, choose the democratic process, at least it's democratic." And that, of course, the planning process chooses not to do if it can possible avoid it. Individuals, of course, responsible for housing principles and land use regulations quite often don't understand what the economic dynamics and feedback will actually be. The process is obviously rather complex and much like the weather, we're not quite sure what the adverse results of cutting the Brazilian forest will be, but we know it's going to be different and we also have some sense that it may not be positive but what the total workout of the impact of changing will be.

Classic example affecting all of you a few years ago was the University suddenly deciding that they did not want to be in ? tarentis locus and you could live anywhere you wanted to so that suddenly 16,000 students no longer had to life in dormitories or buildings that had house mothers and hours and social programs on Sunday. And suddenly the Regents and the Towers and the Wisconsin Hall and a number of other facilities that were built to accommodate that regulation, are obsolete overnight and are empty and bankrupt and foreclosed. And, by the same token, the students that didn't want to live more than a mile from campus found rents moving up 15%, 20%, 25% because son of a gun the law of supply and demand really works. That if you turn 16,000 additional potential tenants loose on the market and the market is incapable of responding very quickly to increase the supply, indeed the land area available to increase the supply is rather limited if you spin a mile circle off of Bascom Hill and subtract the land and subtract the campus, there's not a lot of additional land area that you can develop with student apartments at a price that you can afford. And so, obviously, the price mechanism very quickly gets twisted with what began with a perfectly meritorious conclusion is that people are old enough to make up their own decisions as to where they want to live. You can't argue with that, you know, that's a fairly obvious truism but by simply changing that very simplistic regulation overnight by the strike of a pen, you know, it’s taken 15 years to work out some kind of equilibrium between the price structure of dormitories and the price structure of apartments and where people want to live and as they work through that, suddenly instead of having one ward that was not student dominated, you have four wards that are student dominated and four more wards that are trying to figure out through the zoning code how they can prevent from being student dominated and protect the price structures so that residents with children and families and jobs and so forth, in Madison don’t have to compete with students getting together in 3 and 4 and bidding up the price of rent. So, you know, fifteen years later we’re still trying to work out the consequences of a decision that said, “Let folks live where they want.” - which is not unreasonable but, nevertheless, obviously it is easier to do with a stroke of a pen than it is to correct the supply and demand imbalance as a result of that decision. Land use policies for collective consumers often can also harm the individual consumers.

First of all, many agencies are simply going to do what they want to do because their group behavior can be distorted by other votes. For example, the FHA in trying to demonstrate fiscal conservancy begins to redline parts of the cities which they felt were poor investment risks. Now you can’t fault them for, as a government agency, wanting to do that which is financially responsible. But their inability, or unwillingness to accept risk meant that capital is denied those areas in town which perhaps need it most for rehabilitation. When that is finally perceived, as it was in the early 70's, there's government regulations designed to provide fiscal responsibility to the Savings and Loan Associations actually being accountable for some of the dry rot in our older neighborhoods, obviously you have to remove that restriction. Then you have to say to yourself, OK how much risk can a public agency take in the name of advancing other more socially desirable objectives. Can we make loans on apartment projects that are likely to get plowed under because the residents picked them apart or because management doesn't have the incentive to manage them as strongly as it does to build them, etc. What kinds of risk can a public agency take in guaranteeing loans and making direct loans, in encouraging construction and development of certain kinds of facilities which are marginal to begin with in terms of their eventual business success. And although the politicians who takes those risks and loses, in fact, be tarred and feathered with having made that social judgment and have his career come to an abrupt end because of what are perceived to be "scandaled" in the administration of that particular program. Very, very difficult element to decide.

In a reasonably free society as an individual one is permitted to be a damn fool. As an administrator of a free society, agencies expected to be above reproach and to be rational and prudent at all times.

Obviously there are a number of ways to attack problems relative to growth management. Rammapo(?) and Petaluma represent in your readings very specific, direct recognition of the problem. How do we control the pace of development so that our public infrastructure can gradually absorb the children into our schools and we can gradually extend the sewer and water to the new projects and so forth. Both of them were under desperate pressure from the migration out from New York. Migration, in the case of Rammapo and migration out from San Francisco in the case of Petaluma. And they needed to come up with a response and they addressed it very directly and said is what we're going to do to try and assimilate, as it were, a very rapid rate of growth into an existing community. On the other hand there are more oblique ways to do that. Fairfax County and Marin County represent classic examples of how to do it obliquely. Fairfax County in the name of environmentalism said, "Our sewer system is overloaded, we can't process any more sewage and therefore we will put a moratorium on building permits until such time as we get our sewer capacities expanded," and then they voted not to expand the sewer capacity! Now if you look at it on the one side they're doing it in the name of health, again and environmentalism and on the other side they're saying, "Hey, we've got ours let everybody go to Maryland or go to the next county, Fairfax has got enough trouble." That's called cast iron zoning - simply is controlled by how fast you spread out the infrastructure. Marin County of course got bit on their own strategy when requested the funds - the creation of further public reservoirs for water- they refused and voted down the bond issue and a couple of years later ran out of water. They didn't have enough capacity for the folks that were there, let alone perhaps new folks that would come in and literally for a summer there, for incoming residents, would have to go to work before they could use the toilet and the last thing they would do before as they came home was fill up a 5 gallon bucket of water in San Francisco and take it home so they'd have something to do the dishes with that night. Growth management backfired as well it may have should have. The American way, of course, is that you get what you pay for. The problem is that as we mentioned earlier are accounting systems don't always work very well in terms of what you pay for. There are several systems which are not on your notes which we should identify currently as a way to try to correct that.

One, I want to call exactions. Major cities like Boston, San Francisco and others are stating that really as a condition of getting a building permit for an office building, or a hotel, or some other commercial structure, that you will provide so many housing units together with or as part of your office project. The direct premise is that let's say rents of apartments are too high in downtown San Francisco, for office workers, therefore we will create a pool of apartments for office workers in the downtown area which will then take some of the pressure off our commuting system and will provide housing at a price that will hold people downtown to be supportive of our retail and so forth and so on. That kind of exaction simply adds, of course, to the cost of construction of the existing project but they can get away with it in Boston or San Francisco and a few other markets where downtown office rents are high enough that there's sufficient spread between the cost to construct and the value once created that they can, in fact, subsidize the development of housing in that particular area.

A second type of exaction in the residential area is the payment of flat fees to the park department, to the school board, to perhaps a recreational utility which will presumably go to future development of schools, parks and other public amenities. These exactions may represent as much as 25% or more of the cost of a lot. So that if you pay $25,000 for a lot in the west side of Madison, presently, at least $5,000 of that probably represents direct and indirect contributions to infrastructure extension, park expansion and greenway capacity for stormwater and so forth. And, obviously, you're making up for perhaps not having provided adequate space for others in the past. And you're correcting not only for the demands created by your particular subdivision, but also for the shortfall in earlier planning for earlier developments.

A third type of exaction on the developer is time exaction rather than a dollar and cents exaction. There was a time probably when you could process, and still is in some communities like Dallas and so on, you could process a plat in maybe one or two months time. Probably in Wisconsin it's anywhere from 12 to 18 months to process a residential plat by the time you have negotiated with the neighborhood association, the alder person, the city planning department, the state highway board, the department of natural resources and all of the others that have a kick at the cat as it goes through the preliminary planning process and arrive at a finished plat which is available for sale. When the meter is running on that, of course, in terms of interest costs in terms of the additional legal and planning costs involved and hour after hour after hour of meeting of professionals and if you want to be a developer and cry just a little bit, you go to a city council meeting in which your planner and your lawyer and your civil engineer arrive at the beginning of the meeting, let's say at 6pm in the evening, and they finally get to your case at 11pm and postpone it til the next meeting. They have each logged 5 hours at $100 an hour each and you have nothing to show for it and you now go back to the next meeting and now discover they want something changed, which will not only will cost you money but the planning of it will cost you money and the planning you've already done gets scrapped and you start off in a new direction. The sunk cost in people time in going through the democratic process is tremendous. Ultimately that gets logged in usually to the price of the product. The exaction on human energy, that added significant cost, becomes a major factor in the product price of the product. Now, obviously much of this is good. Much of it is virtue in conflict. I need to sensitize the developer and the consumer to larger systematic issues of the development process. So some of this becomes simply harassment for growth management and really reflects a values decision that we will have both management by default rather than by explicit legislation and cause the newer arrivals and the newer families to look elsewhere - to go to Fitchburg or go to Sun Prairie rather than to settle in Madison and become a capital budgeting problem for Madison. And that question is still unresolved as to who benefits and who pays for regulation. And how do we begin to sort out which regulation has a cost benefit ratio which is positive and which details of regulation, in fact, have a negative cost benefit factor to the general public. We're still sorting that out.

. . . in the same format. And so if you'll go to the second page of the handout we'll begin with essentially a facsimile of a clear output. We've retyped it because the initial original was relatively illegible once duplicated. And we drive off the fact that there is some market demand of the area. Apparently this is an area of relatively high growth just outside of Philadelphia, and a market study by RSW has indicated there's an absorption rate of about 1,670 units, residential units each year. DU stands for dwelling units and there's a common planning nomenclature. One of the interesting parts about this model that it recognizes that in any modeling process the validity is really dependent upon the assumption. All you get when you take a financial projection is a set of assumptions about the future. And it's certainly important to know who made the assumption on what basis and could those that are to be persuaded by this model accept the, let's say, unbiased and reliability of those that made the assumption. So in this case the real housing demand that's been estimated by RSW - so if I were sitting on the city council I might be a little nervous and say, "Gee they're working for the client. What does an independent research organization say here or what does my own demographer and planning department say about the rate of increase in demand for dwelling units?" But at least it's flagged here as where did this number come from? And I as the reader can decide whether I will accept that number or challenge it and ask for some other perhaps with a vested interest. The average development pace required by the developer is 100 units a year. Undoubtedly this developer has a staff and he's decided from the business planning standpoint that he has to build 100 dwelling units a year in order to keep his staff fully employed, cover his overhead and get the desired rate of turnover on his working capital. So that's the target. And the benefit factor from that first of all is a risk factor in marketing which says really to achieve his break-even point, he's got to capture about 6% of the available market in order to make and meet his business plan. Capture rate is a current levelment in measuring market risk in real estate. If, let's say, there's a 400,000 square foot demand for office space in downtown Milwaukee and you're going to build an 800,000 square foot building, what's you're really saying is if I'm going to fill it in two years, I virtually have to get all of the available business for two solid years in order to meet my projected goals. When the capture rate, on the other hand, is less than 10% of the total market there's a great deal of cushion for competition. Other people building a similar product and going after the same apple as it were and it's a much more achievable and realistic marketing objective. So capture rate becomes a risk management ratio. The higher the capture rate, the less likely you are to achieve that, given the surprise of other people arriving with competitive products and so on. Well, in this case the capture rate is a realistic 6.3%. The gross site area is a given at 73.1 acres - apparently that remains after everything else has been dedicated off. And of that 73.1 acres the land analysis has determined that a half acre has to be developed in commercial purposes, let's say a PDQ on the corner for convenience. A major road right of ways are going to take 8.9 acres to be dedicated to the public. Open space is 10.9 acres - almost 11 acres, and that presumably is areas with high slope, perhaps a water, wetland situation - other areas that you wouldn't want to develop and if you can put those together into a workable open space program, why that becomes one of the aesthetic amenities of the project. And finally, they've allocated about 1 acre to a community facility of some sort - either a meeting house or a tennis court or swimming pool or something of that kind. And so, as a result, once you remove that there's about 51.6 acres of land available for development. Sometimes referred to as net acres available for development. That comes off the physical plan which we don't have here. The type of units that are being proposed for development are garden departments which are called GA. This particular scheme is going to have 50% of the units built with garden apartments, 42% will be townhouses and only 8% will be single family. And the net density of those is about 15 garden apartment per acre, about 8 townhouses per acre and about 6 single family homes per acre. Fifteen garden apartments per acre is relatively low. That's about 3,000 square feet of land per apartment, that's fairly generous. In Madison you're required to have about 1,000 square feet of land per apartment. So we're talking essentially a relatively low density type of project. California regularly achieved about 35 to 45 apartments per acre, net acres of development land. Packing them and building them fairly tightly and then doing very intensive landscaping between the units so you can't look into the window of your neighbor's apartment and where you have a climate that allows the leaves to stay on the trees or the trees to stay green all year that works. Where you have a climate like ours where a large part of the time, that does not provide a buffer. Obviously, it doesn't work. The six units of single family per net acre however is relatively high. Here in Madison probably it would be closer to 2 and a half to three assuming a lot of the 10,000 to 14,000 square feet. The number of units then that we can get on this particular parcel is about 260 garden apartments, 219 townhouses and only 42 single family homes for a total of 521 units and the acreages are allocated there and approximately 7.1 dwelling units per acre would be a modest density - not a very intensive development as planned unit developments go.

OK. The last of the total business plan here is that the developer expects to be a year in process of getting approval of plats, putting in the roads and so forth. So in project year one there will be no units sold or produced. Entirely budget year number 2 there will be a total of 100 units produced and through project number six which is called a build-out year, the last 121 units will be produced and again that is the client's schedule and it's hoped that he can maintain the necessary production to support his overhead at 100 units per year more or less. The anticipated sales price at the time this was done which was, I think this one is a model that was done about 1975, was $18,500 for a garden apartment. You can multiply that by that by about 2 and a half and be right about where you should be in '86 terms. Townhouses at $25,000 again by 2 and a half, you would suggest a project $65,000 to $70,000, and a single family home multiplied by 2 and a half would suggest what? 65 and 16 is somewhere in the $75,000 range so that's a relatively modest single family home a "starter" as they say. And the expected occupancy per unit is about 2 persons in a garden apartment on the average. A townhouse will have 3 persons on the average and a single family home about 3.5 persons on the average. And that statistic comes from analysis of that particular county and what the pattern of residency is and therefore hopefully is regarded as an acceptable statistic to the planning commission that's going to make the decision on that.

And the number of school children per unit is about .2 of the garden apartment, .7 of a child in a townhouse and 1.2% of a child in a single family home. And, again, notice that the garden apartment tends to put very little burden on the school board, but nevertheless produces a significant addition of tax base and so on.

The other environmental modes that are created by the project are in the table at the bottom which kind of summarizes that they go forward with that mix with, the number of units and the persons and so forth and so on. Then they want to know what the peak traffic will be generated per hour by each unit, in terms of vehicle movement, and therefore load on the collector and the adjacent streets. They need to know what the sewage capacities are going to have to be in terms of gallons of water per day per resident. And, again, the water per residential unit, per gallon per day. And notice those are about equal in that most of the water used is simply used as a transportation medium for the sewage. That the great balance of the water consumption goes right through the toilet bowl or is used to drain the kitchen dish water and so forth. And so one of the great luxuries in this country is using water as a transportation medium for our waste, rather than really using the water to ingest and to cook and so forth which is a relatively minor portion of the total consumption. Other countries are moving toward sewage systems which move the solids of waste and so forth with pneumatic and vacuum systems because that obviously puts much less of a burden on their surface water capacities and does not mean that you then have to process all of that water and clean it up before you can get it back into the natural circulation system. The coverage per unit of each structure is a critical element in determining what the new water runoff will be as a result of rain storms. Each garden apartment will produce 1,277 square feet of asphalt and otherwise covered surface area with a significant reduction therefore in the ability of the open areas to absorb water from rainfall and snowmelt and so on which puts it into motion obviously and means that at some point we have to have a collector that's capable of handling so many gallons of runoff of rain and snow water and we have to have some place to go with it and some way, perhaps, to control the speed with which it runs off and therefore the erosion and other capacity problems of the system.

That gives us a summary then of the loads that have to be accommodated and obviously it's in the public interest to do anything you can to reduce the amount of coverage on the surface, to reduce the water consumption, reduce the traffic loads on the available systems and so on. In any event, you don't want to produce a project which overloads the existing capacity of the storm water or the sewer or the water system to handle the increment in growth.

The impact on the school district is the first one we'll look at here is, "School District Feasibility Based On Current Costs And Residents". School District Feasibility, yea, we'll start there, that's fine - slightly out of sync but that's fine. Obviously, the school board is going to be interested in how they are going to have to anticipate and accommodate the increasing school ? population. Where we have a net increase in school children and none in the first year and none in the second year as people move in but 74 kids show up for registration in the third year and another 123 in the fourth year and so on. And the taxable, ratable base on which the school board can raise revenues to pay for these is provided in terms of the taxable land that is unsold, the site development that has gone into the creation of the lots and so forth. The value of the residential construction and sales and the nonresidential sales and land, if any, and you end up with what's called the total ratable tax base that is created each year to provide a base for raising revenue for the school board. So in the first year, $4,800,000 are generated. By the second year $20,500,000 and so forth, until finally the project's when completed will, in fact, produce what? $116,495,000 of new ratable tax base from these set of homes. The revenue is based on the mill rate for the school board only is then provided. And then they begin to look at the expenditures. There's two kinds of expenditures, obviously, the variable cost of handling one additional or more child and then second of all the capital cost when they begin to exceed the capacity of the existing building. And apparently they'll have to add a classroom we're told as a result of this development and so they're charging the $48,600 a year for the variable cost and the $32,214 debt service charge for creating the new classroom to accommodate this influx of students. That doesn't mean they're going to build one lone classroom someplace but obviously other developments, other things taking place in the community may, at one point, or another accumulate to an additional elementary school and an additional junior high capacity or something of that sort. So remember what we said the other day, one of the real problems we have is our accounting system. How do we internalize into the project the external costs that we impose on other aspects of the community by the creation of our development. And here is one way of attempting to do that. And we ended up with a total expenditures against the total revenues and notice this particular land use mix produces a very decided positive cash flow for the school board each year. Starting as low as $9,000 in the first year and eventually moving up to $16,000 a year in the 6th year with a cumulative surplus by the end of the 6th year of over $100,000 for the school board. As a result, the school board should be favorably disposed toward the project just in helping them solve their other problems by creating hopefully a surplus relative to their budget requirements.

By the same token the municipal government should be ecstatic. In the first year alone they really don't have any new residents, there's really not very much to do while the planners work with the developer and they have a $16,000 incremented surplus. If each new resident costs them another $105 for police and fire protection and library services and snowplowing and whatever else and that, obviously, is a variable cost, something to ? skips in magnitude and scale. Why they are doing very well. Their total ratable tax base is rising and by the end of the sixth year they have an annual surplus of $245,000 and a cumulative surplus of $791,000 from this particular project. As a result, the community is making money by permitting the developer to go forward and make money. Now, by the same token, the developer might decide when looking at this that he is making too much money - that if the alder person on the ward says well, "Gee while you're main street is entering into the main traffic artery in town, we want you to build a stop light for $45,000." The developer can come back and say, "Hey, wait a minute, hold everything here. We've got a $245,000 profit in year 6 when the traffic begins, you can afford $45,000 for a stop light." Now let's look at the relative profits that are going on between what the community's going to make based on its new tax base and the cost of services and what I'm going to make, and, at this point, maybe you ought to invest something in your future. You can buy income stream here by putting in a stop light and, you know, doing whatever else they feel should be corrected as a result of this additional development. Now, of course one of the great ironies here is that the town board is the one typically that gets to approve the planning process. The school board does not. You'll notice the school broad process is present but is relatively marginal. The town board is doing handsomely. The town board may not have any great incentive for changing the land use mix because it can do as well with a single family housing as without and yet they're the ones in charge of the decision and the school board is the one that has to figure out what to do about it. The school board may not even be asked to participate in the planning process. But they will be required, of course, to provide capacities for the children that are brought in by the planning process. Unless the town board is cognizant that something is due, the interaction here between the tax rate which they can charge and the tax rate which the school board can charge, you could actually have a situation here where instead of pocketing the money, the city council simply reduced their mill rate and, as a result, passed back the savings to the taxpayer on their side and the mill rate for the school board went up and then the politicians who appointed the guys on the school board to say, "These spendthrifts aren't doing what they can to hold down your real estate taxes." So there's always that problem that those with the authority to make the decision relative to the planning board may have a narrower perspective as to what is their self interest than those that are all impacted by that decision to permit certain kinds of development.

On the next page we have a brief summary of the developer's estimated costs of development and his total project costs in the aggregate with the anticipation that about a 15% profit margin will be available for him. Hopefully he may be able to take home about $1,745,000 of the total projected sales on the project. Now that's a fairly substantial number in this particular case, it doesn't necessarily show the leverage required because while there's a deduction for the interest expense on his money, there's no revelation of the return of capital that had to be advanced. So his cash flows will, in fact, be less and you have the present value of the distributable cash to the developer to get his real return.

Spread over time, it's a little more revealing on what the risk position of the developer is. First of all, he's going to be drawing down on his land acquisitions - 15 acres at a time. His construction will begin in the second year and his sales start to finally close and produce revenue in the third year, so that we don’t see our first revenues until the end of the third year or $3,354,000. The expenditures, of course began considerably earlier than that. We have the downstroke on the land and the carrying costs on the land. We have all of the various fees that are involved in the process. Notice there’s no off site construction here but most developments often require the developer to extend sewer and water from wherever it stops earlier down the road out to the development and so forth. And, we’re running, therefore, considerable deficit. We have $2,229,000 out the door in the first year and then we have a heavy flood going out in the second year with the development year until the planning year. So by the end of the second year, we’re down $1,992,000 of outlays. And much of that will have probably been financed by the developer. Fortunately, on the third year, we start to make some of that back. But he has to apply all of it to what he owes on the loan, so his negative cumulative total is still a minus $585,000. In year four, again, as a great result, but nevertheless, we have $350,000 positive cash flow throw-off and that’s virtually wiped out by the $585,000 that he still owes from the previous years and so he’s still got a $255,000 deficit. So it isn’t until year 5 that he finally breaks into the clear with a positive cash flow of $350,000 in and a cumulative net after paying off his advanced loans of $115,000 and then finally in the sixth year he does very, very well indeed. He cleans out the rest of the inventory for $1,630,000 and doesn't owe anything on that so it's all positive cash flow. So notice there's a real time delay and as the real estate developer is halfway home and out there in the third year and then suddenly the interest rates change and they move from 9% where people can afford to buy their first home to 15% and suddenly the effective demand for his whole project is cut off. While he has the interesting problem that the expenses to continue, his carrying costs continue, his revenue goes to zero and now his cumulative debt investment starts to build again and perhaps wipe-out and offset his net worth. And this is the really vulnerable area of the development business. The fact that each of those first early years his investment in a future premise that the lots will sell and they will sell for premium prices and this is very quickly brought out by changing monetary markets and so on that he's totally dependent on the interest rates available to the homeowner. Hence, in the early seventies when the condominium developers all went out of business in Florida and some of the subdividers here in Madison went out of business, the simple fact was that consumers could no longer borrow money at a rate they could afford. Therefore, the premise of being able to sell a lot, let alone, collect cash for it, fell through. And all of the business plans that were built on that presumption, were just blown away and so were the businessmen. And, as a result, most of the lots in Madison today are owned probably by the Savings and Loan Association or a good many of them, rather than the original developer.

OK. Now this was one proposal and as I said the internal rate of return here to the developer is 28.8% which ain't bad. I would suspect that it would be certainly higher than that once you corrected for building the whole process without a loan. If we had leveraged this, the rate of return to the developer on a good year would be 100% and on a bad year would be bankruptcy. It's a highly volatile, high risk enterprise. It's obviously in his interest to have different products. If the apartment product is going, you must be able to sell garden apartments. If the townhouse market is moving, you must be able to do that. And if the single family market is in demand, you must be able to offer that product. The object ultimately is to sell off the land. And quite often if you have to build the house or build the apartment building, simply as a way of selling the land. I know it seems ironic, but most of the profit center would be in the land. You might, for example, sell a $25,000 lot in which he would have let's say $12,500 profit and he would then go to all the work of building a $100,000 house on the lot and he would be lucky to net $5,000 on the house after all the other costs had been paid. But in order to move the lot, he's got to build the house. And, as a result, you often get that kind of imbalance in your business - if you're taking terrific risks on the home loan and construction loan and hope that you can sell that house into a segment of the market in order to move the lot. My father was in the paper box and corrugated container business. For years he made all his money on the corrugated paper machine but nobody wanted stacks and stacks of cardboard sheets with wrinkles in the middle until they put corners on them and tops on them and printed them and so forth. So everything he did after he made cardboard was to get rid of all that damn cardboard. And that was the only way he could move the paper. So the building business and the home building business is often in the same boat. That once you have created a very attractive subdivision and so forth, everything you do after that __________ much and quite often you'll be in the home building business and the apartment business and so forth. The greater the diversification of products that you can have, obviously the more stability that you can have and the more response then you have to changing markets.

Now let's look at what the community wants the developer to do with their single family lot for zoning. Under the existing zoning in this particular proposal the community wants single family only and they will permit two different sizes of single family. And so they have a deluxe single family there for about

80% then and somewhat lower cost single family unit. And the prices and persons per unit, the school children per unit, all of the other factors that we had before. Notice the total coverage including all the impervious surfaces of this project at 21.9% is virtually the same as the other project where we have higher density units - in fact it's a little worse than the other project. Certainly the amount of water used in terms of gallons per day per dwelling unit and the amount of traffic generated and so forth is all somewhat greater than in the previous plan. Now as we look at the school district's budget on the next page, we're adding a lot more children coming into the program because everybody lives in a single family home and probably in the child rearing state and at the same time the total ratable tax base is significantly less than before. So our revenues chug along there at Roman Numeral II and our expenditures per child starts to take off about the 4th and 5th years and now if we look at the total expenditures necessary to handle additional capital expansion of our facilities maybe with another couple of classrooms we're at $45,100 for the 32 something. Our total expenditures are taking off and our annual surplus which began so happily in the 4th year turns negative in the 3rd year as the children begin to show up and by the end of the 6th year, you now have a $100,000 deficit cumulative and a $70,000 annual deficit in which the school board has to find funds from other tax base in order to educate the children brought in by this completed single family subdivision. From the school board's standpoint instead of having a project which produces a $100,000 surplus, they have one that creates negative return in terms of cost of service and that obviously politically is not in their interest and financially is not in their interest.

On the other hand, look how the town board is doing. The town board had fewer people in town, and since they computed their costs based on a per capita basis. The result is that while their revenues declined on a smaller ratable tax base, so do their costs and so now their annual surplus instead of being $700,000 cumulative, is $849,000 and $243,000 in year 6. So the town board __________ the loan and the would probably say, "Great, we'll stay on our single family zoning, it certainly doesn't do us any harm and we can use the profit." The trick, of course, is convincing them that higher density and lower school children factor is a very desirable entity. The town lawyer looking at that top line and saying, "Wow, by, let's say, the 6th year we're going to have 970 new residents in town and let's say that 600 of them are voting residents." And the power core in town, let's say, won the election last time between the old timers in town that, let's say, voted 700 votes for mayor against the newcomers in town that had 300 votes. And now they look over and say oh oh here 600 new votes. That's 1,000 against the 700.

They need to decide if they want to put a cap on the whole thing. They really aren't anxious to see a progressive increase of new voters coming into their particular ward which will disrupt their traditional political power base. So the town board may be looking at this not simply on a financial standpoint but from a political standpoint. You know, what is my political career going to be worth if we now have a whole bunch of new young folks with children who want a fancy school and want us to create a swimming pool for the kids in the summer and so forth and so on. And, golly gee that's going to kind of disrupt things around here. Maybe we can have some subdivision regulation that are so onerous nobody will build anything and we can stay in power until our pension is due and really can sidestep all of the issues that would come with growth. So, in effect, they could look very virtuous and say, "All right, we'll stay on our single family zoning only and take a look at the next phase as to what that does to the builder."

If the builder were to embark on that program in terms of his total cost versus his sales revenues he's going to lose about $970,000 on the project and his project sales rates would be way off in terms his ability to market his product and he would run out of money before he finished the project. So that the builder looking at the single family or nothin' alternative is obviously going to take the "or nothin'" alternative and move on to the next township or the next village in which he can find land that is properly zoned for what he wants to accomplish and so on. As I say, the town board is perfectly happy with seeing him move on because that means that the number of new residents isn't going to tip over the political balance that exists in that particular community. On the other hand, they may be a growth minded board but nevertheless, growth minded with a need for fiscal solvency and be willing to re-negotiate the land use mix to somewhere between the single family solution which is disastrous and the heavy garden apartments and townhouse solution which was perhaps too dense for the community and, nevertheless, produces a great surplus. There's obviously room to negotiate here and find that solution which perhaps produces more single family homes but, nevertheless, does not drive either the school board or the developer into bankruptcy.

Now this type of fiscal impact analysis as a way of justifying a project becomes more and more part of what we call the environmental impact analysis of the project. Not only are we concerned with the environmental and ecological systems which may be affected or disaffected by the project but more and more we're becoming concerned with the various fee accounts of the various enterprises that will be affected by the project. Notice one of the major arguments on the convention center project is, "OK, we got two hotels that are a break even at 60% capacity. If we build this third hotel with public subsidy funds, and they have to split the same market they had before, they're all going to be running at less than break even point and the result is that the two hotels that exist will be in for a significant reductions on their tax valuation and a loss of tax revenues on those two hotels may not be offset by any increase in tax revenues on the new hotel." Or if we build a convention center that is publicly owned on land that was formerly privately owned, we're taking money off the tax base and that really should be directly costed to that kind of project. Most real estate today in any community is going to be argued and justified in terms of public regulations on what it does to the fiscal characteristics of those that are affected - the school board, the city council and perhaps the water and sewer district or the parking utility. Notice that parking utility has reached virtually its bonding capacity - that if they were to be required to build an additional public parking ramp at this time, they will be in effect be paying a premium because the debt cover ratio will be out of whack relative to the most desirable interest rate and in addition, of course, the government has changed the rules on tax exempt interest rates for parking utilities in which more than 10% of the capacity is devoted to a private facility and that changes again the fiscal impact of a project dependent on a public parking lot for its viability. More and more the argument is whether a project should be permitted or what size project should be permitted or what mix of uses should be permitted are being decided on the fiscal impact of that project on the various public authorities that are involved. That fiscal impact can be regarded in a very parochial view simply because, let's say, the city council controls the planning commission and they can decide it purely from the city's point of view or it's being decided on a more statesman-like view which says, "Gee we really need to consider all of the jurisdictions that are going to be adversely affected." Can we find a solution to the convention center that respects the county's need to make the coliseum break even? Is there a way of dividing up delegate type meetings downtown and trade shows with boats and sports equipment and cattle and horses and all that sort of thing with the kind of facilities we have at the coliseum. It's a very statesman-like way of saying, "Hey, in defining a land use decision downtown we're having impact on other government entities that are not necessarily represented in the planning process." The county has no opportunity to comment on the size, type and location of the convention center. They can only argue presumably from a rational standpoint that we're taxpayers in both divisions. That those of us who live here and pay taxes in the county as well as in the city and while we may make a small profit in the city, if that makes a county facility go into the red, ultimately we're going to pay for that in terms of a subsidy provided from the county standpoint. We're beginning to understand much more than we ever did before the organic and complex interrelationships of the cash flows of our government and our private sectors and the need to properly internalize the costs of a project at the time we're in the planning process so that we arrive at the optimal mix that will allow all parties affected to remain solvent and hopefully protect that surplus on which they require credibility and then, perhaps, look at rate of return measures of capital efficiency and so on. The question of who benefits and who pays has become very operational in the political process. And some of our politicians are seeing that honestly and directly and others trying to offiscate(?) it with phony numbers and presumed benefits that are immeasurable but, nevertheless, being tallied on the side of the good. Witness, for example, the recent statement by the city planning department that if we build a convention center downtown it will add 600 housing units downtown. Now you read the small print and it says at a rate of 30 per year. Which means somehow the convention center will be producing 20 houses a year or 30 houses a year for 20 years. That cause and effect relationship is highly suspect. Either that is the presumed public benefit of that dollar you're reaching baby, that's a little far out in terms of fiscal balance. How many of you would like to have your apartment directly across the street from the convention center anyway? Obviously, it’s just a short _________, you know, beyond that, it’s very, very doubtful that anybody is going to relocate from the suburbs to live next door to a convention center. The same argument is being made in the building convention center that the office space that went to the west side of town will return downtown. That’s an interesting concept. They went west to find parking is what they suggested and a parking stall that might have their name on it. And now you’re asking them to bring their office back downtown to a convention center which presumably was justified on its ability to bring 10 or 12,000 people to town at a particular point in time and fill up all the parking spaces - something wrong there some place. You want to be very careful on the specious arguments that are made about fiscal balance. Be sure that there is a real cause and effect relationship between revenues and costs because, obviously, those who are opposed are particularly use will exaggerate the costs and those who are pro a certain use will tend to offiscate(?) the revenues. Now easily project over longer periods of time that it is really feasible to do, given our limited accounting and financial foresight, at this particular point in time. Nevertheless, the arguments will made more and more, not on the private investment return, but on, in fact, the impact on the public benefit and payoff on public capital invested. Thank you. See you Monday.

(Referring to slides) . . . program which hopefully would structure a community which balanced the urbanity of a full scale downtown with the best of suburban life and hopefully encouraged political activism and proprietary identification with the town among the residents. And this is just an initial introduction to downtown which is the motel in the downtown area, the village just to the left is the four theater cinema and it is surrounded by low rise office buildings and so on.

The major shopping center assemblage which is Rouse's forte was built essentially in three major stages with the parallel line across the top of the T and initially then the whiter roof leg and finally a major Sears and additional department stores at the final end here. It is tied to the office district in downtown area along the lake by a pedestrian bridge and all of the road systems feed into this particular system. As we pointed out there are very subtle balancing of the parking at different levels so that they can generate a relatively even pedestrian flow into the two levels of the center. And this has become the regional center, not only for Columbia, but for considerable area around in addition.

(next slide) The first point of arrival for the initiate into Columbia is called the Visitor's Center. The Visitor's Center is typical of the Rouse style in that he attempted to economize here - this is a straight industrial steel building, dolled up, put down on the lakeshore. You can see the riffraff along the water's shore and so forth. And it was really designed to 1) provide a slide story and a little amphitheater for the visitor to become familiar with the Columbia story and what it is attempting to accomplish - at the upper level there is a display for each of the builders that buy lots in Columbia and develop homes or apartments to tell their story and show their current models and so on and the lower level is the public relations department that provides a local newspaper, welcome wagon services, a variety of other marketing services. And because he felt that in the long run this lot would be a very valuable downtown site, he wanted a building that was demountable and could be removed and that site developed further toward the end of the final development process in Columbia.

(next slide) This is the interior of that building with current photography on one side, amphitheater on the other and so on. And very inexpensive display space. Each builder is entitled to a cubicle and sales display point. Again, the first office building is a three-story building there which you see is called the Teacher's Building because it was financed by the Teacher's Life Insurance Co. that was willing to take a chance on Mr. Rouse.

One of the less attractive aspects of the downtown early development is extensive parking lots which are not particularly well landscaped and more recent developments have gone to the more Texas style parking ramp tied directly into the structures.

The lakeshore is done with fountains and terraces and they make quite an effort to create a number of civic events so that people become familiar with the downtown center.

This is one of the residential supporting lakes. Again, all of the boats are owned by the recreational utility. This is the American City Building which became the corporate headquarters for the Rouse Company and for the Enterprise Corporation which is a spin off of the Rouse Company which the student spent some time with on Sunday. The Enterprise Corporation headed up by Rouse and, which is his primary drive today, builds specialty shopping centers at selected areas, particularly along the water, such as the one up in New York City, the one in Baltimore, Cincinnati and other areas of that sort, Minneapolis currently has a project. And he takes the profits that are created in that town from the shopping center and plows them back into nonprofit low rent housing, using it as seed money to create entrepreneurial groups among the minorities and among the low income neighborhoods so that they can have some participation in the development of new housing within their area so that ultimately it’s a zero sum game, the Enterprise Company is simply designed to create capital with which to fund the entrepreneurial redevelopment of housing in lower income and somewhat declining areas.

One of the typical office buildings brought in to provide economic base. Recreational amenities of the downtown lakeshore. Again use of the water to create some distance between the downtown area and very high density residential development. Remember if you're going to start a shopping center, if you're going to start a school system and so forth, you need a lot of residents to spend money that will justify merchants leasing space and paying a reasonable rents initially and so the initial push of this development, like so many other new town developments, it's a very high density housing. And then market that to the yuppie market. So this is a very popular place for the flight attendants and pilots and so forth that work out of, say, Baltimore's Friendship Airport. It's a popular area for people who work in Washington in the government sectors and particularly those that are working in government offices that are straight off of Silver Springs North and into the countryside for major federal installations.

One of the intriguing things, that's a relatively old slide of the shopping center, it was before the addition was built on the back and when you go out there now, it's hard to find what looks like that because all of the trees and the vegetation have grown up. It's a completely different atmosphere.

The double level walls, the clock is always a typical Rouse touch so that people can tell their kids where to locate them at a particular point in time. Meet us at the base of the clock, etc.

The fountains again become part of the decor and the sound control and so on. The thing that's always intrigued me is the fact that small children can walk right into the water, there's nothing to prevent them from falling right through. The other thing that intrigues me is the dollar take on the pennies thrown in the fountains. I've never understood that, but if I could have any concession in all of the shopping center I would like to have the fountain. (laughter)

Again some of on the intriguing water sculpture. Now you get the overview if you can remember the schematic that we showed you the other day. The Interstate 29 coming across the top left-hand corner, the downtown connected to that at the north and the south ends by a major connector boulevard which swirls through and which provides a separator between the commercial office areas adjacent to the lakeshore and the shopping center to the north and some of the early residential neighborhoods developing here along the second manmade lake, called Wilde Village with an "e" on it. I'm not sure that's because the plant tenants live there or what. The first of the major developments.

One of the interesting moves that he made was to dedicate a portion of the woods that was immediately adjacent to downtown to a symphony orchestra music pavilion and convinced Mrs.

Maryweather Post to finance that with a charitable gift which further subsidized the Washington Symphony Orchestra, making this their summer headquarters. That's the pavilion. Let's go right on past that.

Now, one of the major problems you have obviously is providing public services, police and fire and so on. It's not something that you want to create really from scratch. So here was an area in which county government stepped in and took responsibility for what we'll called the safety function of government in terms of fire and police, and Rouse contributed heavily toward the development of an adequate capital base to these facilities, building the fire stations, helping to purchase the fire engines and, in effect, keeping the cost impact of expanding these services rapidly internal to the community so that the balance of the residents in Howard County were not feeling imposed on by the necessity of raising their taxes and funding services, obviously, for the Johnny-come-lately in Columbia.

This is a medical center developed in conjunction with John Hopkins and the front building is part of the outpatient medical clinic services, the back building is a general hospital that handles the run of the mill type of things and then more serious situations and special situations are then referred back to the John Hopkins medical complex in Baltimore which provides a superb medical package to the residents. Indeed, one of the major incentives for the people living in Columbia has becomes the desire to be within the service network of the HMO which is not only reasonably priced but has gained a reputation for house-call service and rather high quality medical element so that a prospective resident has a choice to living in a subdivision that perhaps merely adjacent to or even totally surrounded by Columbia but not within its jurisdiction and living within the Columbia network, they would prefer to live in the Columbia network, simply to quality for the benefits that go with the territory.

One of the major coups initially, of course, was securing an industrial base. Rouse did not simply want to create a bedroom community which stole the upper income residents from Baltimore and Washington, he wanted a totally self contained element and about the time he began this, General Electric was searching for an environment in which to locate all production of appliances on the eastern coast and so they centered their appliance park facility in Columbia, requiring an additional 1,500 acres of land to be purchased by Rouse to accommodate them. And so very early in the game he had an initial industrial base and economic base and additionally a high silhouette quality tenants in his industrial park and he was able therefore to avoid being labeled simply as a residential bedroom suburb in newtown close.

Since then there's been tremendous expansion of the industrial park. Much of it is in the wholesale distributing. Major importers of foreign cars and foreign appliances and so forth find the Baltimore port extremely favorable in terms of handling the goods and you have here in Columbia access to about 35,000,000 people within about 300 miles so that it becomes a major distribution point for imports and wholesaling of all types.

The second major component once we move from the downtown is the so-called Village Center. The Village Center represented those kinds of things which require a basic aggregation of population to support a high school, to support a community shopping center with super markets and drug stores and all of the related elements that can support a church, that can support a junior high school, that can support other public facilities. Again the concept was to create one in which the car was immediately adjacent to it but not passing through it - that the internal portion or character of the center was essentially pedestrian. The second thing they wanted to do was provide joint services where there was a time match, for example, a parking lot that was suitable for a church on Sunday, could be supportive of the high school or the shopping in their respective schedules. High schools might need a parking support during the major part of the day Monday through Friday. The shopping center needed overload parking capacity on Friday nights and Saturdays and so on and rather than pave the world with asphalt, you wanted to position those kinds of facilities so that they could be complementary to and provide a time match in terms of the use of the facilities. There was also the desire among the sociologists that rather than having each village become relatively provincial and out of touch with the other villages, a way of encouraging some sort of interaction among the villages. So each one was selected for a specific unique facility. One had the indoor ice hockey rink, another might have the bowling alley, another one might have a major indoor natatorium with swimming programs for adults as well. And therefore you would begin to encourage some interaction so that people in other villages that wanted to bowl had to go into the one where the bowling was and in the process they begin to meet and become familiar with folks from the other villages and, for that matter, other neighborhoods than their own. So one aspect of the village center was to encourage that kind of interaction among the villages and certain facilities were set up to be unique within each building to cause that kind of interaction.

Let’s take a look now from the schematic to the reality of it. Here is the one of the very first, notice at the very top center the Junior High School to the right center, the Senior High School sharing certain playing fields and certain open space where the woods are and so on and notice the high school's immediately adjacent to the wagon parking for the shopping center in the very center of the picture. The shopping center - the green corner that's there at the intersection was reserved for a church site which has been built since this picture was taken. Again notice the mix of housing units in this lower area - a early apartment project three stories high which, but then again, this picture was taken, they were relatively bare of ivy and so forth and the design was often referred to as early Russian Renaissance and there was a little lake. They have since gone in and redone the exterior surfaces of that and allowed the ivy and the landscaping to grow up and they're relatively attractive and acceptable buildings at this point in time. Notice the high rise on the next corner with, as you'll see in a moment, some condominiums at the top, the main collector street wandering through the development there but not through the shopping center and in a moment you'll see that going under that are a series of pedestrian underpasses so that as a trail system, you can walk from each neighborhood to the major shopping center without actually having to cross the major street, you can go under it instead. One of the experiments is - notice along the lower edge of the main traffic collector is another two-lane road and that was to be reserved exclusively for the bus transit system. The theory was that busses if they can move as quickly or better than cars will be a more attractive alternative to everybody taking their own car and so they tried to design a transit system in which along the major arteries the busses had their own traffic land and therefore would not be delayed by traffic or automobile congestion. That idea did not work. People still continued to use their own car and that has since become bicycle trail and so forth for the community - but that was the original concept.

The arrival point here with a children's tot lot in the middle with supervised play and the entrance into the internally oriented shopping center around an inside patio.

This was the first of the shopping centers. It represents a number of design philosophies. One, to make people feel comfortable with shopping centers you want residential textures and materials so you have hand hewn beams, you have light textured surfaces. It's a relatively mild climate so as long as it's under a roof and protected from the rain it doesn't have to be glassed in, and you have a domestic kind of yard just beyond there with the grass and landscaping and so forth.

One of the things that any building must do as a public building is read well. People have to understand how to get to and fro. Here was a stairway coming down and it sort of got everybody and saying, "Yoo-hoo, there is another stairs and here's how you get there," sort of thing. Compare that, for example, to the Humanities Building which nobody can figure out. The Humanities Building is really poor architecture because it's not self explanatory. You're not quite sure how you get from A to B and, in fact, in some cases, you can't get from A to B without going outside and starting over. And so begin to critique a building. Does it explain itself well? Do you understand where the elevator is and where the stairwell is? And where the entry points are in terms of where you came in and how you get out and what level you parked on? Look at how often the people have rather primary colors on each level of the parking ramp and the last thing you see as you get into the elevator is, remember you're on yellow level or you're on the blue level, and so forth and getting you to become oriented and, obviously, reducing your sense of stress, "Oh my God, how do I find my car now?" or being embarrassed by having to walk through three levels of parking to discover where it was you left the automobile. Well, you do that a couple times, you don't come back. And the whole objective of the shopping center is to get you to come back frequently because you feel comfortable there and to stay as long as possible because the longer you stay, the more you spend. And, therefore, the building should be - so it's the very simple design details that have a lot of meaning behind them.

The exterior here is again attempting to create a village center atmosphere.

Again a few design tricks that are all very intentional. One, domestic character in terms of the texture of material - white brick and shingle is very indigenous to the area. Notice the commercial using wood framed windows and then across the top having a mansard-type freeze on essentially what is a flat-type roof, again, to provide that shingle texture that is more characteristic of domestic rather than commercial buildings. A subtlety for those of you who are a landscape architect, notice there's a small concrete edge on either side of the sidewalk, properly done that is about an eighth of an inch higher than the asphalt and as the person who is sauntering along's foot touches that concrete their directed or channeled back out on the asphalt and you don't have the grass being worn away where the asphalt and the grass come together and the pedestrian is a little sloppy as to whether he is walking on the walk or on the lawn. Notice the green grass comes right up to the concrete - nice clean edge and that little subtle turn of the ankle gives you just enough of a signal to stay on the walk and off the lawn without having to really be conscious of doing that.

This is a center plaza which has had art shows and so forth. Again, notice it takes the eye, guides it right down that strip and there is then a walkway that goes down, eventually comes to the underpass over to the apartment district - there's a condominium apartment building on the far side with 2-story townhouses at the top of the building.

An art show on that same plaza.

One of the elements that they tried to do was bring the various kinds of fast food and filling station kinds of things into harmony with the balance of the area. In this case the fast food people are clustered around an internal patio which you can arrive at by foot from the high school, the shopping center, the junior high and so forth. Or you can arrive by car using the same parking lot that you would use for the shopping center or the high school and again the signage is controlled, the lighting is controlled so that it's down lighted and you don't have magnificent golden arches broadcasting all around the world and so forth. And whatever special of the week is on is on an inside panel on the inside of that patio wall so that once you're within it, you can find out that ice cream is the special of the week or whatever but the advertising isn't allowed to intrude on the passerby.

Here's one of the early churches in the area. We mentioned earlier that one of the things that failed here was the expectation that people would be relatively rational about the use of limited resources in the church and that we could use ecumenical buildings that all faiths would be able to use a room of appropriate scale to their congregation and that didn't work at all. People wanted to spend their capital on a building that had character and codes to which their particular faith related and they had to go back and help a good many different faiths construct churches and reserve sites in the residential areas for that.

A filling station, again, trying to pick up the domestic and barn rural, semi-rural characteristics of the area. Notice again the softening, the Gulf symbol is there but all they're advertising is internal to the structure.

A second shopping center was then developed for the next village and in this case it took advantage of what had been a magnificent dairy farm with some major farm buildings and silos. The silos are used in pylons to identify the area that verticality that is an accent that's important to this type of architecture and then they picked up on the barn theme as we'll see in a moment to create an inside timber-like mall.

Notice, McClear(?) stores coming in. One of the things that they have done is systematize the shopping center to get rid of the trash and so forth. Beneath this particular shopping center is a trench with a conveyor type system, corkscrew much like an automatic stoking machine for a coal furnace. People dumped their trash from their store into a little trap door in the floor that moves it down into this steel container which is then picked up by a truck and you don't get the vermin and the rats and the cardboard boxes and the orange peels blowing in the breeze behind the center. It’s a nice, neat, totally enclosed system.

One of the things they discovered was that there was returning to the American lifestyle a desire for some people to be able to run their specialty store, let’s say a sewing machine store, or a fabric store or whatever, and live above that store as it became a mom and pop or family effort and so their additional shopping centers - as did restaurants - include living quarters above the stores which are either affordable by the owner/manager of the store or by some of the sales clerks often, people approaching retirement who work part-time as sales clerks and live in the immediate area adjacent to their unit.

Another fountain where children ride their bicycles through - internal to that center again.

OK, the third design module is the so-called neighborhood unit. The neighborhood unit relates to several very small scale public facilities. One is the elementary school, the second is some sort of recreational facility which includes swimming pool and tennis court - outdoor swimming pool - probably some park facility and perhaps a PDQ convenience-type milk depot outlet and possibly also a church - small denomination church. Again, the automobile is not to be intrusive. The automobile is to run tangent to that area but not through that area. And the walkways and bicycle paths and so forth are again designed to allow the neighborhood and particularly the children to filter into this area without having to directly cross a major traffic artery. And, again, some of the facilities will be complementary to one another. The elementary school can take advantage of the swimming pool or the tennis court. The PDQ can perhaps take some advantage of the parking. The school can take partial advantage of, say, reserved park area for botanical studies or whatever. Let's take a look now at how well it's executed on that schematic.

Here is a typical neighborhood center and at the left center you have a swimming pool, tennis court, a small brown building which is a community building where the cub scouts can meet and the neighborhood can have their association meetings and so forth. Right to the front of that sharing the same parking with that facility is a PDQ service type facility. Notice the road coming in off the main collector street is a cul-de-sac so there's no through traffic other than that going directly to the elementary school at the top center. The elementary school, obviously, has open space which is supportive of the school program, but in the summer and the rest of the hours, it becomes playground for virtually everybody and open space for everybody in the immediate neighborhood. The single family homes largely are on cul-de-sacs so that they are not facing major traffic going by the front door and the whole element is tied together pretty much like the schematics suggested it should be.

This is a little close-up of that particular school which is not on the open plan on the inside.

This is a Montessori school which has been also gifted a site so that people have alternatives to the traditional public education. The education system, aside from the private school, is run again by the Howard County School Board. Again, Rouse wanted to avoid competition with or the need for creating new public institutions which really weren't very efficient in terms of fragmentation and, in addition, tended to have created a standoffishness in terms of the other residents of Howard County so you wouldn't have gotten that cooperation in the total development process. And it was important to work cooperatively with Howard County Development Corporation and the essence of that was of course not threatening the authority or the pulse and visions of the county that had already been established by police commissions, the school board, the planning department and other groups of that sort that were just beginning to convert a rural county to an urban county.

This is the neighborhood swimming pool with the neighborhood meeting room building and bath house directly behind that.

And here's somebody just, obviously, out of cold beer headed for the PDQ.

The playground supportive of both the school and available as a resource to the kids just playing in the neighborhood. And one way of conserving the woods and keeping it off everybody's tax base is to dedicate part of that natural remaining woodland to the school board. It's part of the school site and is therefore their responsibility from an insurance standpoint and so on. But it becomes a common resource to everybody and is part of that overall goal of trying to do as little damage to the ecology as is possible when you're converting it from rural to urban in character. So that if you have a nice little patch of woods, put it into a common ownership form of some sort where there is financial responsibility and maintenance responsibility but, nevertheless, access for the community to enjoy.

Again here is part of that pedestrian system we were talking about with simply using large concrete sewer pipe as a way of creating passage ways underneath. Note the little concrete scuffer for handling rain water without erosion going down this slope and you'll also notice that around the trees there's no grass. My first trip out there I met with the folks that were setting the town and they had a crew of about fifty guys out cutting grass and most of them were trimming by hand around the trees and we told them about athrezine and what every farm boy should know I guess about control of that. And they were so appreciative of the fact that that represented substantial savings for them, they spent the rest of the day with me, giving me the story of Columbia.

Here's again a little smaller pedestrian system taking advantage again of a walkway going into one of the apartment complexes and under the collector street going by.

These were some of the early apartment buildings - rather ugly all things considered. Those have been considerably softened by changing the textures outside, some shingles, some clapboard, and so forth, certainly changing the paint style and then allowing the ivy to grow up over it and make all the various _____?_____ acceptable. I took some additional pictures out there this last Sunday and, we'll have to feather those into the slide presentation so you can see the before and after. Rouse took a very strong position, however, that he wasn't going to intervene too strongly on the design of the building. Remember, his business is selling lots to builders who will, in fact, build the houses or build the apartment buildings and operate them. He felt that it was sufficient that he could market a new concept in terms of where to live and that if you tried to also market designs that were new to the area and didn't necessarily reflect the traditions of the area, that that was too much of a marketing problem and that he should allow the builders who were successful to market that which had made them successful and not meddle in the design process. And so aside from siting and determining the density of the structures, the builders were pretty much allowed early on to build what they had been building elsewhere and which had proven themselves to be acceptable in the marketplace. Once he saw what he had done and decided maybe the builders could use a little guidance into the twentieth century, they took a little stronger philosophy in terms of design control than they had in the past. But I think that you can understand that a project that is starting out new and has nothing there and you need someone else to build it for you, that you're not really going to try to meddle in their business very much and discourage them from trying a new site, a new location that was as yet unproven. And hence the Rouse people were greatly praised for their financial structuring and for their physical layout on the land and loudly damned for a good deal of their early architectural products when, in fact, it wasn't their architectural product. It was people who had bought the site and developed the buildings accordingly.

Here is a somewhat more recent shot on the same group with the trees starting to forgive everything.

Ivy is probably the single greatest contribution to urbanity that we have in this country.

More recent units are fairly exciting-type townhouses. This is a relatively modest first-time buyer unit - one car garage, a common wall with the unit alongside - but notice the garage is being used as a way of controlling the sound transmission. A private front door, the white brick again is very characteristic of the Virginia/Maryland colonial architectural traditions and here using the narrow house, then you use the clear stories - that's actually a bedroom over the garage so that's really a two-story home.

A little less expensive group - doesn't get the garage, they only get the car port.

This was one of the early efforts at an interior swimming pool without building a very expensive internal building. That's a wood frame, canvas roof. The water is heated. There is a hot water radiant heating in the concrete around the pool and the purpose of the canvas is to trap that heat inside so that you can use that for a much broader range of the season than simply June, July and August. You probably extend the use into early November and probably start using it again in April and it was an early design concept by which they could expand to an olympic size pool at a relatively lower cost in place, than building a whole new building.

Again an interior ice skating rink in one of the villages for both the junior high and hockey league and figure skaters.

Skating on the lake in front of the new town. And that gold statue over there is called the people tree and it is the logo for the Columbia/Howard County Development Corporation.

Those are some of the larger houses built along the golf course. (It’s a topsy turvy world out there.)

The golf courses - all of them are publicly owned by the recreational utility which owns the tennis courts and so forth as well. And the capital costs were all funded by a bond issue - tax exempt bond issue - issued by the recreational utility. The ongoing maintenance is a matter also of both assessment and green fees and the course tends to wander through the project in such a way that there are a number of points of entry. These were installed right up front. It wasn’t the case of a plywood sign - future site of 18 hole golf course and so on. Those amenities had to be in place for instant gratification of the new residents.

Here’s a night view of the downtown area with the American City Building in the background and the darker area in the foreground, of course, being the water of the lake.

One more set of slides there. While they’re putting in a couple more residential slides. Let’s evaluate what Columbia has been able to prove. It was initially financially successful and did very well until the very high interest rates of the early 1980’s which virtually crushed the purchase of new construction family homes. The absorption rate fell and it was necessary to restructure Howard County Development Corporation to a degree that the Connecticut General Company now controls virtually all of Howard County Development Corporation. The rate of inflation however really bailed Connecticut General out. One of the unique features of the Connecticut General loan was that the interest payments on the loan would be postponed and added to the balance of the loan. And about the time it became necessary to start making the actual interest payments they fell into this malaise of not being able to sell houses because of the interest rate, Connecticut General was able to restructure. Howard County Development Corporation in the mean time, because of the land and in order to accelerate development had actually gone out and built many of these early apartment projects. Investors were reluctant to build apartments in a new town before there was adequate proof that people wanted to live there. So to put some money in the tambourine, Howard County had built large numbers of apartments - several thousand apartments as a matter of fact - and financed them with another life insurance company. Life insurance companies that were not willing to lend on new towns, and so forth, but would be willing to make a 7%, 35 year loan in the early 60’s on an apartment building, particularly when the two partners were in part heavy as Connecticut General is and the Rouse Company. The tremendous rate of inflation that cause the interest rates to rise and therefore squash the home sales obviously also caused a tremendous increase in the property values of the apartment projects built in the late 60’s, early

70’s. And, as a result, the profits made on the sale of investment properties by Howard County Development Corporation was able to, in fact, reimburse Connecticut General for the advance of funds when the interest rates were technically beyond the operating revenues of the development company. So Connecticut General has come out of it reasonably well. Howard County, of course, continues to pay fees to the Rouse Company to operate the development process and so the Rouse Company has done very well too, not because of their long term ownership in the property which they largely lost in the restructuring, but because of the fees paid for leasing, property management, financing, construction management, planning services provided by American City Company and so on. And so they really demonstrated that one of the reasons for controlling a project of this size, is not because of the long term investment values, but because you control a captive customer for services and as long as you’re in control of the management of the enterprise, your ability to select who will provide the expertise becomes a major profit center even though the real estate itself may be performing marginally or negatively, for that matter. And so the Rouse Company has done very handsomely even though they have been essentially excluded from the long term ownership as a result of the financial problems in the late 70’s/early 80’s.

Now, what have they been able to do or where have they failed? Rouse feels that one of the areas in which they failed was to achieve a cross section of our society in terms of low income who, through the normal stages of income, and in terms of demographics. Essentially we have a yuppie population, the vast majority of them have college educations, they have, you know, relatively high disposable incomes and Rouse never did find a way with the end of the federal program subsidizing rental housing to be able to build either for ownership or for rental, residential units that were suitable for the low income family, even the policeman, the fireman, the kinds of folks that are very important citizens within the community, but it’s very hard to build new and deliver it at a price which a fireman or policeman and city worker, and so forth, can afford. So Rouse feels very badly that he has not, in fact, been able to achieve the full degree of social integration that he wanted to accomplish. He was dependent on the federal subsidy programs and as you know Nixon pretty well killed those as an effective tool for new town development.

The second thing that they discovered was that they were not able to create the social stability that is implicit in really the environment to bring up children - that it is important to grow up in a town in which your parents and your grandparents are known - in which you’re recognized by the butcher or the baker as being so-and-so’s son or daughter. And that there is, in fact, a social restraint and a social behavioral system that is imposed by that kind of tradition and recognition. That anonymity tends to encourage social irresponsibility. And the anonymity of all being new in a town had its interesting reverse consequences in that if you go to a city council meeting, the individual that decides his opinion carries more weight starts out with, “when I arrived here three years ago” you know. Which would be the same thing in Boston as saying “my grandparents or great grandparents stepped off the Mayflower,” you know and therefore I have authority to speak on the subject. And that the need to establish that kind of social hierarchy and credibility led to that sort of kind of positioning. If you were there six months you were a native and therefore presumably entitled to have your opinion carry more weight. So the teenagers had a terrible time in Columbia. For one thing they were bored, it was a relatively homogenous kind of community - everything was new, everything was laid out for them - it took no imagination at all. You stepped on your front porch and tried to decide to go to the golf course, the tennis court or just hang around downtown in the mall and so forth. And really it doesn’t require a great deal of imagination when it was all laid out for you. As a result, they had excessive problems with delinquency, drugs, drinking, all of the kinds of problems that beset the high school. But Columbia had a worse record than many others that had less resources and less income and, for that matter, less parental concern than they did. And it was the same kind of record that characterized the new towns in Scandinavia and England. There is something important about historical roots - about lineage and the necessity of identified with the community rather than simply internally motivated family unit which has very few or very strong ties to other families in the area. And a new town can't replace that. They discovered that and they're not quite sure if there are any artificial devices which control that.

A third element that has fallen apart and they've never been able to make it work is public transit. They had always hoped that this would be a one car town in which you could rely on a public transit system to interact throughout the rest of the community. They have tried dial-a-bus, they have tried, as we saw, special lanes on the road to facilitate high speed bus transit from one point to another. They have gone to a Volkswagen style, you know, custom bussing. Drive right up to your door on radio control base and all that type of thing. And they continue to lose money and continue to fail to have public transit catch on.

The positive area has been in their ability to deliver a series of software features that are urban. The medical system, for example, is excellent. The support system for new residents and for elderly, and so on, is excellent. The ability to get people involved in government has worked out just as they hoped. The city government of Columbia has more expertise at their control, more enlightened committees working for nothing in their areas of expertise, whatever it may be, than virtually any town in the U.S. And they say it is really amusing to watch a developer come into the planning commission and have a group of highly trained people in urban planning, and so forth, pick his plan apart, rebuild it for him, and then decide what part of it they would like for the community and generally a developer will have a few gimmes in there to bargain with - they pick all the gimmes up immediately and then get down to negotiation and really nail him to the wall and so many of the parcels that were bypassed originally because Rouse was not able to buy them in that original push. That has been totally assimilated in Columbia because when the developer, in fact, got around to developing those things, he found out he had no choice. The market demanded to have the same character as Columbia that surrounded it - that it be part of the medical system, that it provide the same kinds of amenities that Columbia did. People wanted to use the golf course, the tennis course and so forth. So he really had no choice but to come with his hat in his hand and say, "OK, what's it going to cost me to be part of Columbia?" And they would tell him what it was going to cost him to be part of Columbia and they would simply assimilate that land into the master plan and proved really that the necessity of controlling all of the land immediately wasn't true if the development was so superior on the parcels you did control, that those who had held out found it in their advantage to become part of the total program and not try to go their own way. So that part has worked out very well.

I believe the population is about 75,000 presently in Columbia with another 25,000 to 35,000 residents to go before they ill be built out. One of the elements of the plan has been that all around the borders of Columbia the land is in public ownership and part of the park system and so forth, so that it will, in fact, stabilize at 110,000 and that if you want to have the same environment, you'll have to start over someplace else, thank you, we don't want a town which simply continues to grow because it's good until, in fact, it has grown to a point where it no longer has the character that made it good in the first place. So there is, in fact, a territorial turf which puts a limit on growth automatically and no one has to make that decision arbitrarily and whimsically at some point in the future. OK, I quit. See you on Monday.

. . . and provide a number of projects that demonstrate that first in a fairly simplistic and obvious vein and then one in a somewhat more complex adaptation to context in which it will operate, particularly the political context in which it has to operate and to do that we initially want to look at a project in Chicago called Water Town Place which is a classic example of “highest and best use,” and then we want to look at Faniel Hall in Boston, another Rouse project which is a classic “most fitting use” adapting to the environment and the structural historic buildings that were already in place and which we conserved and then three, we’re going to look at the Galleria in Philadelphia as a rather interesting solution to the political risks inherent in a project as opposed to the more typical marketing end and financial risk inherent in the project.

The project in Water Tower Place as you see here is on upper Michigan Avenue. A big John Hancock building is right behind that, behind that’s the Playboy Tower and the Drake Hotel as you move toward the beach in the upper left-hand corner. And we’re going to be talking about that centerpiece project which at the face is a vertical, regional shopping center. The next few lines in sort of the lightish greenish blue is office space, on top of that is the Ritz Carleton Hotel with a public space under the tan roof and the towers of the hotel coming up to the first band and above that, condominiums. So that essentially it is a, obviously, highly mixed use project. The site was a relatively unique anomaly in the real estate market. It had been a private park for the family and little children of Edgar Brofmann who you all have supported. He’s the owner of Seagram’s Distilleries and while his children were growing up and they lived in their little modest lakeshore condominium, he needed a playground for them so he continued to own a vacant block of land that had a tennis court on it for him and a sandbox and an asphalt bicycling court for the kids. And when they were finally were able to pedal around town on their own he found it opportune to sell the site which had appreciated just incredibly since the time he had bought it anyway. He has a king Midas touch and he sold it in 1969 to Phillip Klutznick. Klutznick was at that time, and for many years thereafter, the head of something called Urban Investment and Development Company. And Mr. Klutznick had also a king Midas touch in which he had specialized in shopping centers in the midwest region and also did a new town called Parkridge South, south of Chicago. And the Klutznick family has been very active in all matter of real estate but preferred large-scale long-term projects. There aren’t too many companies that prefer to do that. The kind of thing in which it might be ten years from the time in which you started until the project actually came out of the ground and generally represented a fairly complex combination of uses and urban redevelopments and so on. They did Mile High Center in Denver. They did the Copley Plaza project in Boston and typically took a rather daring view of life because of the fact that real estate had its cycles. They always wanted to begin a project at the bottom of the cycle when everybody else was discouraged and depressed. He said, "That's the time to begin. Then when you come on stream with your project, they're now riding the upturn of the cycle and you hit it right at the crest and your marketing program is most favorably sold." Well that takes kind of a guts poker attitude to borrow a couple hundred million dollars when everybody else says the world is coming to an end and the sky is falling and Klutznick says, "Great, now's the time to start another project." And that was his basic approach. But he was also a master at doing it with other people's money and locking them into the project, so his initial move in this case was, first of all, to enter into a 50/50 joint venture with Marshall Field and Co. Marshall Field and Co., as you know, was down on their luck and had one time been the 100% corner down on State Street in Chicago and they felt that the upper income market that they wanted to reach had been moving North. And they wanted to be on North Michigan Avenue to maintain contact with that market. And Klutznick felt that what was needed in downtown Chicago was a regional shopping center like the ones you could find in the suburbs. But, obviously, you can't do that because you're not going to find 100 acres of ground in downtown Chicago, so it had to be a vertical, regional shopping center, which is a fairly daring concept. Because people typically didn't move well vertically. People move along a plane, but people don’t want to go upstairs or downstairs. They don’t want to get on elevators and escalators and things of that sort. You really have to trick ‘em into through, obviously, design and singular attractiveness of the merchants. So, at any rate, he decided that’s what he wanted to do on the lower level. He had paid $20 million dollars for the land. So having paid $20 million dollars for the land, he really started backward. Most of the time a good developer figures out, “OK, what’s the investment value of my project going to be? What’s it going to cost me to do that? And the difference is the maximum you can pay for the land.” So in effect the design sets the land price. Here he was working backwards. Mr. Brofmann had already set the land price. If you want to control this with $20 million dollars - take it or leave it - he took it. So now, in effect, he’s got to pile one use on top of another which will allow him to beat the price of $20 million dollars. Classic “highest and best use”. You’re working backwards to maximize the number attributable to the land, rather than going the other way around and saying what would best fit in this area and now what can I afford to pay for the land given that objective in terms of use and scale and so on? So now he starts out with a regional shopping center, looks around and says, “Do we need more office space?” And at that particular point in time, Chicago had a glut of new office buildings coming on board so what had been a traditional office market with John Hancock right along side of him, he said, "Gee, I don't think I'll build much office space. I'll do two floors for doctors and psychiatrists that take care of the rich in the neighborhood and maybe put my own office in that space and that's enough of that." And so that's what they did. Now he said, "What else do we have in the area?" Well, we've got rich in the area and rich have rich friends so we really ought to have a classy upscale hotel. At that point in time the Drake Hotel was being considered for purchase to be demolished and replaced by a major office building as well which is one of the things that discouraged Mr. Klutznick about office buildings. But he said if the Drake goes which was one of the premier hotels in Chicago, not to mention the world. He said, "We really need another premier, you know, top of the line, $200 a night on up type of thing and what's ritzier than the Ritz Carleton?" And so they got the Ritz Carleton franchise and said, "Fine, we'll put that on top of the shopping center and the office space" and so, in effect, he's looking for market niches that he can fit. Now he says, "I still can't use all of the building envelope capacity. Now one of the interesting features of the site was that the front half of the site had a limitation on how high it could be because the John Hancock people had used Mr. Brofmann's site as a staging area to build their building and had bought from Mr. Brofmann previously an air rights limitation on the site which makes the $20 million dollar price even more surprising so that nobody could build and block the view of the John Hancock Building from downtown Chicago. So once he hits that maximum ceiling, the Hancock people own the air space over that site so in the back half of the site, which he had bought from another piece from another owner, he could then set that tower back and 2 things happened. One, it can see past the John Hancock Building to the North and the water and leave the John Hancock Building available and two, it allows him to separate the entry way to the shopping center and the office space from the entry way to the hotel and the condominium and stack one on the other. And he said, "Gee I've got maid service. I've got all of the services that go with the hotel. That would certainly be nice to provide that service package to residents. It's also a residential area so I'll use the rest of the space envelope available for condominiums and stack the condominium load on top to hit the market niche that's a little iffy and, as it turned out, a little slow in terms of the marketing. So, in effect, the marketing opportunities or niches that he perceived as immediately available really determined what uses got stacked on the site and he had to keep staking uses on the site 'til the net residual investment value of the land exceeded $20 million dollars. Now having arrived at that decision as to what to build, the problem was now how do we make the shopping center work?

First of all, as we look at a cutaway of the building we have in the basement some parking and so forth below in the pink which is below street grade. Then going through the middle of the building you'll see that little white space just above the pink which is a break essentially in the dark brown band which represents street level there and that's a drive through that is 5 lanes wide. So with the streets one-way on each wide. You come in on the south side of the building with your taxi cab and unload either into the shopping center which is on the left side or onto a preliminary lobby area to the hotel on the right side or a lobby area for what is essentially a legitimate theater on the left side. Above that all of the light gold is retail. We're going to talk about some of the design problems of that. Then you have the two floors of office space which are the light blue and then you have the Ritz Carleton's public space. Well as you know hotel meeting rooms and lobbies and so forth have to be clear span spaces and if you're going to have a clear span with no columns cutting it up, and so forth, you can't really afford to build anything above it because the cost of building a truss that would carry the weight of a major building above that truss just becomes prohibitive. So typically hotels just like this auditorium room is pulled out from under the main building. You got to close out the meeting room. So by setting the meeting rooms on the west side of the building which was already constrained by the air rights to the benefit of the John Hancock Building, they utilized that space - classic example of fitting the spatial envelope that was available on that particular site. Then the hotel rooms themselves are in the back side of the site in kinda cool blue and then the gray area above that is the condominiums. Each of those uses - it was important to separate their entrances. Obviously people that are living in a snooty condominium don't want to ride on the elevator with a bunch of convention goers in the hotel. And, as a result, the hotel has its own lobby on the corner of that drive-through portachair for the cars. The condominium entranceway is at the back of the building which would be the far right of the building loading off the back street. So the condominium system has its own set of elevators serving the top of the building. The hotel has its own set of elevators serving the guests at the hotel. The office space has its own set of elevators on what is essentially the far left-hand corner of the building on the North side with its own lobby etc. so that office users have their own arrival point, their own elevators and they don't have to mix their tracks(?) and then the shopping center - each of the major department stores which would be Marshall Field and Lord and Taylor facing Michigan Avenue have their own internal vertical elevator system.

But in addition each of the floors of the department stores will open out onto the shopping mall, as it were, on each floor and the mall itself will have its own elevator system for people that had no particular store that they wanted to go to but wanted to mosey through the general shopping center area. So you have a whole series of vertical transportation systems that serve each of them and we'll look at some of those a little further in a moment. The total amount of shopping space here - there are 2-300,000 square foot department stores - Marshall Field and Lord and Taylor stacked vertically. Then they added to that another 700,000 square feet of retail space. So you've got almost a million 3 in retail space which is one heck of a major shopping center. And the rents started out initially and these are net of all operating expenses which they share at $15 a square foot up to as high as $45 a square foot for office space. Now you can add to that approximately $18 a square foot as their share in the operating costs of the retailing. So when you put all of that together - if you have a specialty shop that's paying $36 a square foot for space - let's say $18 for the net rent on the space and $18 as their share of common expenses and they had a 2,000 square feet of space, they would have to net somewhere in the neighborhood of $900,000 a year or $300 a square foot. And that's pretty heavy retailing. And yet a great majority of them do that and exceed it. McDonald's for example will exceed that by a significant number.

The exterior has been roundly criticized over the years. One of the problems, of course, is that retail design had moved away from any fenestration to a point where they wanted solid walls all the way around the building so that they could have their storage and tapes(?) worked up against the walls with the shopper kind of in the middle so you don't want windows. This is Michigan Avenue's front facade and one of the critics, Paul Goldberg, from the New York Times labeled the marble facade as dreary and portentous Russian Renaissance. One of the Chicago architectural critics called Watertown Place the everything - a building that provides Michigan Avenue with everything but architectural or urban grace. What can you say about a slender vertical slab 70 stories high weathered uncomfortably to a horizontal box, housing shops and an atrium. It's a slab slapped on a box and that's about it. Another critic wrote you have to go back to words like "vulgar". Watertower Place goes beyond the point where vulgarity in the grand scale can be called a style. Klutenick, of course, argued back, he said, "Wait a minute, what can you do about this, retail type structures tend to be boxy and without fenestration and so forth." But in any event the building was regarded as, you know, a success financially and a very insensitive building in terms of its massing and its material facade.

One of the areas of intricate sensitivity that I don’t think most critics caught onto was the fact that you had to move people two floors up from Michigan Avenue into the main shopping mall and people don’t do that very gracefully and particularly when an escalator you have the phenomenon called parallax in which if you’re standing at the bottom of something looking up like that with a long parallel line, they tend to converge and this is very claustrophobic and one of the things you have to fight in a shopping is claustrophobia. Claustrophobia tends to make people’s anxiety levels and stress levels rise. They tend to become impatient - they want to get out and so forth and if they don’t spend enough time there, they don’t spend enough money there so it’s very counterproductive. So in this case, the space is very cleverly designed so that in fact the escalator’s trains and rails and so forth get wider as they go toward the top. So when you’re standing at the bottom, the eye tending to correct for the fact that they’re getting wider, makes it look straight and parallel and you eliminate the parallax and the claustrophobia. In addition, by having large beds of flowers, having a water stream coming down along one side of it with the soothing effect of water bubbling and gurgling and so forth you begin to offset that claustrophobia and you lure people upstairs off the street which was a major design problem which has been very subtly overcome. And if you are down in Chicago and you go in there, watch very carefully for the design tricks to move you upstairs without appearing to drag you on endlessly up the escalator.

Here's another view of that. Notice the water coming down the center, the flowers, everything softening the edges of that so that it is not a hard area and the sounds are absorbed into it so that the noise - the white noise of activity and the hum of the escalators is greatly softened.

The internal mall really features a light shaft coming down some eight stories with glass box elevators so that, as you ride up you have a glimpse of what all the stores are on each floor. One of the tricks of a shopping center is to tease you into new territory where you hadn't thought you were going to go but as a stroller moseying through the shopping center you want to move people further forward. And to do that you have this fairly dramatic plate glass elevator enclosure - the elevator turned inside out sort of thing. You step through the silent door and now go zooming up in a glass box which you're facing backwards rather than the door and you can begin to see whose shops are on which floor and they generally have some of the more interesting specialty shops within very much sight of the elevator. Notice further to open that area up they have plate glass rails around the edges of the mezzanines and at the top of the glass rail is a wooden railing piece sloping inward so that if you rest your package or your coat on the rail instead of having it fall to the basement level, it falls at your feet instead - reminds you to keep track of your stuff. One of the problems with it is, of course, is that it is very marbly and very glossy - you know - lots of chrome and polished marble and granite and glass and the light tends to bounce off of that as you see there which is glaring and that glare itself is claustrophobic so that there will be more carpeting which not only softens the noise factor but also eliminates the glare factor which is very offensive over a long period of time.

Another view down for those of who suffer from heights. For those of you that are into retail store design, they are the epitome of modern retail design. You see virtually every architectural retail style within the center and people have lavished tenant improvements on it.

Watertown Place has been defined as a machine for making money. Certainly it is in the right location to do that. Apartment rentals in the area start at $1,000 a month and move on up from there - very high income area. But it doesn't really fit what the American's citizens dream of what the city should be all about. It doesn't have textures that are friendly. It doesn't have a scale from the outside which is friendly and, in short, the city builders' ego has left it out of sync with the values of the community and for that matter the criteria of the critics as well but financially it has begun to cash flow very well. Initially it didn't really do what it was expecting to do in terms of the sales per square foot but thanks to inflation and continual tinkering with the marketing mix, it is doing very well. Lots of amusing stories about the rich initially coming to shop - the one I like best is the lady in a mink coat sitting at McDonalds at a table and complaining about the service.

The counterpoint to the John Hancock Building is really a project called Faniel Hall. It, interestingly enough, does a bigger volume and has more sales per square foot than Faniel Hall and yet was very much constrained by the architectural inheritance within which it had to work. Somebody pointed out that William Penn and Walt Disney were both great city builders. Disneyworld itself has proven that there is a great middle class market for entertainment flavored with history. That the Americans have an insatiable appetite for nostalgia and, of course, those cities which have enhanced and enriched their historical roots have done very, very well. Boston is one of those cities which at one point, like Baltimore, which we're going to look at on Wednesday, have really reached the pits to a point where traffic congestion and a road system laid out by cows wandering around the hills and so forth has virtually brought it to a standstill and they had to begin to redevelop and virtually gut the entire downtown. And one of the dangers of course of gutting that downtown is that you create something that is so modernistic and so contemporary that you have, in fact, lost the historical roots and nostalgia by which the population identifies with the downtown. And, in this case, the Boston planners were careful to save certain elements of their downtown and one of them was something called the Faniel Hall Marketplace which we'll look at in a moment.

An early airview with Faniel Hall is essentially those three long buildings. Interestingly enough, for those of you who weren't at our Embarcadero Center element project on last Friday, but at one time Boston, of course, had a great deal more water area than it does presently and as a general rule, if you're in downtown Boston on a straight street you're on filled land that was in effect pushed out into the tidal flats surrounding the hill areas and the Back Bay, for example, was just that - it was a bay, for example, was just that, it was a bay before it was an upper town residential area. And in this area, this was initially the area in which the ships unloaded and so forth. And these buildings were port side warehouses and then as the port side pushed out towards deeper water, this area was all filled in and they became essentially isolated from the water and it became the produce center - a point where all of the food and so forth was brought in and then redistributed to the local merchants which parallels also the Embarcadero Center history and the Crowder Center was really no longer operational because it was so congested you couldn't bring a truck in let alone get a truck out and so the village became abandoned and the city took over title and in the process of trying to decide what to do with them, ten years in advance of their redevelopment actually went back and pointed the brick, stabilized the roof, stabilized the interiors and, in effect, went into a conservation mode without knowing what to do with the space that was involved. And the rest of the governmental center of urban renewal for downtown Boston continued to develop around it. And the history of it was essentially that they were built about 1826 by a mayor named Johasia Quincy and it was called Quincy's Market and was really the food retailing center for Boston. Second of all the architecture really represented the prefabricated industrial building of the mid-18th century and we'll look at those in a moment. They could have gone on and built these as long as they wanted to. It was a building system which essentially was highly modular and made use of the granite from New Hampshire and Vermont and they built a great number of these types of buildings throughout New England in the long mill shaped form so that it was the counterpart of the Butler's Field building of today in terms of cheap, infinitely flexible kinds of space. They're done in kind of a Greek Revival and they were put on the national register in the early 1960’s as they were really kind of premier example of that type of building. The total site is about 6 and a half acres and each building is approximately 535 feet long and about 50 to 60 feet wide. Quincy Market is the building in the center with the dome and the other two are called South Market and North Market - kinda catchy - and they each contain about 160,000 square feet of space so we’re talking about a fairly sizable element but nowhere near the size of the square footage of Hancock Building near Water Tower Place.

This was early produce market day. General layout with the major building being the one in the center with the white major court with the dome above it and that became the first building to be redeveloped. The city owned the buildings (and next slide please) and was very jealous of protecting historic character of it and so forth. Rouse said, “I don’t really want to own the building anyway. Tell you what I’m going to do. I’ll lease the building from the city and I’ll be responsible for outfitting it as a retail center and doing all the leasing and management and so forth and I’ll rent it from you. But I’m not sure how this is going to work so I’ll rent it from you on a straight percentage lease. Whatever my sales are, we will pay you, say, 5% of sales. If I don’t have any sales and it turns out not to be a good idea, why then we take that risk together and you know, you won’t get any return on your historic buildings and I don’t get any return on my investment and the effort to carry this thing off." So the city of Boston is the owner. They lease it for 99 years to Rouse and they get 25% of the tenant rentals in lieu of real estate taxes as well and, of course, the tenant rentals range from 5% to 8% of gross sales. So you could look at it from the fact that the city was getting about one and a quarter to two percent of sales for the rent of the shell of the building. The first year the city made about $225,000 on their investment and they were elated about that until they discovered that the state of Massachusetts which had risked and put up nothing, took home $2 million dollars in sales taxes and in meal taxes and recreational taxes on the property. So the money is flowing to the State of Massachusetts rather than necessarily directly to Boston which has become a very sore point in terms what should be the allocation of state revenues on that type of development. But the phenomenal thing was that after it opened the first year it drew more people than Disneyworld - about 13 million people visited in the first year. Q: What year? A:'78 or '79. Each building came on stream slightly one after the other. The guiding genius behind this was not only Rouse who was doing the retailing but an architect who wouldn't say nay. He had been working at this thing for 8 or 9 years to save the building, find a use, he's the one who got Rouse involved, a guy by the name of Benjamin Thompson and Associates. On the basis of this one project really, Thompson and Associates have become nationally known for urban redevelopment and so forth. And they had George McCombery(?) Company, a Boston contractor of considerable scale to get involved with the project. The center building that we're looking at here became all retail and in the tradition of it as a produce center became a food retailing area and really was a takeoff on the food parks that Rouse had developed in some of his shopping centers. To expand the building and in addition, extend the season beyond just the summer season, you'll see that they built bid greenhouses on each side in which they have space heaters and you can either eat in a restaurant in those areas or pick up food in the center area and then come out into a seating area and eat, and in addition to those greenhouses they developed a cart kiosk - essentially it's a wagon like an old railway baggage car in which people can specialize in selling T-shirts or costume jewelry or whatever and this has become a phenomenally successful retailing business and copied all over the United States including in the Milwaukee Grand Mall. You know the number of independent merchants who rent the carts quite often by the month and then if they don't do well, the shopping center people push them out and find somebody else who will do better. And of those many of them mature ultimately into having store space and so forth. But it's a way to get the small entrepreneur with a specialty underway at very, very minimum cost. The second buildings - North and South buildings - have retail on the first level and by in large offices above that and it's become a very popular place for offices for consultants and planners and architects and people providing some sort of services relative to the financial district which is right nearby. City Hall which is just west of this and so on and the Court system which is just west of this and so on. In the first market study that was done and this was 1976, to get back to the date, they discovered that 65% of them lived in the Boston metropolitan region and came by private car traveling as much as 20 miles to come down here. In effect it has re-established the connection between the hinterland and downtown which is exactly, of course, what people would like to do rather than having them bypass downtown as they do in Madison. On the average day they're doing about 35,000 people a day much of it in the lunch crowd and much of it in the early evening crowd - the after hours opportunities here are very good as well.

The mall down the center between the buildings - a very popular spot in the summer. If you'll look at the building closely you'll get a sense of that repetitive construction that's all simply granite pieces that fit together, boom, boom, boom, with an inside wood frame called mill construction so the outside walls are load bearing, inside walls are big timbers carrying it and you could build that building as long as you wanted to -

build that all the way to Buffalo on that basic formula. There's another good example of the industrialized character of the building while it was under renovation and the upper three levels are all office space. The second floor level is mixed, some retail and mostly office and then the first level is all retail and restaurants and so on. Here is the feeling underneath the greenhouse with canvas slides that come down during the heat of the day so that it doesn't get too hot on the inside. You'll notice space heaters hanging off the ceiling to extend that comfort level into November and into early spring and there's a series of restaurants moving down there some of them picking up on the Disney theme of having different price ranges but having the same environment. If you're into the $5 dinner you go to the spaghetti place. If you're into the $7.50 dinner why you get the tenderloin tips and mushroom stroganoff and then if you're into the $12.00 and up area why you get the roast beef and so forth. And yet you're all really lined up at the same kind of environment and the only different is where you enter. So it makes it a lot easier to serve and control the food route because the kitchens may be at a point somewhat more remote from the serving area but in addition it allows people of different budgets to enjoy the same fantasies and environments and lifestyle, if you will, while they're having their meal. Here again you see the natural rail divisions among different price ranges of the restaurant. This is the inside of the rotunda at the second floor level. Notice the brick has been left there for nostalgia, some of the old maritime souvenirs around the top. But then they don't try to get too artsy, craftsy with the rails so they go to a modern glass Plexiglas system with a wood band around the top because one of the problems you have as a shopping center, of course, is making it kid proof and if you have railings that kids can poke their heads through, they will. And for some reason kids' heads always go through, but they don't come back out. So as a result, you go that totally glass thing which doesn't intrude visually on the shape of the space and at the same time provides a greater level of safety. Here's one looking down through the rotunda - the typical kind of shop, maybe only 300 square feet and is typically a proprietary merchant selling bread or specializing in ducks or geese or whatever. Each of the long corridors then has a whole series of signs hanging out - let me have the next one - I think the signs are clearer - once more - there you can see some of the retailing tricks of the trade identifying everything from breads and rolls and fruit and so forth and what you do at noon in Boston is you come down here, you stroll through and pick up your lunch in pieces from the various merchants and then go outside and sit in the terrace or under the greenhouse for lunch.

Since this has been built the immediate adjacent areas to the east of it have become highly residential with a yuppie influx to condominiums, remodeled warehouses on the wharves and so forth, so this has become not only a "touristy" kind of food base but is, in fact, the shopping support for the adjacent condominium development which has been very intensive and largely the condominiums have succeeded simply because of their convenience to this center and the open-air Boston Market which has been around for a long time. I don't know how many of you have ever been to Boston, but there's one area just virtually under the freeway which has been traditionally been the wagon merchant, out of doors, in which you could go and squeeze the oranges and so forth and so on.

Here again taking your lunch out to the yard terrace. Notice the cart there as a retailing kiosk - tremendous sales per square foot - they'll do something like $1,000 - $1,500 per square foot from one of those little kiosk's, costume jewelry and various little knickknacks and so forth.

Now, in the basement typically they have these little entries into local watering holes and pubs which are very popular and the psychology, of course, is knowing where you want to go. The insiders know which pubs have which kinds of entertainment and so forth, and so it's a very clique and atmospheric place to go after hours. To help the merchants on the second floor to have store/window accessibility they have created these glass kiosks on the terrace and they will indicate where the store that's merchandising that particular item may be and provide immediate eye-level visibility to a second level store.

Again the lobbies going up to the second level kept open and spacey - again for security. Notice there's no place in which a mugger or some other social anomaly can hide out there. It's really important to do that in an old building because otherwise the security or perceived insecurity is questionable. Initially, one of the problems this project had was that unlike other shopping centers which, the shopping center owns the space around it and can exclude anybody at the door that he wants with a floor walker or a private policeman and so forth, this is public space and so the pick-pockets and all the other nary-do-wells that may hang around downtown are free to wander through and as a result they have a higher level of security problems in terms of protecting the consumer from the social anomaly that might discourage them from coming back again. So, again the building is designed to provide as much self security as possible. (One more slide and we'll quit.) One of the thing that it engendered is that it didn't have parking spaces initially. It made such a congested area out of the area again, the city was compelled to come in and build parking ramps. As they built the parking ramps, the hotels came back in the area and there now has been three new hotels, very nice hotels built in the area and that's one of them. Looking back on City Hall right off the end of it is the Financial District about two blocks away from the center. Notice it works even in the winter. It's not a very good picture of me. Again the merchandise under the greenhouse - tremendous action central area. OK I quit, see you on Wednesday.

. . . construct an interconnecting tunnel for the rail line to divert the trains still coming in on the commuter system to the remaining railway stations. That, obviously also, is a public project. The third level they wanted was a bus station for serving again the major Greyhounds and the Badger buses of the area and so forth, and that was to be below ground in this particular project. And they above that as we being to approach the street service, we are getting to an area which for a long time was really kind of a wall dividing the community in half, partly as a result of the railway system that had come in there at one time, and so on. And that had to be cleared and acquired and assembled for the project. With all of those elements depending on political action and sustained public capital, Rouse felt that what we really needed to do was create a space(?) frame that went deep into the ground. (Spin that over the last set of slides in there which would be the Galleria. It will begin with a cartoon of the Philadelphia Regents at the outset.)

The particular project - the question here is that red dot which is between the __________ River and the Delaware. Philadelphia is located between the two rivers and going from right to left is a major subway line going out into the hinterlands of Philadelphia and New Jersey and there is another one which runs north and south which cross underneath our subject property. Talk about ideal linkages and heavy pedestrian traffic areas - superb. But the problem was how do we deal with the risk created by the inability of public agencies to 1) coordinate and 2) move forward according to a time table and 3) finance their portion of the project. And it's a classic example of space time because, obviously, different groups within the public have different vested interests in different space time units of the project. Obviously, there was a subway space time component with a subway station to be built at the bottom of the development. There was a railway tunnel, there was the bus station and as we move into the site you will see also that there are a series of streets on the surface of it that are going to continue to pass through the project as though they were simply nifty little tubes of traffic moving through the commercial and shopping center space, And given all of those elements they said, "OK, tell you what we're going to do. We're going to make the entire project a public project and the public will create and finance these various components and then, Mr. Rouse said I will lease back out of the total megastructure those components which are suitable for retailing.” So for the risk of completion of construction - completion on time and so forth is truly that of the public sector and “if you guys want horse around with it, if you want to extort costs out of that through your labor union and so forth, you go right ahead and do that and when you’re done, give me a call. And what I’m prepared to do is first of all tell you what kind of space I have to have to lease, so I’ll participate in the design of the facility and we’ll produce the kinds of spaces that we know are suitable for retailing and related enterprises and then we’ll lease back out of that megastructure all of those elements which are commercial in character and all of those space which are public in character will, obviously, already be in your control.” A very innovative way of looking at the rather complex interrelationships that exist between the public and the private spaces that together create an urban environment.

This is looking down on phase II of the project. We’ll zero in a little bit, but that hole down in the ground about four stories to a point where it is resting on top of the subway line which is that light tan element which is below that. This is street level. Gimbals was already developed at the end of the block and represents one of the anchors on a downtown regional shopping center and there would be additional major department stores in phase II. Now you can begin to see it going down into the ground with the upper light area really representing that which is commercial and valuable and the areas down below that with different ceiling heights - the high ceiling heights for example required for the bus station level and below that the areas for the subway station and so forth. So you begin to look at a city as a series of cubical areas, some of which are public, some of which are private, some of which are part of public transition point, and we can begin to allocate the ownership. We're truly arriving then at this concept of space-time being dedicated to a certain kind of occupancy for a certain period of time. Looking at it from the top, the major department stores which provide the anchor. We tend to lose sight that in our major cities much of the total development lies below ground. We take it for granted that the street we're on is, in fact, at grade level which is not so. Many of you have been to New York, I'm sure, and have been on Park Avenue. Park Avenue from Grand Central Station to 105th Street is in fact a bridge which in some places is over a hundred feet above the true grade of the island. Below that you have two levels of rail line coming into the station. Below that you have the subway and below that you have the major utility systems and storm water systems which are supportive of all those major office buildings. And you tend to go on Park Avenue and assume that, you know, you're somewhere near the grade level of the original territory when, in fact, you’re no where near the ground.

Here is the classic example, again, of a little tube for handling the passageway of public people from one building to another, beginning to make a megastructure out of a series of blocks in the area. Another look at the complexities below grade.

The initial entry point now to the shopping center. Watch carefully hear at the Galleria and particularly the next slide (and the next one) and now think about if you’ve been to the Milwaukee Grand Avenue if you had seen that style of architecture and that type of structuring before? This was the prototype for the Milwaukee Grand Avenue project. And you will find that the two architectural firms were the same and the idiom is the same in terms of the structural systems, the use of spaces, sky lights and so on and the political structure is the same. In the Milwaukee Grand Avenue project most of the building and structure that you see is, in fact, owned by the city of Milwaukee or the Milwaukee Redevelopment Corporation and then Rouse has leased out of that space frame those components which can be, in fact, re-leased as commercial space. The mall is, in fact, a public street and is owned by the City of Milwaukee and maintained by the City of Milwaukee. The first element for Rouse is control and as a result he sets up a development management corporation which is in charge of managing the space. The parking lots of Milwaukee which are owned by the city are managed by Rouse's parking lot management company and the mall which is owned by the city and is, in fact, a public street or thoroughfare is, in fact, managed and maintained by the Rouse Project Development Company. And then, of course, the actual retailing operations and so forth are also controlled by the Rouse Management Development Company. But if you look at the physical spaces you will find that they are primarily publicly owned because the ability to construct and carry through on the political risk really was dependent on the City's expertise rather than the developer's expertise and he wanted that risk to rest squarely on the city in terms of that area.

Multiple levels - this is the subway station arrival point which generates tremendous pedestrian growth to the project. This is the escalator moving people up from the lower subway level and dumping them right into, essentially, a grocery market. When you come off the arrival from the subway you are in a farmer's market kind of area in which the workers can either pick up the pieces of his lunch as he goes by from the subway on the way to the office, or headed for home can acquire the makings of dinner all on a very attractively displayed farmer's market format that does an incredible volume. There's a small, about 400 square foot fruit market that is doing $600,000 a year in fresh fruit, oranges, apples and so forth so that they can take advantage of that impulse purchase and they very carefully analyze what are the kinds of things that people buy while rushing for a train. And generally it's something to eat or to read, or both. And as a result they do tremendous volume on the corridor to that space.

This is the origins of the Rouse famous food park concept in which you have multiple fast food operations surrounding an inner patio area where you can then go and sit down at a table and so forth. Each person can then get a food style of his own choice and initially, of course, the premise that you could have a McDonald's and a Burger King and a Chinese food take out and so forth and so on - all under separate management and it didn't work because they couldn't maintain quality and so in most cases Rouse owns all of the franchises surrounding that area in order to be able to maintain strict control of the quality as well as the interplay of one product against the other, so that if one is designated at the official German bratwurst and knackwurst family place, nobody else can create that element. One is designated at the official Philadelphia pretzel area or whatever and you need to be able to control that kind of allocation in it. It grows out of the project called the Yum Yum Tree in Denver which was the conversion of 50,000 square foot discount store into multiple food operations with a common mall in the center ranging everywhere from a Jewish deli to an ice cream shop and giving everybody, essentially, their choice. This yellow strip across the bottom is, in fact, what will be a new just one level below grade, moving sidewalk connection from virtually city hall in downtown Philadelphia through this whole project so now is the connector into all of the other buildings below grade there will be this common inside walking pedestrian level that will interconnect all of the buildings along this area and respect the client - much like the Toronto underground pedestrian network but considerably wider and more open with occasional breakthroughs for skylights and atriums coming down and bringing sunshine and so forth down on the streets this is just one component of that which will be extended in that new area that's under construction. If any of you have been in Milwaukee you'll see many many similarities.

OK, switch over to the Baltimore ones please. Now notice, there the political risk is probably over a ten year term from the time that the project was started in terms of assemblage of the site, the concept was put together, and eventual execution of the second and third phase. One way of establishing the risk control is simply tell the city that as you finish each component we will lease from you the various elements that are suitable for private rental and commercial exploitation and that rental revenue that we're providing you along with some over aggressive participation, at this space in the sale will be adequate to, in effect, provide amortization of the city's debt in financing the project as well as providing the city a profit that is greater than the real estate taxes that might have been paid had it come in private ownership rather than public ownership. The city's getting two elements, 1) an assured rental income that allows them to amortize the bonds so as an industrial revenue type bond as opposed to a city GO, general obligation bond and 2) they're getting a participation in a profits which will give them a greater rate of return than the real estate tax process would have provided if the buildings had been privately owned. Now a third element, of course is that because the city had to carry it through for that ten year span, if they deviate from the plan, they do so at their own expense. They will have committed $X number of dollars of capital to it and if the politicians get cute or try to negotiate something else from Mr. Rouse, Mr. Rouse can take a walk and say, "Fine, you didn't meet our original bargain and therefore I'm not obliged to rent your additional space either." And so, as a result, the political risks are right where they belong, on the various agencies necessary to execute the project. And the commercial risks are right where they belong on Mr. Rouse in order to obtain the proper tenant mix and marketing environment that will product the maximum sales from the commercial space. The situation in Baltimore was like this. Baltimore, similar to Philadelphia but, certainly, Baltimore realized 30 years ago that it had reached the pits. That there was really no more reason to be a Baltimore. People were fleeing downtown Baltimore and had some of the worst slums and some of the worst downtown conditions wasting some very interesting resources in terms of the harbor and so forth. And, therefore, determined that there should be a master plan by which they could begin to rebuild and take advantage of the federal urban renewal project. They were reasonably astute to realize that probably the federal program of subsidizing acquisition, demolition and clear that begin in 1954 was not going to last forever. And that they were probably best off to concentrate on getting many of those federal funds for clearance as they could, realizing that the redevelopment of these now cleared areas would take longer as the market demand adjusted to the available space. Oh, here's the first picture I took of Baltimore, representing the inner harbor area which we will now look at from the air. There it is as it exists currently. This was taken from approximately the Rusty Scupper. (laughter) For a moment I thought we are the bar at the __________. The building which is blue is probably the nation's finest aquarium that was built as a result of this project and those students that were on the real estate club field trips finished up there on Sunday. The tall building next to that is now the International Trade Center at

Baltimore and the students were lectured on the project from the 20th floor and the balance to the left of that is that resurgence of downtown Baltimore in what is called the Charles Center area of downtown Baltimore. This is inner harbor, an area that was the original harbor of the original Baltimore which was bypassed as there came a need for more maneuverable areas for large ships and which was really redeveloped for containerization and so on. Baltimore took the play away from New York City as one of the first major moves in their redevelopment by modernizing their port more quickly and anticipating the trend toward containerization more efficiently than New York and therefore became a major shipping center which then gave rise to the desirability of . . . And that became one of the basic elements of the resurgence of Baltimore's economic base - the fact that as a port city they could then generate very significant expansion of their wholesale and distribution sectors of industry which we saw going all the way down to Columbia which is about 45 minutes from here and becoming a significant part of Columbia's economic base as well.

The larger picture is the inner harbor is that very inner tip of the bay at the top there and you begin to see some more of the commercial development and so forth coming off to the right and then moving north. The original city before it was developed in this older picture was really about seven or eight blocks from the inner harbor area which is you see partially cleared there, but otherwise abandoned and disconnected from the commercial life of Baltimore. The original planners of Baltimore realized that you can't simply launch yourself in the middle of an area and in a disconnected way recreate something with an approach zone that was very intimidating and discouraging - that you really have to build from your strengths. And that Charles Center which was the crossroads of downtown was really the point from which they had to begin and that it would take them ten, maybe 15 years to reach a point where they had built out to the water and could make it an integral part of the downtown area. They also realized that at that time the politics of Baltimore had had some very serious ups and downs. At the time this project started the mayor was a man named Delesandro whose son, by the way, was your host at Mobil Land Company and Delesandro was one of the first really good mayors. The mayor just before him and then later governor was a man Agnew and you can sort of get a sense of the quality of government at that point in time. Delesandro really was trying to turn Baltimore politically from machine politics of the dirtiest sort to a creative political leadership. But they were concerned that perhaps he wouldn't be able to do that or sustain it and therefore they wanted to create an entity that would outlast that and so they created something called the General Center of Heighth and Inner Harbor Management Corporation. It was put in charge of a premier fourth generation Baltimorian by the name of Martin Millspagh who was also our host while we were out there and Martin Millspagh and his associates were above reproach for the political process and the object was that for each building and proposal that came in for the redevelopment of downtown Baltimore, that the interim(?) to the Harbor and Charlestown(?) Management Corporation would be the ombudsman that would deal with the city. The master plan was entrusted to this quasi-public corporation and the execution of the master plan was entrusted to them so that regardless of how city hall came and went or whether the city council lost its heart for this sort of thing and so on, nevertheless, the division would persist and be carried forward for 25 or 30 years. And they were compensated by getting the ombudsman fee of approximately 1% of the projects that were, in fact, entitled and financed and then built by the various development autonomies. In that way they were able to keep the developers and the city politicians a little bit apart and reduce the exposure of the developer to extortion by the traditional machine politics of the area and, at the same time, protect the developer from very rapidly changing attitudes and objectives of the political process.

The very first buildings were rebuilt downtown adjacent to the department store and that’s the original Charles Center Building right there. The master plan called for development of the entire area within the red line ultimately but realized they had to begin with the downtown core in pink at the top and gradually build out toward it. Nevertheless, they proceeded to acquire all of the land around the inner harbor as part of the federal urban redevelopment project. At that time, the rules of the game were that Uncle Sam paid for two-thirds of the cost to acquire, demolish, clear and reassemble then sell the property, and the community had to pay one-third. However, the community was allowed to, in effect, meet their one-third payment by investing all forms of government funds in the project. And therefore a major segment that we'll see in a moment was redevelopment of city hall and state government facilities in the designated urban renewal area so that the funds really did double duty. They created new public facilities and, at the same time, fulfilled the city's responsibility for contributing one-third to the overall public costs of the project. So virtually, the thing was actually paid for by the federal government. And a number of cities were able to exploit the federal government programs to their maximum advantage - New Haven was one, New York City was another, Baltimore was another.

The total master plan called for eventually developing on the wharfs recreational and apartment kinds of things - some retail esplanade along the west side of that squared off bay with further residential development behind that. State office buildings were to be built up along that boulevard to the right of center that heads up north of the project and then the balance of it was to be really a resurgence of commercial and retail development in the downtown area just north of that heavy red line in the project. That was the master plan conceived about 1958-59 and carried through to this day 30 years later by the Inner Harbor Group. Notice the initial development started to move down that street access toward the wharf so that you could build from your strengths and eventually connect downtown to the water resource. Here was the initial schematics of residential housing coming out on the old wharf and recreational development where you see the lower white works. Most of that high density housing did not eventually take the tower format as we’ll see in a moment with the upper center corner there with the two light strips being retail across from that eventually being hotels, convention hotel kinds of things and the tall brown building there, of course, is the International Trade Center that was ultimately developed.

The initial schematics now starting to be converted to reality with the buildings set at an angle there, International Trade Center, the green-roofed building is really a recreational shopping and restaurant area by Rouse which was one of the first of the models for what is called the Enterprise Corporation. Enterprise Corporation which is now headed by Rouse who retired from the Rouse Company has a rather interesting dual role. He creates specialty or what are called festival shopping centers - recreational kinds of shopping center in key tourist areas or recreational areas in the city which are highly profitably and then he then turns the cash flows from that into low income housing seed money by encouraging neighborhood lower income groups to organize housing coops to redevelop their particular neighborhoods with the assistance of the equity fund provided by the Enterprise Group. Mark Millspaugh who was head of Inner Harbor Charles Center Development Corporation has taken over now as president of the Enterprise Corporation for Rouse this last year. You'll notice also that the pedestrian bridges going across from the shopping center into the high hit convention hotel directly behind that and the marina, built on this lower level, again, to create a sense of activity and a recreational pier right out in front of the shopping center area. They did a lot of historical restoration. This is one of the older buildings down there that was completely gutted and repaired under the historic structure laws so, again, they took maximum advantage of the federal incentives to restore old buildings and take the investment tax credits that were possible prior to this current tax law. This was a restoration of city hall which originally was going to be demolished and replaced with a modern building. The taxpayers voted that down presumably an economy move and they spent twice as much money restoring the actual city hall - probably with a little more desirable urban impact.

An example of the office buildings being interconnected with the pedestrian skyways. This was some of the FHA insured median income housing - median price range housing, built out on the wharf - magnificent views to both the West and the East and that area has been a reinforced with a great variety of amusement, recreational and restaurant areas and immediately adjoins the old Italian area which is right behind that building which retained its low Philadelphia style townhouse area, Italian restaurants and so forth. This is an elderly housing project in the immediate periphery area. Again, subsidized for low-income elderly under the Section 8 program in which the residents pay only 30% or their actual income, whatever that may be and the federal government pays the difference and a very expensive program for the federal government but a very effective program. One aspect of it was the adjacent neighborhoods that looked like this. And rather than demolishing everything by a bulldozer that had historic significance to the community, Baltimore created a very unique sweat equity program in which a yuppie couple can buy one of these shells for virtually nothing as long as they promise within three years to, in fact, restore it and make it their home. There was block after block of that kind of housing - this is a little Italian area immediately adjacent to the totally redeveloped area. Here are co-ops assisting each other in the redevelopment of it. And this is the finished product out of what had been small housing. This leads to a process called gentrification which, in effect, displaced what had been a relatively low income area with upper income yuppies who choose to live downtown rather than in the suburbs. Most of this housing, however, had been abandoned before they acquired it under the sweat equity rule. They say Baltimore has a very fine housing planning program and provided not only the opportunity to buy this for a “nickel down, dollar when you catch me”, very low prices, but also provided financing assistance at subsidized interest rates so people could afford to do this. And, as a result, create units which probably in this area now are $80,000 to $120,000 each and the individual homeowners probably didn’t invest more than $30,000 or $40,000 of hard dollars in the project as they were doing it together with their own labor.

Again, looking at it schematically, the nearest piers to the enterprise shopping area are going to be recreational or are recreational and we’ll look at those again please. Very interesting conversion - this was a power house that had long since become obsolete and that was taken over by a group that has built, in effect, an amusement park inside, multiple level thing with all manner of mechanical whistles and wheels and so forth and they’re taking advantage of this tremendously large interior multiple story ceilinged space to create a fun palace, as it were. There’s a little more detail on the interior circus as it was developed. Here’s what they did with the wharf - notice that midway down the wharf they built bridges spanning the wharfs so that there’s a pedestrian spine connecting the wharf closer to their other end so that you can move from one project to another. That’s the aquarium area with a public park in the front. The next one over is that power house that we were just looking at and all of this area is now lighted with sidewalks running along the wharf lines and so forth. Here is the area right outside the enterprise shopping area. Another view of it on a Sunday. Somebody always has to pay extra for sculpture. It now draws more people than Faniel Hall. As you’ll recall, Faniel Hall in its first year drew about 13 million, the majority of which came from within 20 miles of Boston. Inner Harbor has had the same impact on Baltimore. Seventy-five percent of the 15 million people that visited last year came from within 20 miles of Baltimore and came more than once. As they begin to identify with the downtown city and create an identity for the city once again that is a very positive kind of experience. They have all kinds of Milwaukeefest type activities now all summer long to bring them in. One of their elements, of course, is the U.S.S. Constellation has been restored. Housing is now being brought in for the childless couples and so forth to create a permanent retail market in the immediate area. Question: What is that thing that looks like a fortress? Chief: It looked like a fortress, yes. Question: that's housing? Chief: that's housing, yes. The view again from the top of the observatory on the International Trade Center gives you again a glance of the large residential area just to the South of this area which, this whole area then becomes really kind of a recreational park base serving those residents. And, again, causing a resurgence of redevelopment of those areas which has become extremely desperate slum areas. This is a music festival area done with one of the German cloth intention types of tents. Marinas with tour boats in the foreground. One of their pride and joys was, of course, the tall ships show that took place there and these are a couple of those that came in. Their fourth of July spectacular. Art shows on the mall. This is a canoe race I guess. The usual folk dancing, ethnic grouping. Some sense of it as night which has become quite the after hours area in Baltimore. More of the tall ships group. Interestingly enough, they built a ship in the area, this was a ship building area at one time so they built the boat called the Pride of Baltimore as a two-masted bark and used it to participate up and down Chesapeake Bay and their various elements and I understand last year it got hit by a squall and sunk! I don't know if that bodes well for Baltimore or not? Anyway, the people were able to watch it built under old historic techniques over a period of about 2 and a half years. And there it is under sail. Apparently it got caught with its sails up on a Chesapeake squall. There you see the festival halls a little closer up - the blue loop in that park over there have become a trademark of the festival mall, I believe there are Cincinnati, Foulton Fish Market in New York, Minneapolis is in the process or about to begin one and there are several others around the country. Gives you some sense of the pedestrian draw and the volume that they do down there. What we'd like to conclude about this is that if a city has a vision of what the city beautiful should be and what they would like to recapture of their past and how they would like to protect themselves in the future and can create a political mechanism which focuses the best of city talents on the problem, and they can work in a patient way, over 25 or 30 years to carry that forward, that we can, in fact, salvage our major internal cities and we can, in fact, bring in a new sense of community and identification of our residents with the city and in that pride in itself will bring about the political revolution that has occurred in Baltimore. That if the city is decrepit and corrupt in appearance, the politics will soon become a mirror of that situation and if, in fact, the leading power structures of a city can be involved and committed for 25 or 30 years in the redevelopment of it physically, that it will, in fact, redevelop politically and socially as well - but they are interrelated and that tends to mock the democratic process at the urban level works best - where the citizens are involved and proud of their community whether we're talking about Columbia, which started from scratch or Baltimore that had to recover from 100 years of neglect and decline - the results can be the same if you have the patience and the foresight to stick on the turf. And each community across the country is either going to resurge and go into the twenty-first century with growth and health and an enlightened group, or if it chooses to fall apart and not organize so that the city, in fact, will decline. It happens at the local level, it doesn't happen as a result of federalism or state guidance - it happens because of innate pride of the local citizens and a dedication to a contest which they would like to carry through and can do so with patience. Madison is right on the brink. It is at this point it has no real commitment to the long-term, no vision of where the city beautiful should go, and yet at this point, we have not fallen apart and gone to a decline either. It will be interesting to see how we begin to balance off our political forces in Madison to arrive at a consensus of what we should be and how we should develop and how we will integrate our economic growth and our resources such as the University into the long-term viability and residents of the community. The purpose of the course really hasn't been to make real estate majors out of you, it really has been to sensitize you to the process and to perhaps make you more active citizens in the overall urban planning process and certainly specifically to enjoy more that which is done about you as you can understand more of the process as it goes on about you and fills the newspapers every day with the protocol of the process by which we build our cities. Thanks very much for your patience and have a good summer.