JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS

II. CLASSES AT THE UNIVERSITY OF WISCONSIN--MADISON

E. Business 550/705: The Real Estate Process

5. Problem Sets and Workbook: Various Years

Index

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.

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:

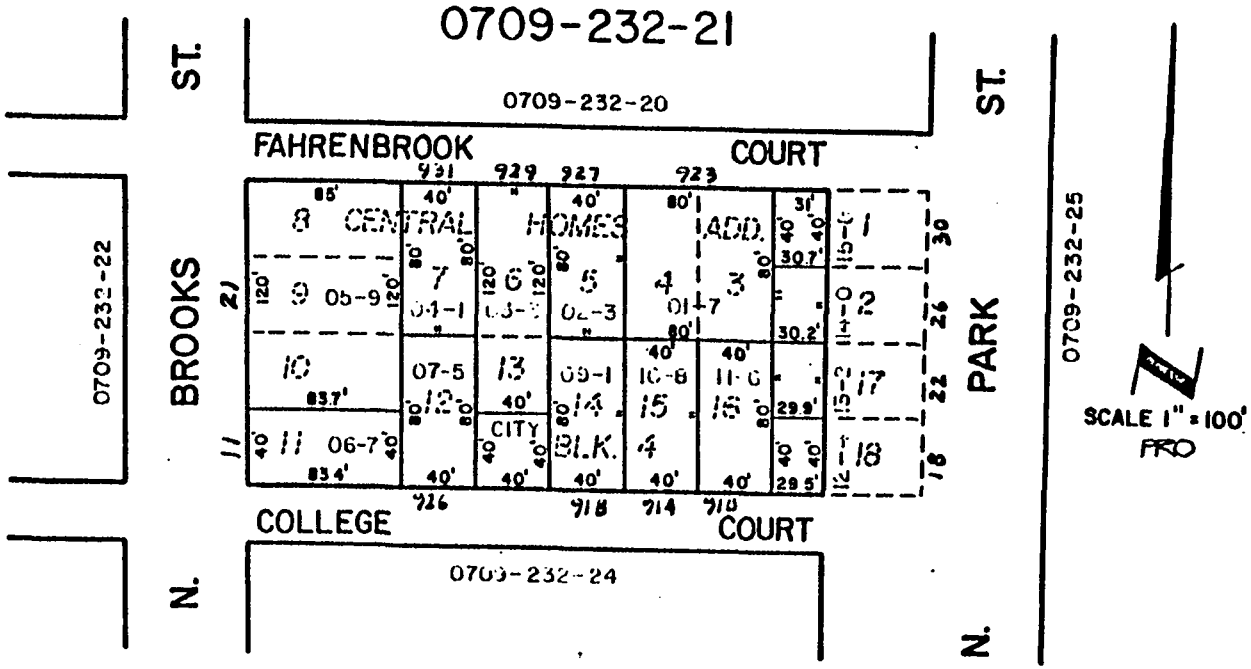
One-story building	95%
Two-story building	91%
Three-story building	87%

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. <u>DO NOT GO TO THE BUILDING PERMIT OFFICE</u>


0709-232-21
0709-232-20
FAHRENBROOK COURT
COLLEGE COURT
0709-232-24
0709-232-22
0709-232-25
N. BROOKS ST.
N. PARK ST.
CENTRAL HOMES ADD.
CITY BLK.
SCALE 1" = 100'
PRO

336659

VOL. 5 PAGE 24.

CEN

TRAL HOMES ADDITION

TO THE

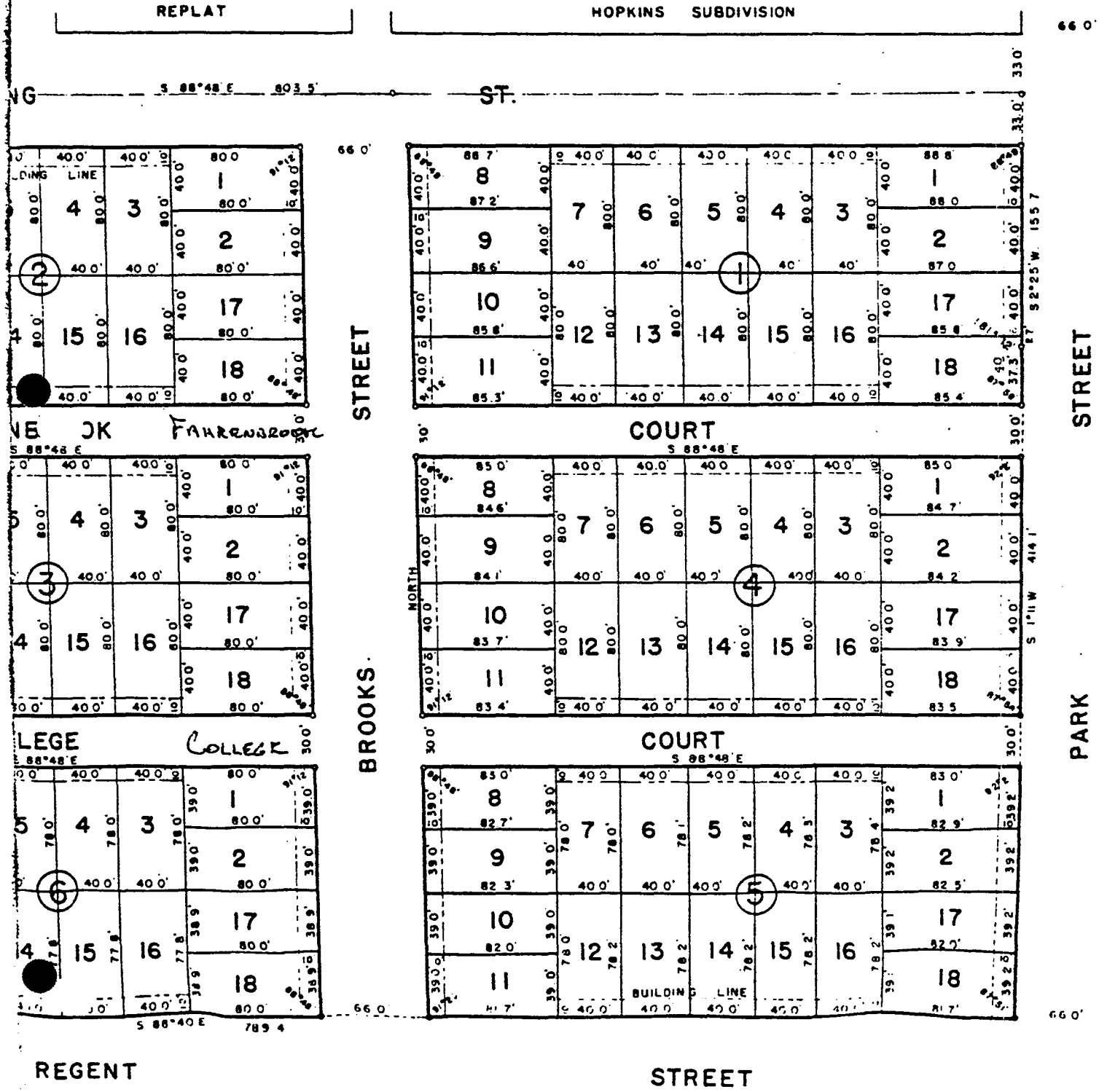
CITY OF MADISON

BEING A

SUBDIVISION OF OUTLOTS 11 & 12 UNIVERSITY ADD.

RECORDED MAY 18 1916 SCALE 1" = 50' R S Owen, 1914

REPLAT HOPKINS SUBDIVISION



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

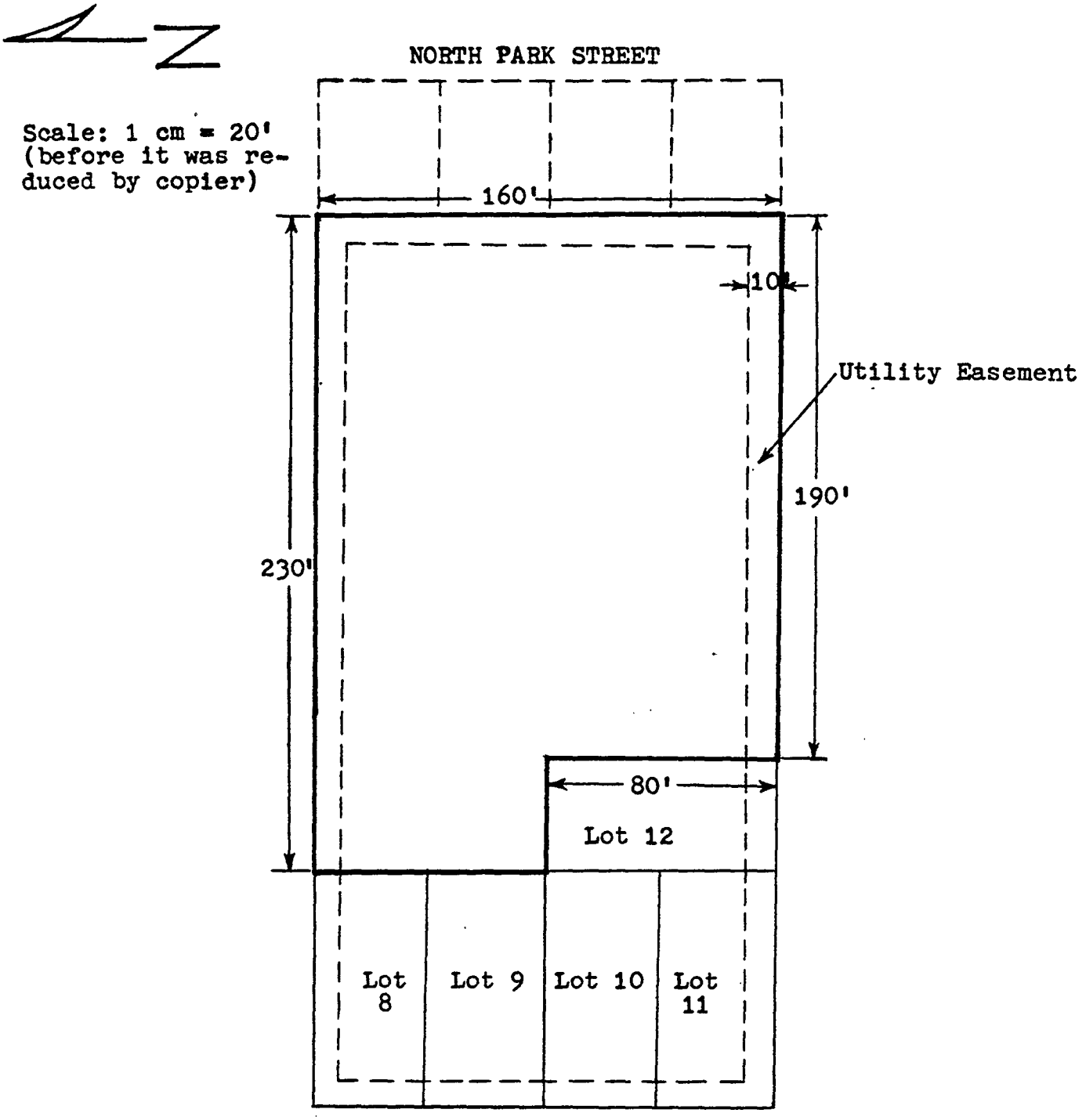
Parking

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		

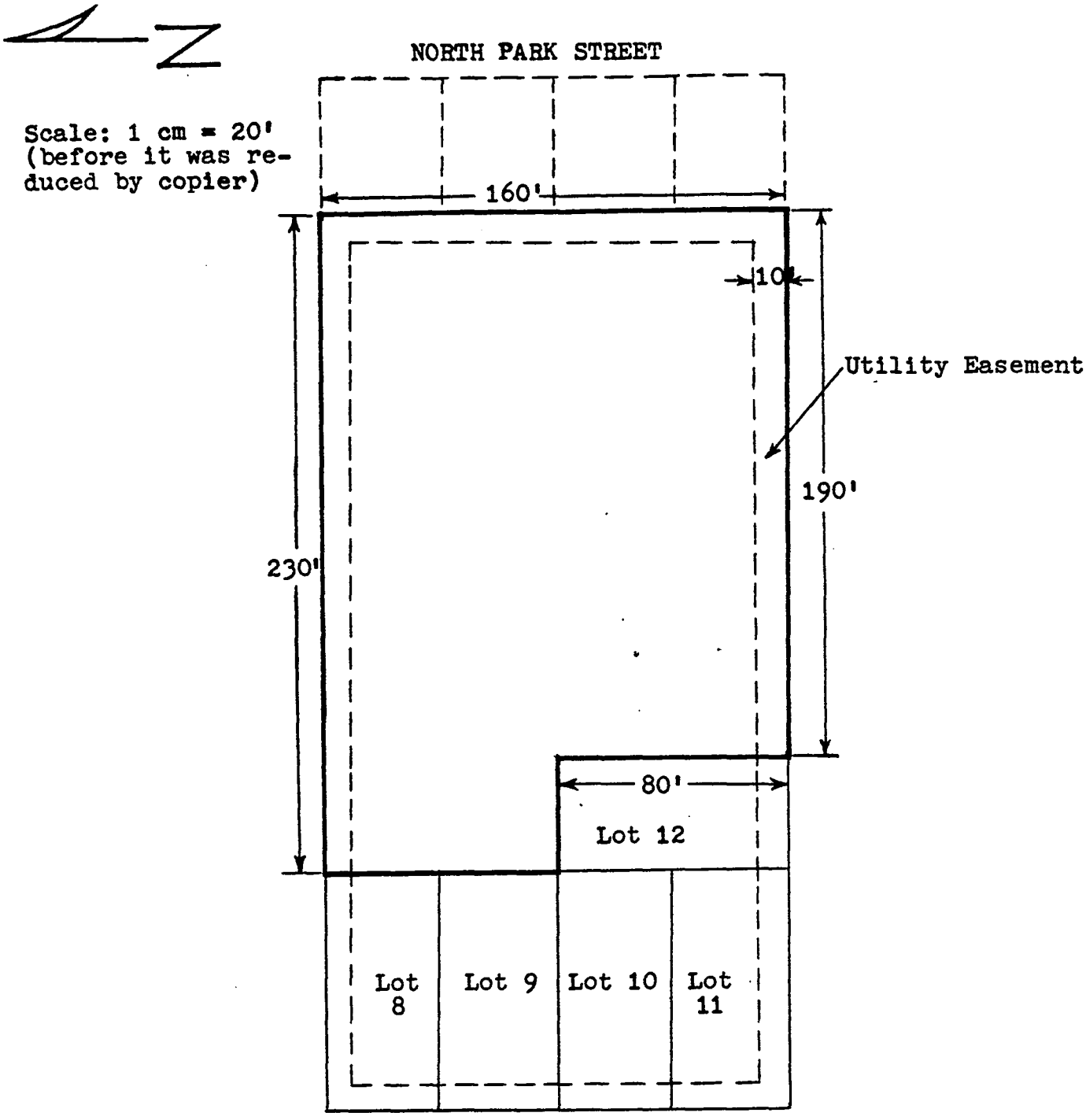
11. Parking Area:	Gross
Apartments	
Retail	
Total	

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:

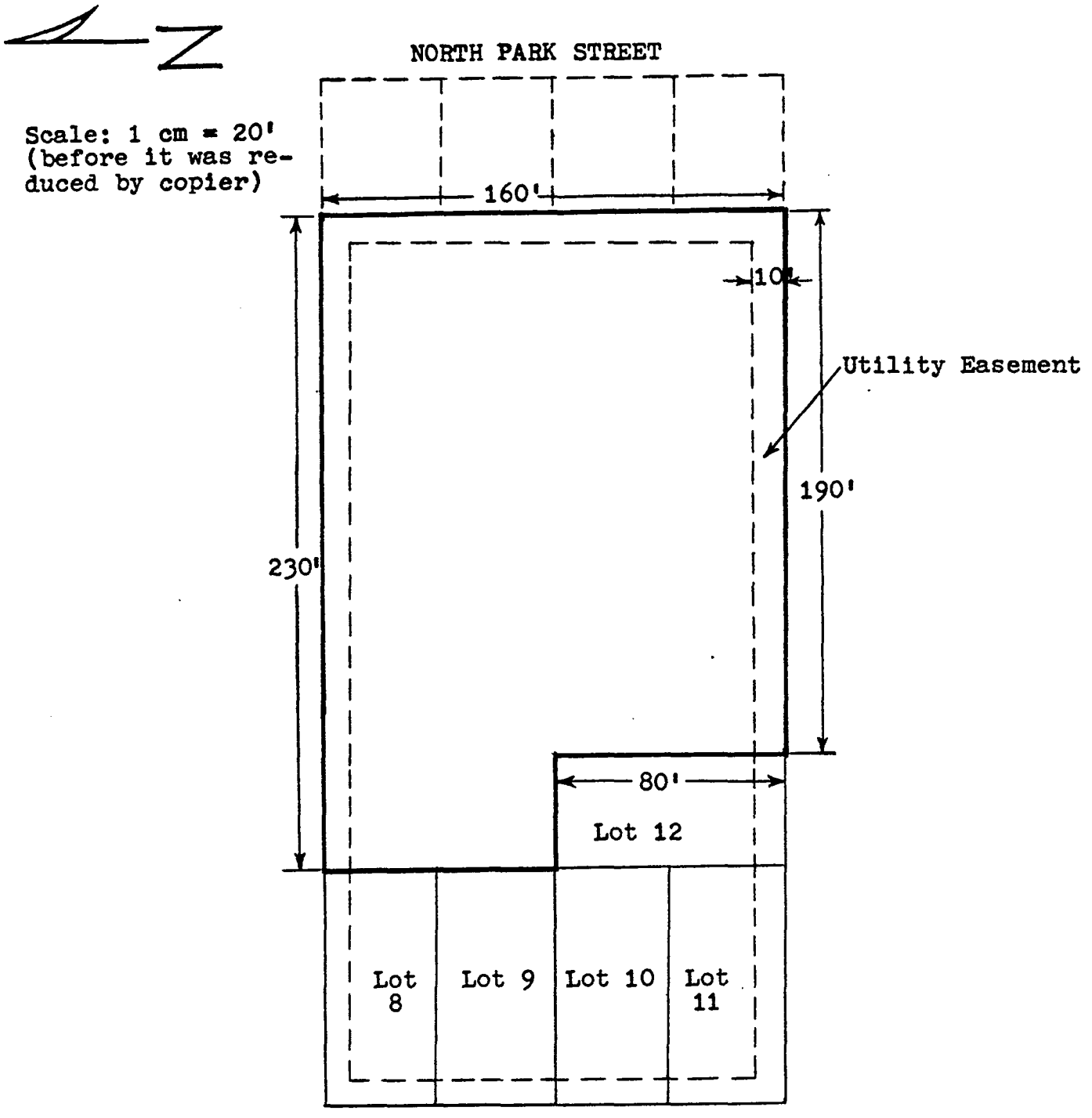
8. Number of Apartments on Lot Based on Number of SAUs on Lot:

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.



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)

/. LOAN TO COST RATIO APPROACH

SITE ACQUISITION COST _____

+

CONSTRUCTION BUDGET _____

+

INDIRECT COST AND DEVELOPMENT FEES _____

=

TOTAL CAPITAL BUDGET _____

×	
1- LOAN TO COST RATIO ____	LOAN TO COST RATIO _____
=	=
CASH EQUITY REQUIRED _____	MORTGAGE LOAN _____
×	×
REQUIRED PRE-TAX CASH DISTRIBUTION RATE _____%	DEBT SERVICE CONSTANT _____
=	=
CASH THROW OFF REQUIRED FOR EQUITY _____ ▷	◁ _____ CASH REQUIRED FOR MORTGAGE LENDER _____

▽

NET OPERATING INCOME

+

OPERATING EXPENSES _____

+

REAL ESTATE TAXES _____

+

CASH REPLACEMENTS _____

=

EFFECTIVE GROSS REVENUE _____ REQUIRED ▷ _____

+

VACANCY LOSS ____% = _____

=

GROSS POTENTIAL REVENUE = _____

+

NET LEASABLE UNITS = _____

=

RENT REQUIRED PER UNIT = _____ ◁

2.

DEFAULT RATIO APPROACH

GROSS RENT POTENTIAL

×

_____ 1- DEFAULT RATIO

=

RISK VARIABLES AND _____ EQUITY CASH

-

___% _____ VACANCY LOSS

-

_____ RISK RESERVE

=

CASH AVAILABLE _____ FOR INVESTORS

÷

REQUIRED PRE-TAX CASH ____% DISTRIBUTION RATE

=

JUSTIFIED CASH _____ EQUITY INVESTMENTS

×

DEFAULT RATIO _____

=

CASH BUDGET OUTLAYS_____

-

OPERATING EXPENSES_____

-

REAL ESTATE TAXES_____

-

CASH REPLACEMENTS _____

=

CASH AVAILABLE FOR _____ DEBT SERVICE

÷

DEBT SERVICE CONSTANT_____

=

JUSTIFIED MORTGAGE _____ LOAN

TOTAL JUSTIFIED INVESTMENT

-

_____ Land Cost + Soft Costs

=

_____ Construction Budget

÷

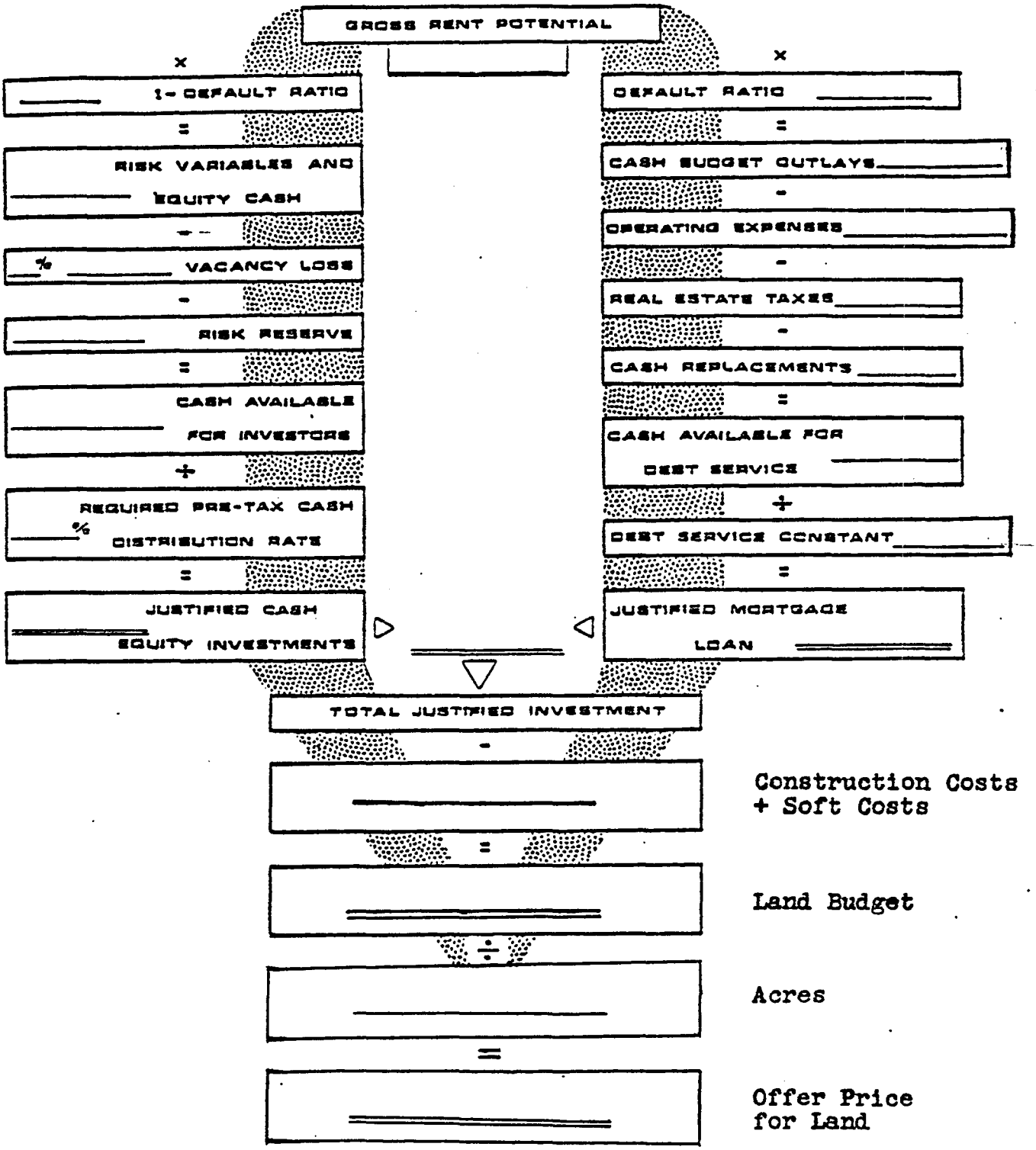
LABEL BOX → _____ ?

=

_____ Construction Cost per Sq. Ft.

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).

Data Input File

(tape here)

NOI in Year 1

(tape here)

Initial Cost

(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.

(tape here)

Initial Equity from 1.b.

(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.

Data Input File

(tape here)

Initial Equity from 2.a.

(tape here)

B/T Cash-on-Cash Return on Equity from 2.a.

(tape here)

MIRR from 2.a.

(tape here)

Default Ratio from 2.a.

(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	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

FEASIBILITY WORKBOOK

TABLE OF CONTENTS

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 CILI 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:

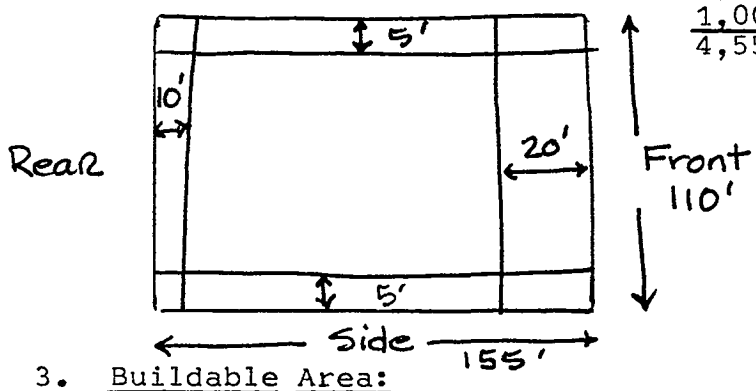
1. <u>Lot Area</u>:

   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):

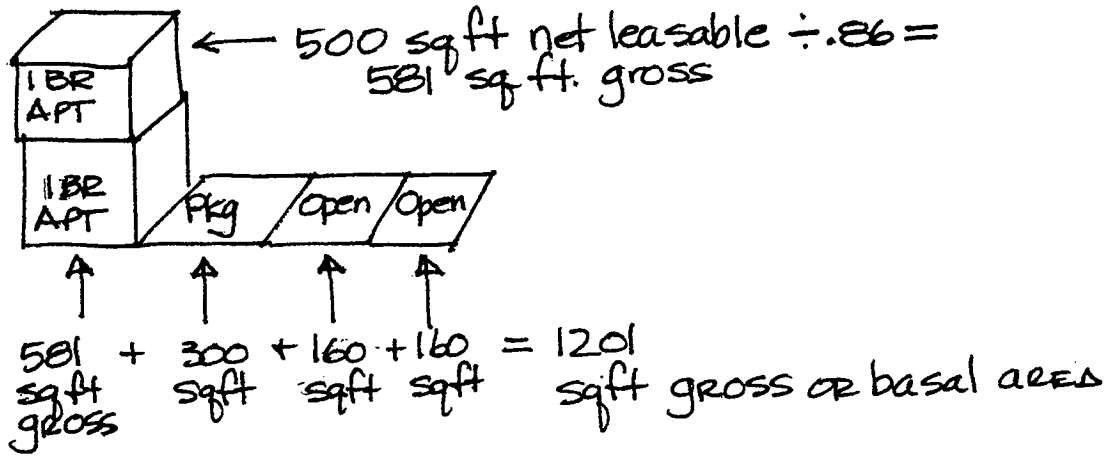
17,050 sq. ft. / x 1,000 sq. ft./one-bedroom apartment =
17 one-bedroom apartments.

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:



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:

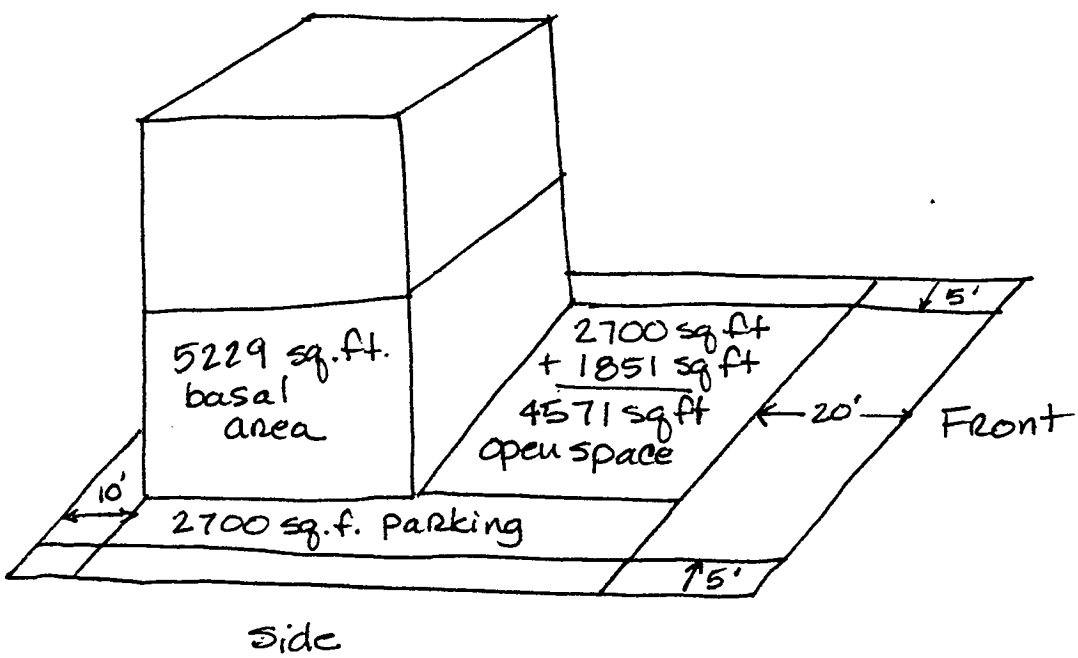
17 apartments x 160 sq. ft./apartment = 2720 sq. ft. open space.

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.

		Proposed Use		
		Low Rise Commercial	Low Rise Residential	Low Rise Office
Site Features	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 explanantion. 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

Retail / Comm - 800 and floor
Apts : 1-BR upstairs
450 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

REPORT ID: CFU271

$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
1126 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 7892	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 79 TAX DUE 1980 1,606.63	L 28,300 I 48,300 T 76,600 TAX DUE 1980 1,651.73	86 FRONTAGE TOTAL SQ FEET 5644	NOT AVAILABLE		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 1210 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.

III-15

III - 16

VOL. 6 PAGE 31

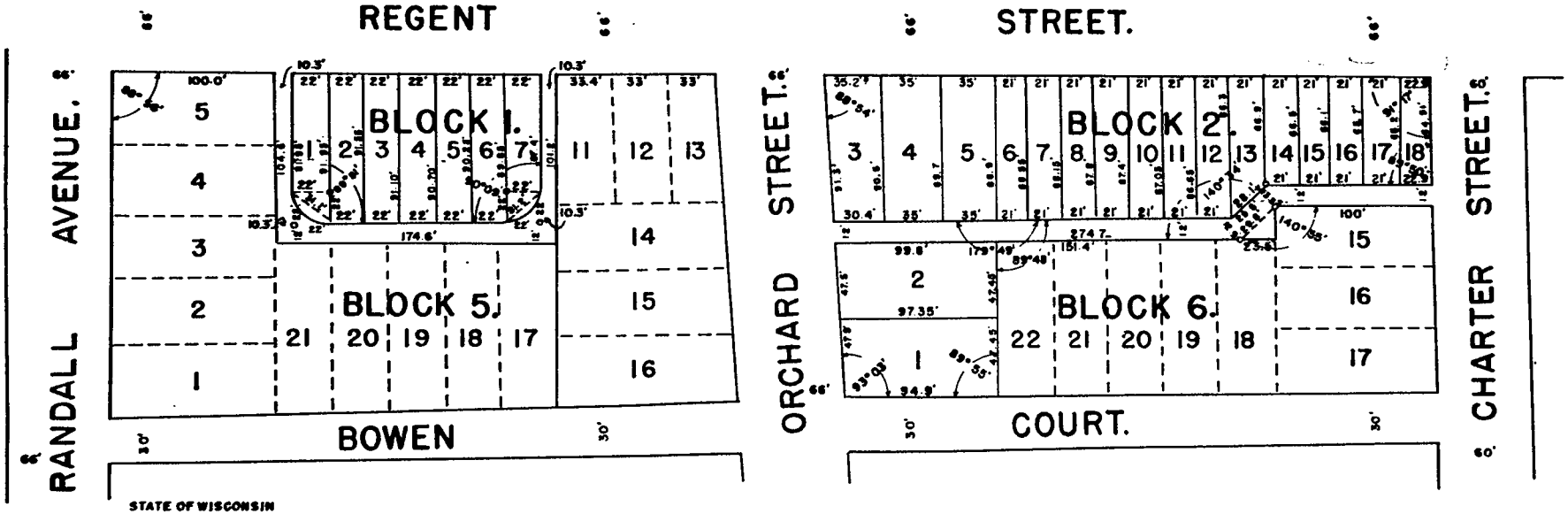
482181

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.

Title Search: 1201 Regent St, Madison

① Grantor: Jack D. Taylor
Grantee: Gordon DeVries
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.

III-20

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 records on page 401
of
Register

RETURN TO
Croak Law Offices
4715 Monona Drive
Madison, Wisconsin 53716

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:

Tax Key #

This is not homestead property.

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 hereby states that he has satisfied with the title as shown by the abstract title insurance commitment submitted to him for examination; the Vendor agrees to deliver the abstract title insurance policy to the Purchaser when the full purchase price hereunder shall have been paid. The Purchaser agrees to pay the cost of later continuations of abstract 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. 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.

VOL 955 PAGE 401

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
_____ County. } ss.

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.

Names of persons signing in any capacity should be typed or printed below their signatures.

My Commission (Expires) (Is) _____

FURNISHED BY

Dane County Title Company

III-22

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

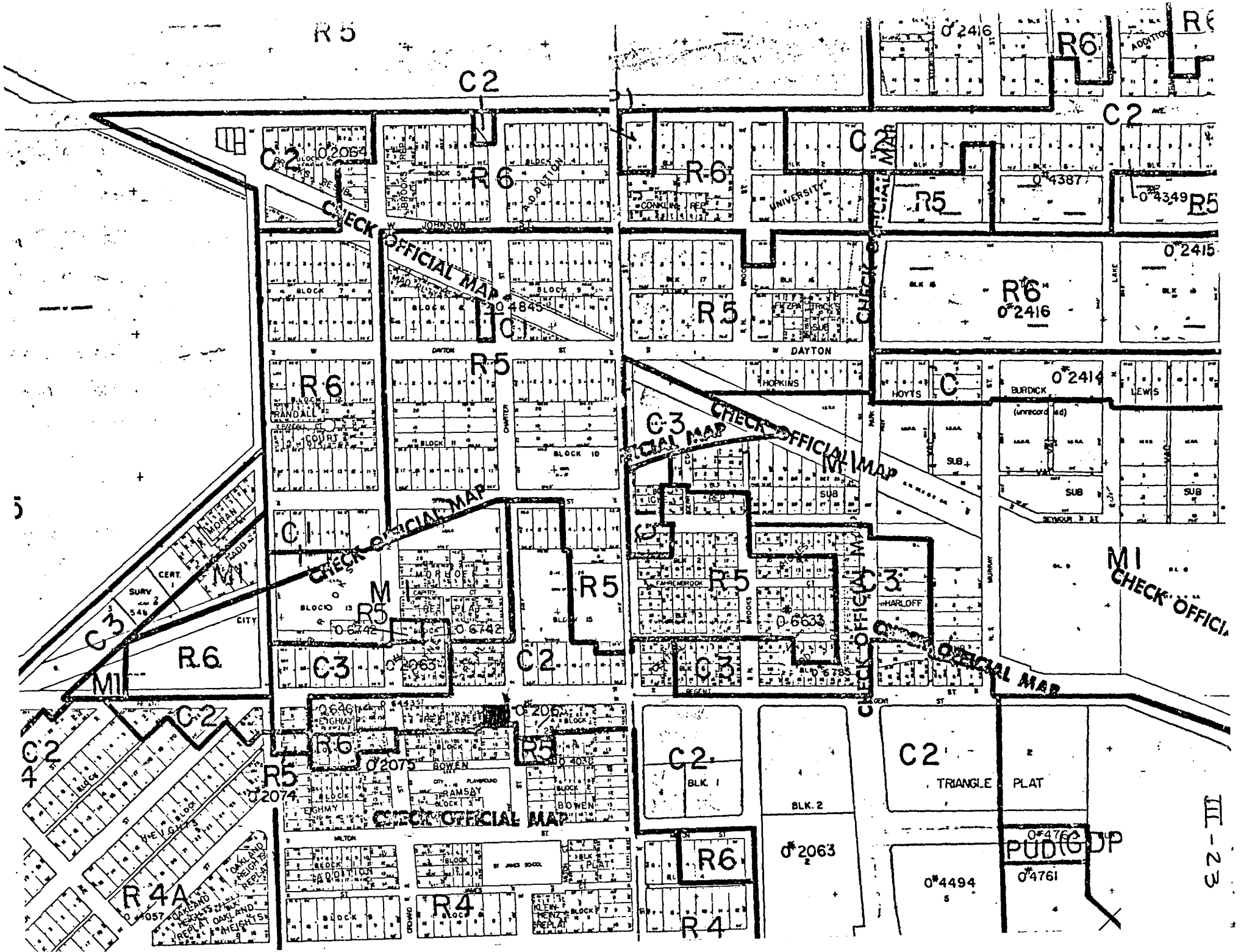
VOL 955 PAGE 403

Office of Register of Deeds
Dane County, Wisconsin } ss.

Recorded June 6 1978

At 2 20 o'clock pm

Harold K. Hill, Register


R5
C2
R6
C2
R6
R5
R5
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II-23

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) Lot Area Requirements. 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) Height Regulations. In the C1 district, no building or structure shall exceed three (3) stories nor forty (40) feet in height.

(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

(e from 28.11)

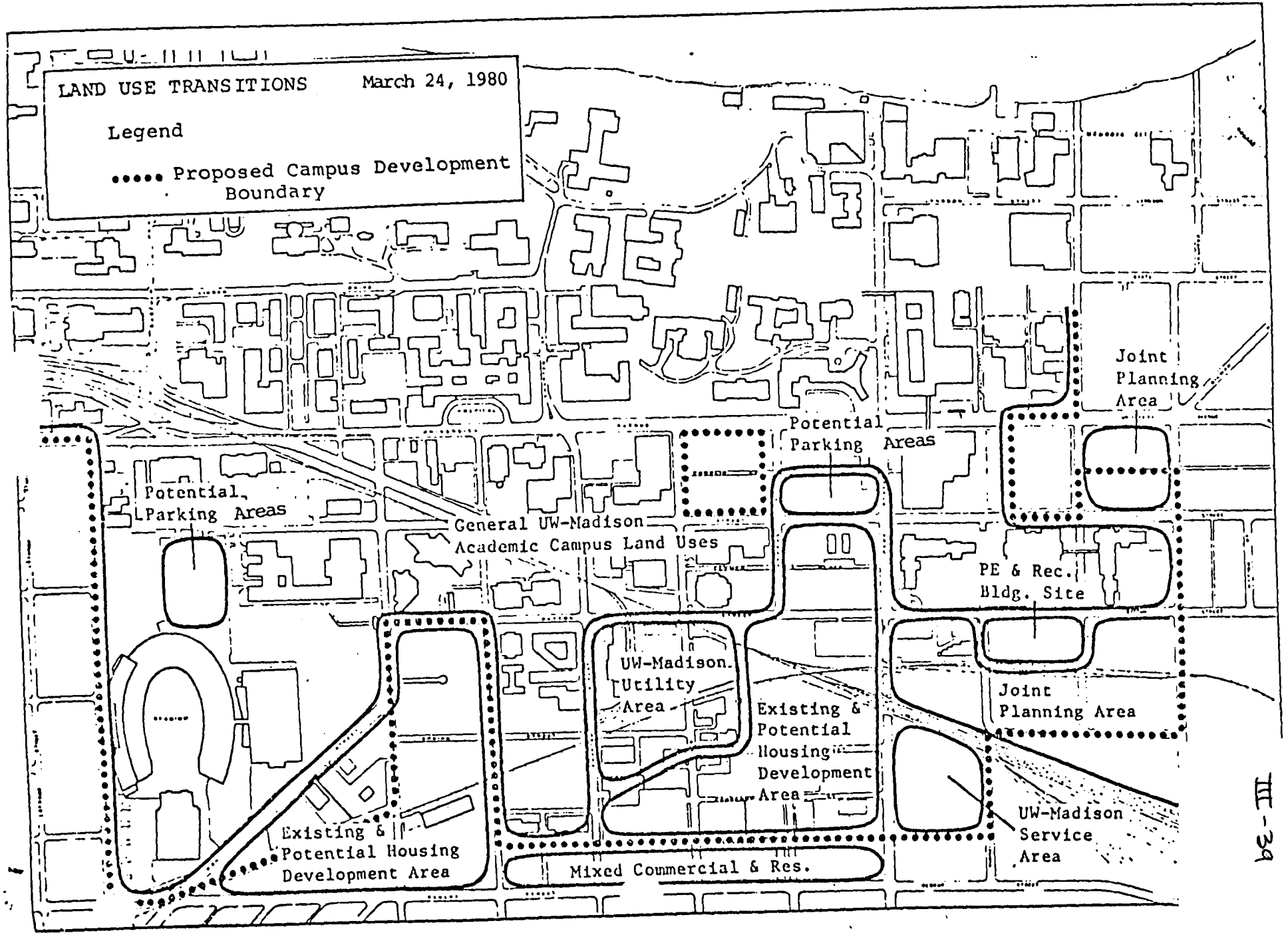
ZONING CODE **RESIDENTIAL** Sec. 28.11(3)(1)1.a.

REQUIRED OFF-STREET PARKING FACILITIES

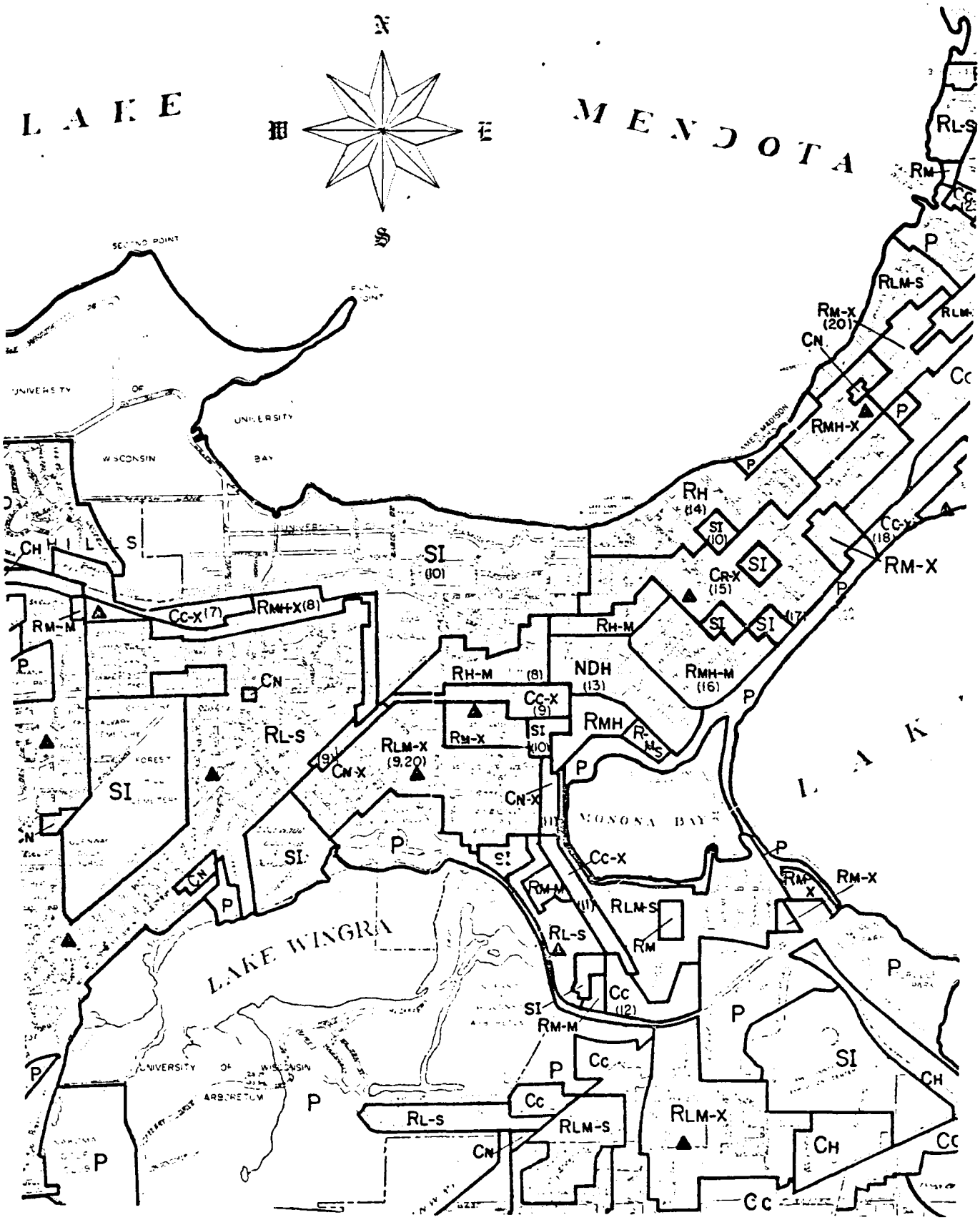
	Number Of Required Parking Spaces Per Lodging Room Or Dwelling Unit				
Zoning Districts	Lodging Room	Efficiency Unit	One Bedroom Unit	Two Bedroom Unit	Three Or More Bedroom Unit
Conservancy, Agriculture, R1, R2, R3, R4, R4A, R4L	1.00	1.00	1.25	1.25	1.25
R5, C1, C2, C3	.50	.75	1.00	1.00	1.00
R6	.33	.50	.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.

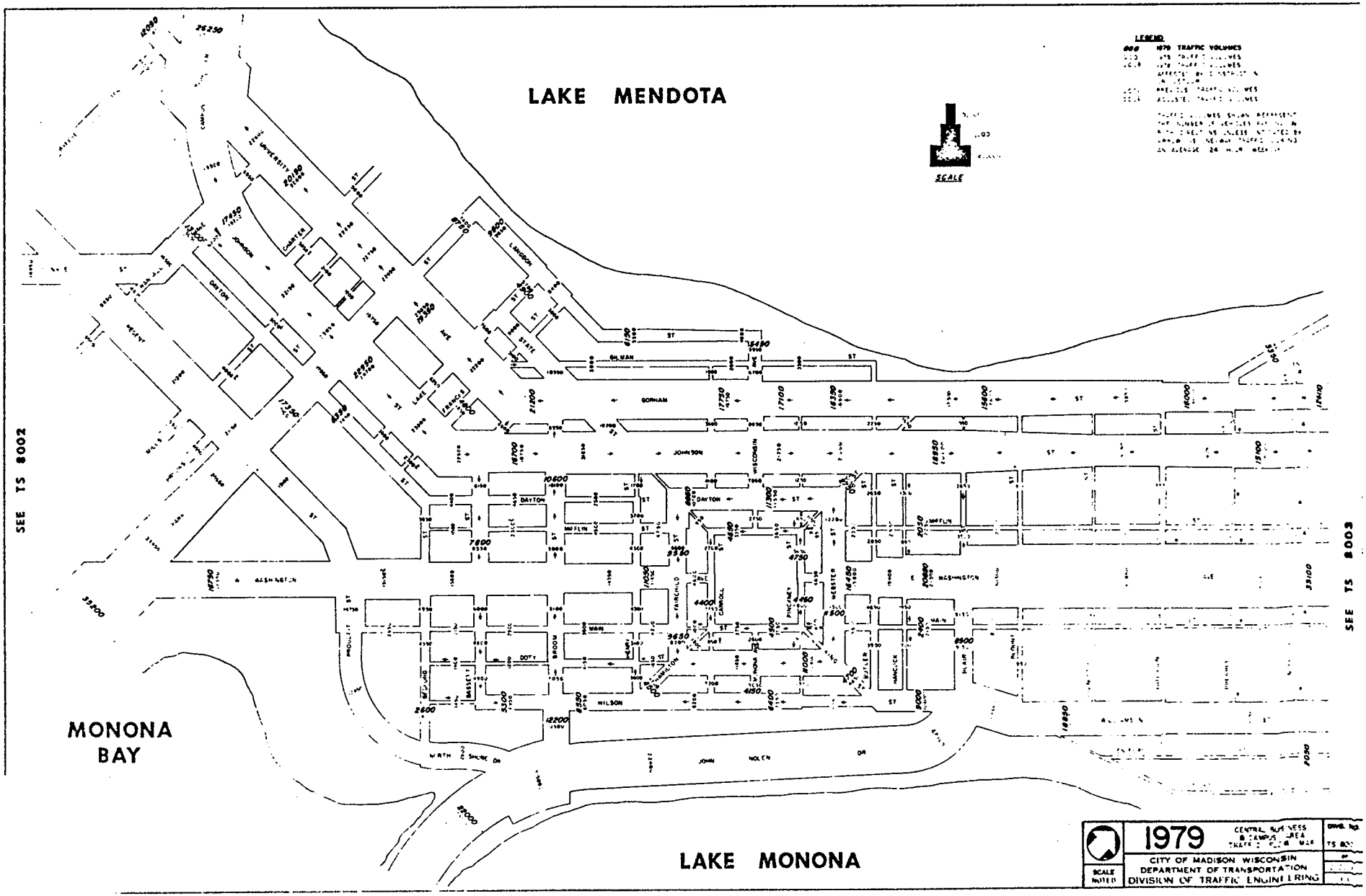
Additional comments on particular recommendations are contained in the following notes, which are keyed to the numbers in parenthesis on the maps.

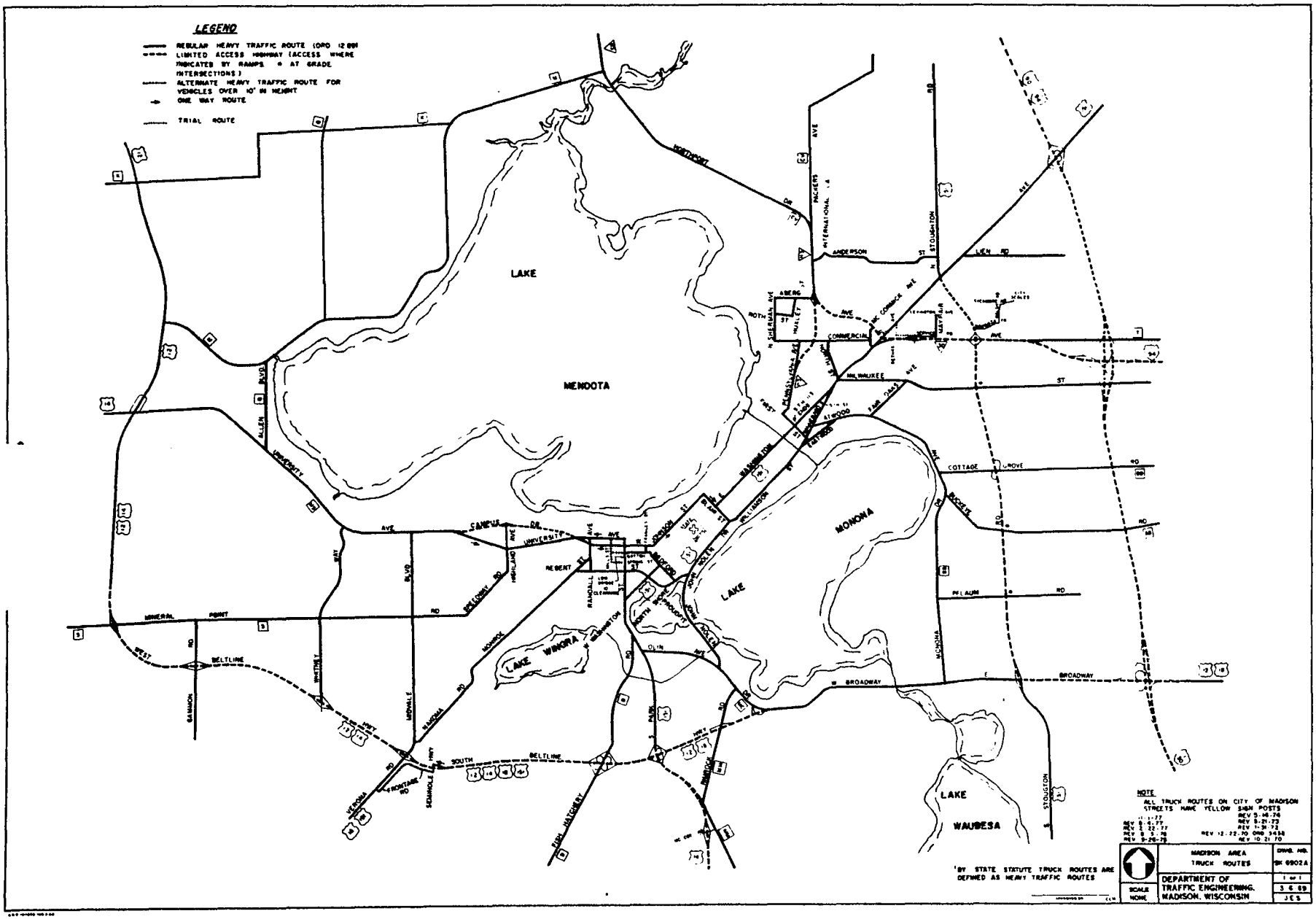
9. It is recommended that intensive commercial and high density residential uses be developed along Regent Street, and that commercial ground floor uses have residences built above them on Regent and Monroe Streets. This recommendation, coupled with the higher densities proposed in notes 8 and 13, should reduce the pressure for new higher residential density development in the Regent, Monroe and Vilas Park neighborhoods.

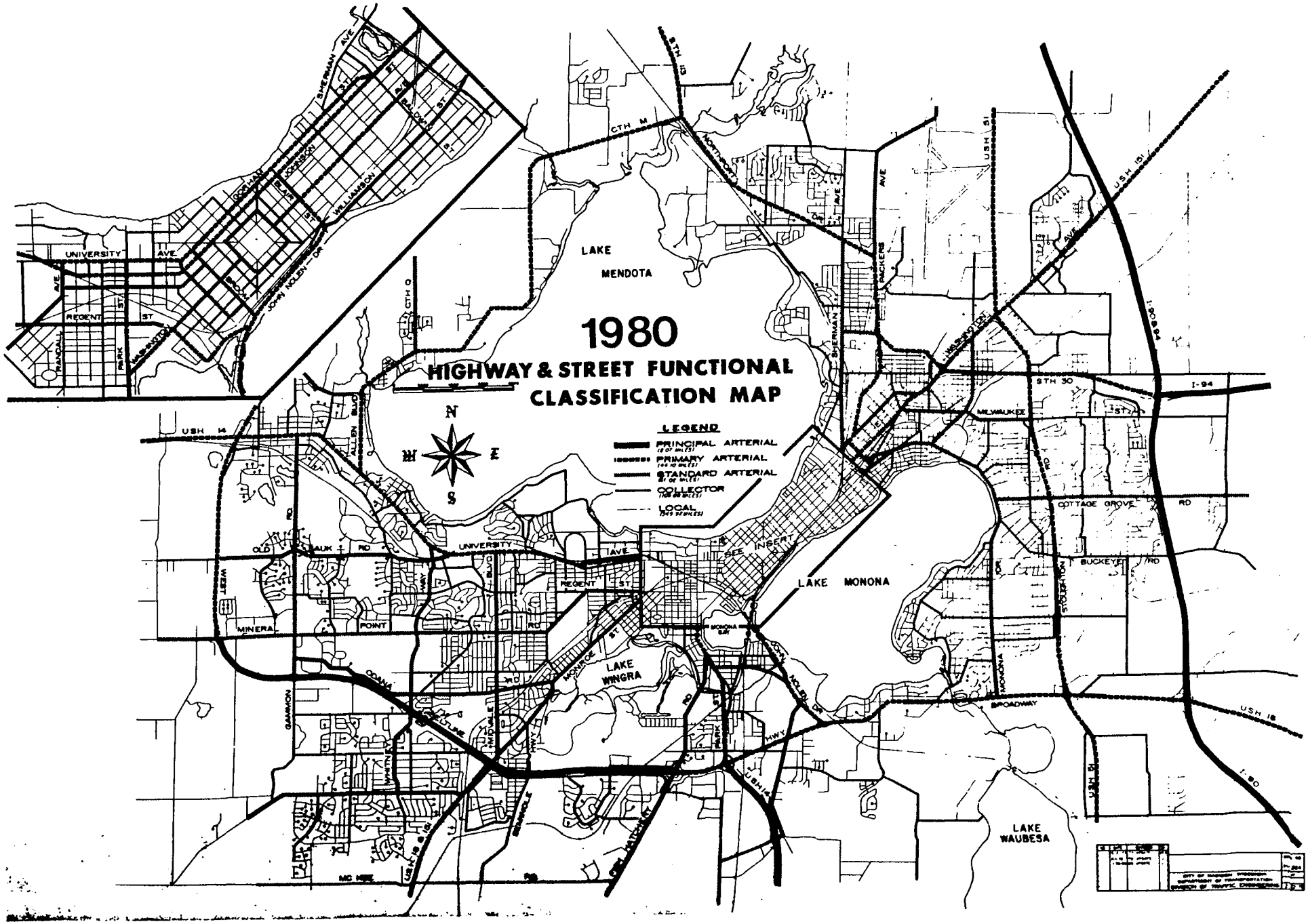
e. Mixed-Use District

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.

III-45


LAKE MENDOTA
LEGEND
SCALE
SEE TS 8002
SEE TS 8003
MONONA BAY
LAKE MONONA
1979
CITY OF MADISON WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRAFFIC ENGINEERING
SCALE NOTED


LEGEND
REGULAR HEAVY TRAFFIC ROUTE (ORD 12.69)
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
MINERAL POINT RD
WEST BELTLINE
SOUTH BELTLINE
BROADWAY
COTTAGE GROVE RD
PFLAUM RD
STOUGHTON RD
MILWAUKEE ST
COMMERCIAL AVE
ANDERSON ST
UNIVERSITY AVE
SAUK PASS
NORTHPORT DR
FAIRCHILD ST
WASHINGTON AVE
MONROE ST
PARK ST
FISH HATCHERY RD
MOORLAND RD
WHITING WAY
ALLEN BLVD
SEMINOLE HWY
FRONTAGE RD
VERONA
MONONA DR
MONONA
NORTH STOUGHTON
INTERNATIONAL LA
ABERG AVE
ROTH ST
NORTH SHERMAN AVE
MC CORMICK AVE
MAYFAIR
ATWOOD AVE
REGENT ST
RANDALL
CAPITOL
OLIN AVE
NORTH BLOUNT
SOUTH BLOUNT
SAMPSON
HIGHLAND AVE
SPECHT
GAMMON
MIDVALE
NOBLE
NAKOMA RD
SOUTH PARK
WHITNEY WAY
VIEN RD
BUCKEYE RD
MONONA DR
NOTE
ALL TRUCK ROUTES ON CITY OF MADISON STREETS HAVE YELLOW SIGN POSTS
REV 11-1-77
REV 5-6-77
REV 5-22-77
REV 5-2-78
REV 9-26-78
REV 5-16-74
REV 5-21-73
REV 1-30-73
REV 12-22-70 ORD 3484
REV 10-21-70
MADISON AREA TRUCK ROUTES
DEPARTMENT OF TRAFFIC ENGINEERING, MADISON, WISCONSIN
SCALE NONE
DWG. NO. SK 6902A
1 of 1
3 6 69
JES
'BY STATE STATUTE TRUCK ROUTES ARE DEFINED AS HEAVY TRAFFIC ROUTES

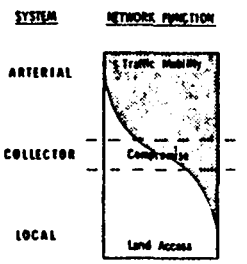

1980
HIGHWAY & STREET FUNCTIONAL CLASSIFICATION MAP
LEGEND
PRINCIPAL ARTERIAL
PRIMARY ARTERIAL
STANDARD ARTERIAL
COLLECTOR
LOCAL
N
S
E
W
LAKE MENDOTA
LAKE MONONA
LAKE WINGRA
LAKE WAUBESA
SEE INSERT
UNIVERSITY AVE
REGENT ST
MINERAL POINT RD
OLD SAUK RD
COTTAGE GROVE RD
BUCKEYE RD
MILWAUKEE ST
BROADWAY
STH 30
I-94
USH 151
USH 51
USH 14
USH 18
I-90
CTH M
CTH O
STH 113
MC KEE RD
GAMMON
WEST
MONROE ST
MIDVALE
PARK
MONONA
STOUGHTON
SHERMAN AVE
PACKERS AVE
WILLIAMSON
JOHN NOLEN DR
BLAIR ST
BADGER ST
GOODMAN
RANDALL
WASHINGTON
CITY OF MADISON, WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRAFFIC ENGINEERING

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

A guide sign used for marking officially designated Bikeways.

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.

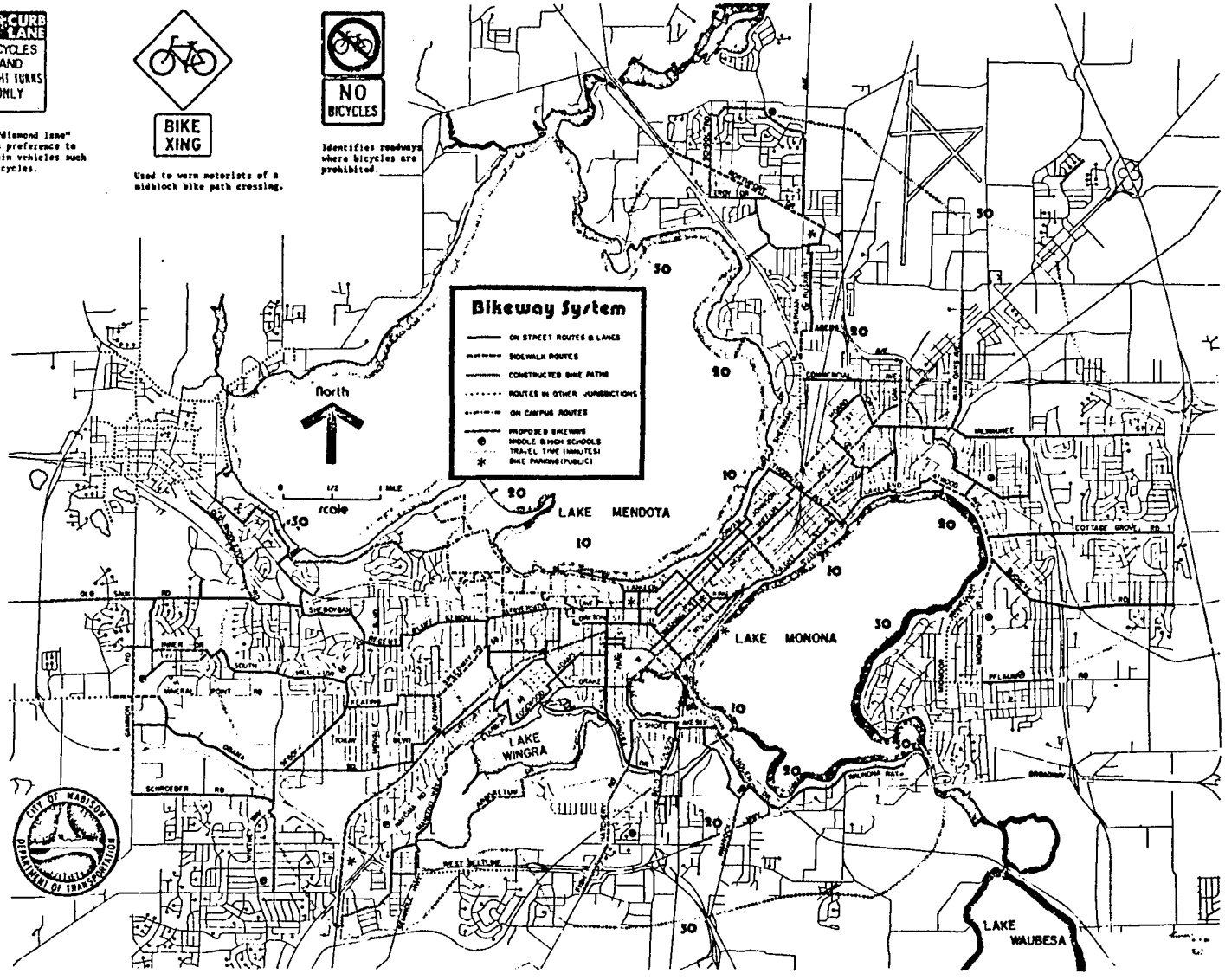
Rectangular or square signs always give information or regulations which you MUST observe.

The Madison Bikeway System was funded in part by Community Development Block Grant Funds from the U.S. Dept. of Housing and Urban Development

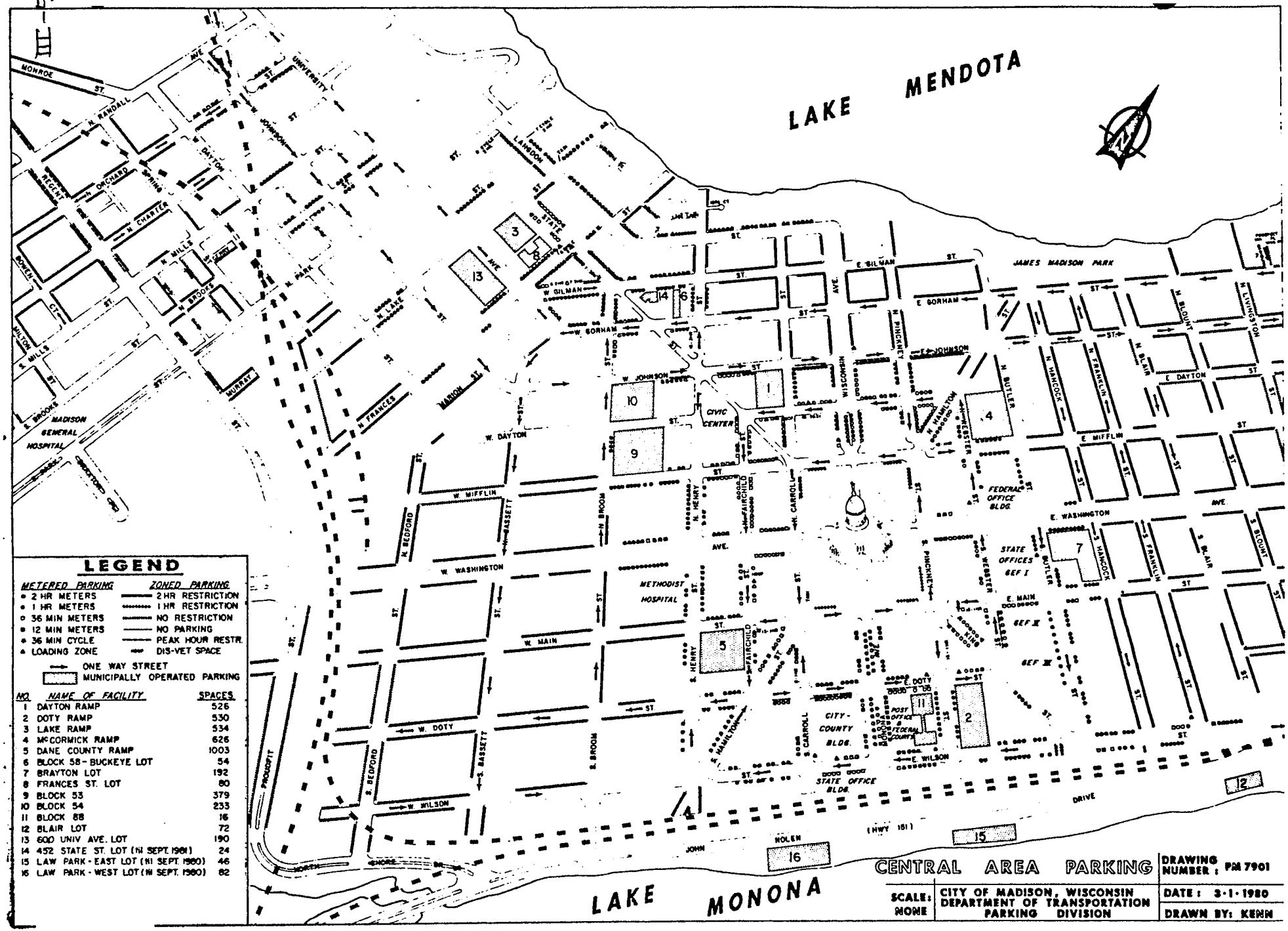
The "diamond lane" gives preference to certain vehicles such as bicycles.

Used to warn motorists of a midblock bike path crossing.

Identifies roadways where bicycles are prohibited.



APRIL, 1980



LEGEND

METERED PARKING	ZONED PARKING
2 HR METERS	2 HR RESTRICTION
1 HR METERS	1 HR RESTRICTION
36 MIN METERS	NO RESTRICTION
12 MIN METERS	NO PARKING
36 MIN CYCLE	PEAK HOUR RESTR.
LOADING ZONE	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 (IN SEPT. 1981)	24
15	LAW PARK - EAST LOT (IN SEPT. 1980)	46
16	LAW PARK - WEST LOT (IN SEPT. 1980)	82

CENTRAL AREA PARKING

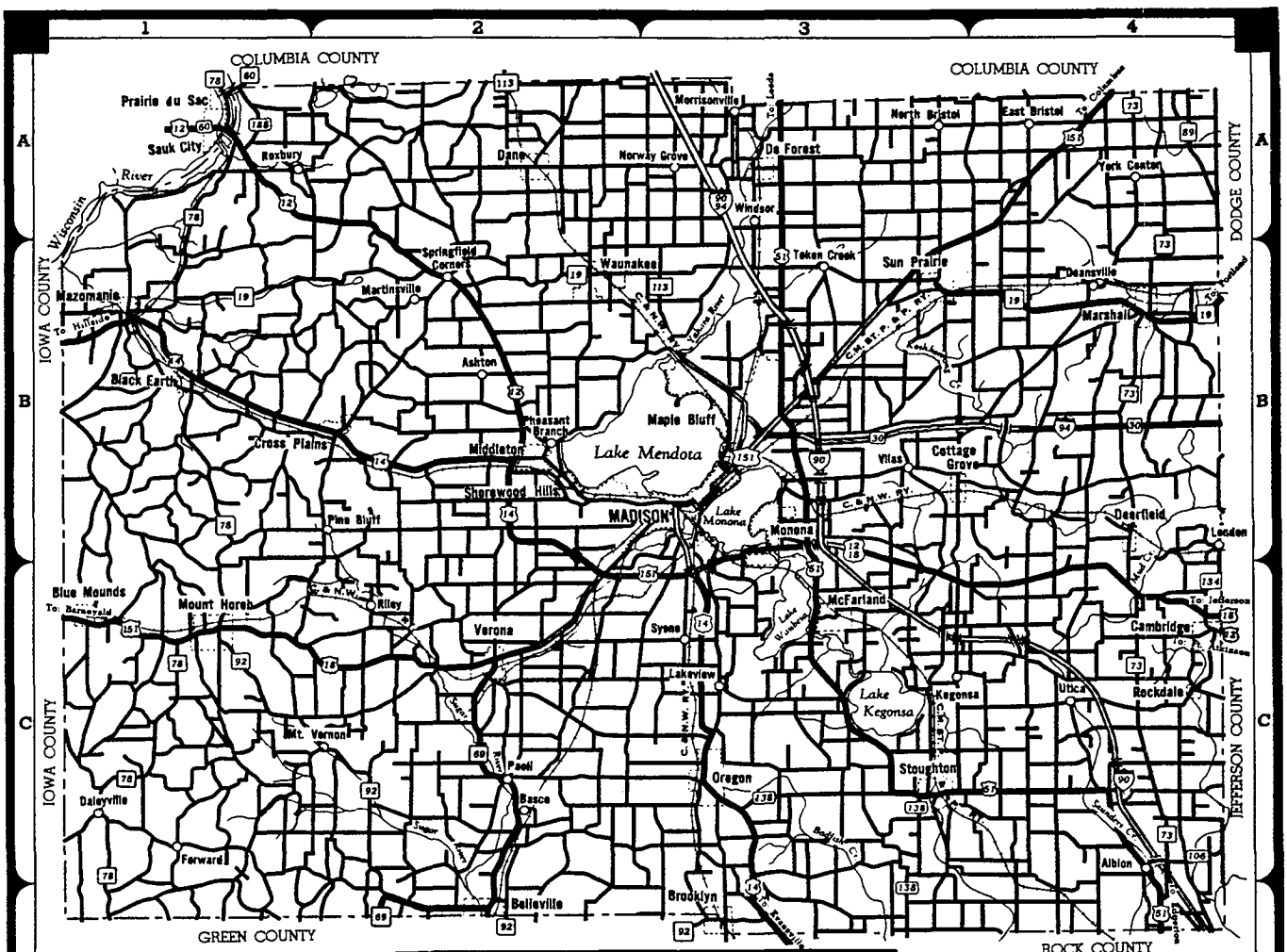
SCALE: NONE

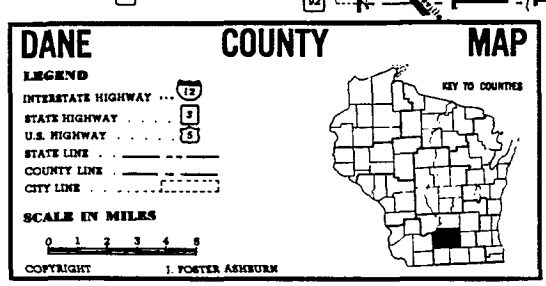
CITY OF MADISON, WISCONSIN
DEPARTMENT OF TRANSPORTATION
PARKING DIVISION

DRAWING NUMBER: PM 7901

DATE: 3-1-1980

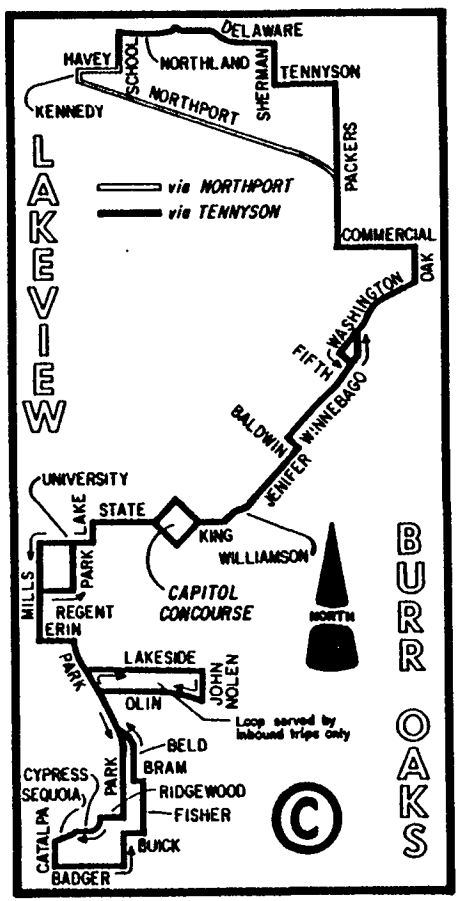
DRAWN BY: KEHN



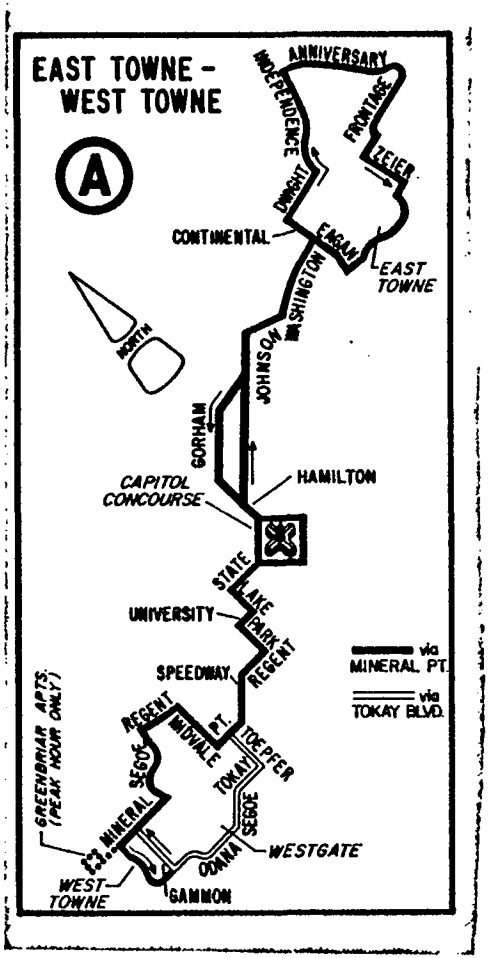


Albion..... C-4
Ashton..... B-2
Basco..... C-2
Belleville..... D-2
Black Earth.... B-1
Blue Mounds.... C-1
Brooklyn..... D-3
Cambridge..... C-4
Cottage Grove... B-3
Cross Plains.... B-2
Daleyville..... C-1
Dane..... A-2
Deansville..... B-4
Deerfield..... B-4
De Forrest..... A-3
East Bristol.... A-4
Forward..... 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 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 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.

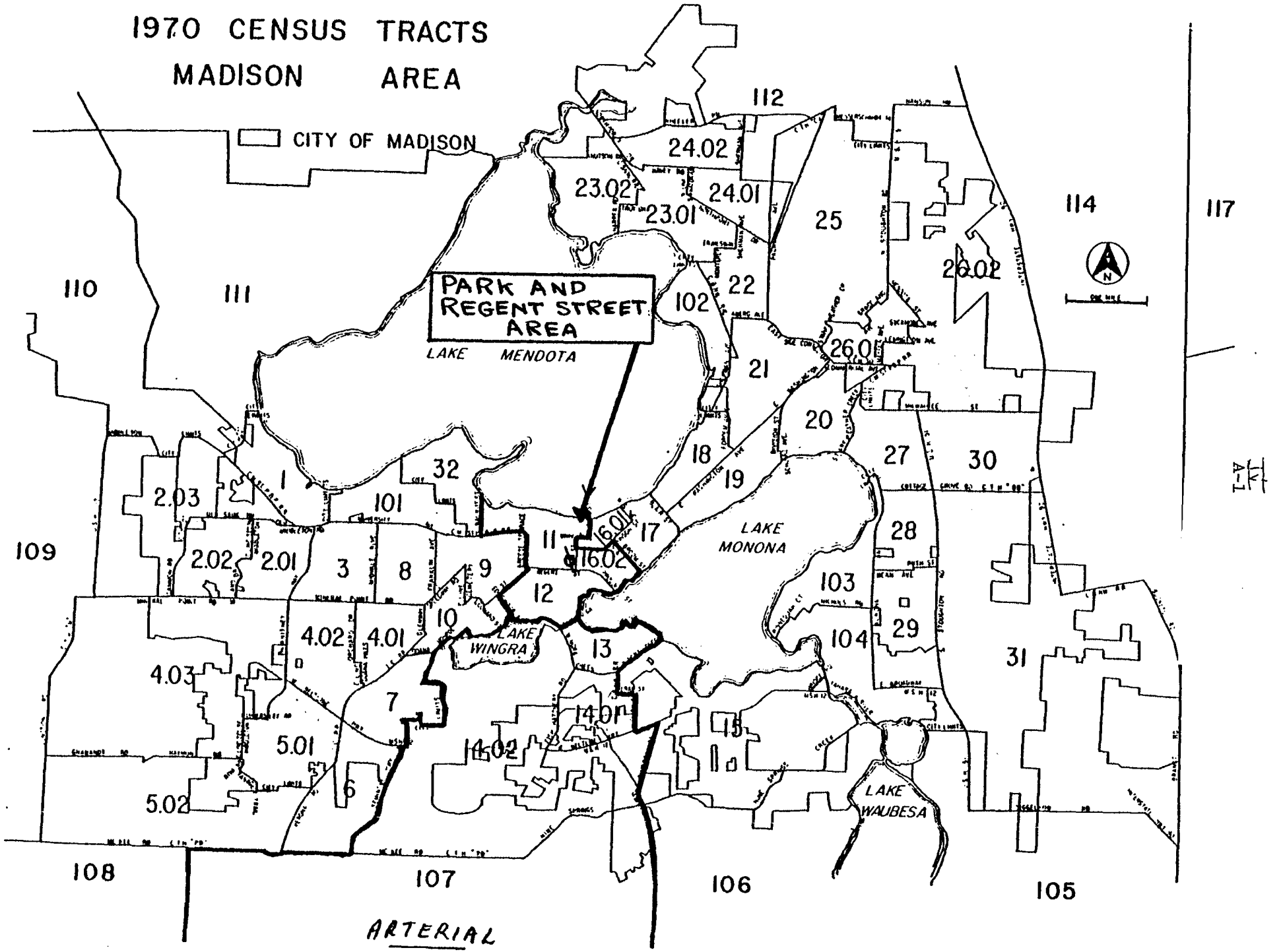
2. Delineation of trade areas for each alternative use.

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.

Appendix A


1970 CENSUS TRACTS
MADISON AREA
CITY OF MADISON
PARK AND REGENT STREET AREA
LAKE MENDOTA
LAKE MONONA
LAKE WINGRA
LAKE WAUBESA
ARTERIAL
110
111
112
114
117
109
108
107
106
105
24.02
23.02
23.01
24.01
25
26.02
22
102
26.01
21
20
18
19
27
30
32
1
2.03
101
11
16.01
17
28
2.02
2.01
3
8
9
16.02
12
103
10
29
4.02
4.01
104
13
31
4.03
7
14.01
15
5.01
14.02
6
5.02

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)

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)

Total	66,604	20,265	2,882	1,132	2,314	13,937

Table 9a

Total Occupied by Unit Type (9,1153,8)

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

Variables	Madison Area	Total Area	11:00	1200	9 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	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	9 1602	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)

		Madison Total	Area Total	11.00	12.00	16.02	13.00 14.00 14.02 107 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	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	9 ~~16.02~~	~~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 14.02 Arterial	14.01 107
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 14.02 Arterial	14.01 107
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	9 ~~16.02~~	13.00 ~~14.02~~ 14.0 ~~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	9 ~~16.02~~	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).

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

INDUSTRIAL GROUP	EMPLOYMENT COVERED BY UNEMPLOYMENT COMPENSATION Jan. 1975					
	WISCONSIN		MILWAUKEE SMSA		DANE CO.	
	%	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

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% $13,000 rent / 9000 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

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.

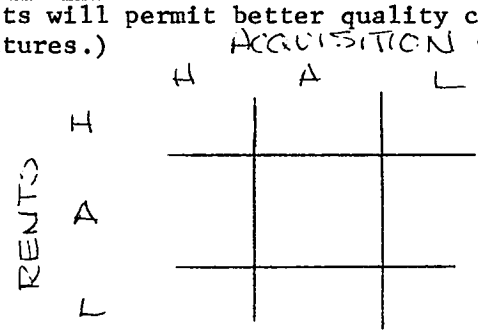
A. Building Dimensions

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. <u>Explain</u> 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

**********************

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

**********************

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
```

	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

don't calculate only our three cells you've selected!

```
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
     ==================                          1981      1982      1983      1985
(6)  39  AFTER TAX PRESENT VALUE               219739.   222312.   224406.   227382.

     CASH FLOW ANALYSIS
     ==================                          1981      1982      1983      1985
(7)  39  AFTER TAX PRESENT VALUE               220815.   227773.   233608.   242470.

     CASH FLOW ANALYSIS
     ==================                          1981      1982      1983      1985
(8)  39  AFTER TAX PRESENT VALUE               212872.   217249.   220248.   224605.

     CASH FLOW ANALYSIS
     ==================                          1981      1982      1983      1985
(9)  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
```

4th year Discovery

TIV for each alt.

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

RECAP INPUT FORM

version 1979

GENERAL DATA

Page 1.

1, Project Title ____ User Name ____

10, Starting Year ____ Data Sets ____ Classification ____ % Owned 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. 0 ____

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% LV
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	(1)
* EXPENSES	$ 24843.	*	RATE OF GROWTH OF EXPENSES	0.0700	(1)
* 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	$ 56600. (3)	

25%

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

use 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
PARKING	1.00	1	15.	2	$	6400.	0

(4)

125%
ST LINE

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	(1) - 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	(1) - 33120.	33934.	34738.	36308.
6	LESS DEPRECIATION	(5) - 6498.	6281.	6072.	5676.
7	LESS INTEREST	(6) — 18678.	18584.	18480.	18236.
8	TAXABLE INCOME	(7) 7944.	9068.	10186.	12396.
9	PLUS DEPRECIATION	6498.	6281.	6072.	5676.
10	LESS PRINCIPAL PAYMENTS	(6) 853.	947.	1051.	1295.
11	CASH THROW-OFF= DIST C. aftr TX.	13589.	14402.	15207.	16777.
12	LESS TAXES	(7) 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)	(8) 0.	0.	0.	0.
16	DISTRIBUTABLE CASH AFR TAX	9617.	9868.	10114.	10579.
17	TAX SAVING ON OTHER INCOME	(7) 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	(9) 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	(9) 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
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

TIV: incl. sale.

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

20 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.	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

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.