JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS

V. INDUSTRY SEMINARS AND SPEECHES - SHORT TERM

H. Presentations Sponsored by Other Universities

3. "Contemporary Real Estate Feasibility Analysis", sponsored by the University of Alberta Extension, October 12-13, 1978 (incomplete lecture notes)

Index

CONTEMPORARY REAL ESTATE FEASIBILITY ANALYSIS

For Presentation at
University of Alberta Extension
Edmonton, Alberta, Canada
October 12-13, 1978

Instructor: Professor James A. Graaskamp
University of Wisconsin School of Business

I. Basic Concepts and Definitions

A. Real estate is a tangible product - defined as artificially delineated space with a fourth dimension of time referenced to a fixed point on the face of the earth.

1. Real estate is a space-time unit, room per night, apartment per month, square foot per year, tennis court hours, or a condominium for two weeks in January at a ski slope.
2. To the space-time abstraction can be added special attributes to house some form of activity.
3. Improvements from survey market to city layouts to structures define space.
4. Legal contracts and precedents define time.
5. Rights of use are defined by public values, court opinions.
6. Private rights to use are those which remain after the public has exercised its rights to control, to tax, or to condemn.

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

1. A real estate business is any business which provides expertise necessary to relate space-time need to money-time requirements and includes architects, brokers, city planners, mortgage bankers, and all the other special skills.
2. The true profit centers in real estate are in the delivery of services and cash capital.
3. Since private property rights are only the residual rights after subtracting the public interest, the only real private property is money.
4. Equity ownership is the degree to which one enterprise controls or diverts cash from another real estate enterprise.

C. The real estate process is the dynamic interaction of three groups, space users (consumers), space producers, and the various public agencies (infrastructures) which provide services and capital to support the consumer needs. (See Exhibit 1)

1. Each of these three decision groups represent an enterprise, an organized undertaking. All are cash cycle enterprises constrained by a need for cash solvency, both short and long term.
2. A desirable real estate solution occurs when the process permits maximum satisfaction to the consumer at a price that he can afford within the environmental limits of land while permitting the consumer, producer, and the government cash cycle to achieve solvency - cash breakeven at a minimum, after full payment for services rendered.

3. Solvency of the total process, not value, is the critical issue.
4. Land is an environmental constraint and not a profit center. Land provides access to a real estate business opportunity and is not the opportunity itself. Real estate business wants to control land to create a captive market for services.

D. The old concept of highest and best use - namely maximizing the wealth of an individual from the ownership of land in a stated period of time is being replaced with more socially responsive definitions. Here at Wisconsin we use two concepts, one representing the ideal solution and one representing the most practical current solution.

1. The most fitting use is that use which is the optimal reconciliation of effective consumer demand, the cost of production, and the fiscal and environmental impact on third parties.
2. Reconciliation involves financial impact analysis on "who pays" and "who benefits" - thus the rash of debate on how to do impact studies.
3. The most probable use will be something less than the most fitting use depending on topical constraints imposed by current political factors, the state of real estate technology, and short term solvency pressures on consumer, producer, or public agency.

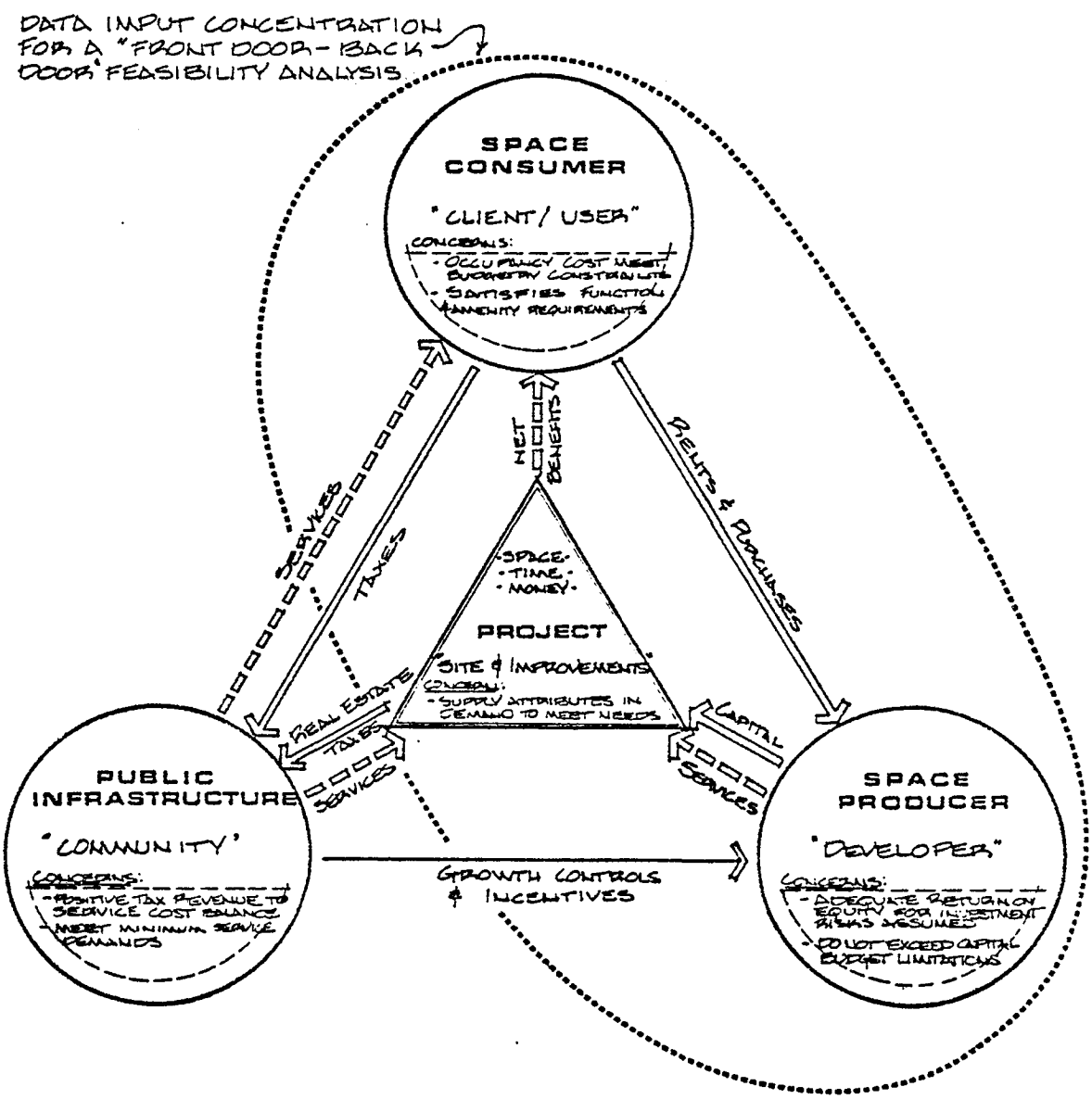
E. A real estate decision has only two basic forms. Either someone with a site with land and possibly improvements is seeking a use, a need, a consumer with the ability to pay (or) a consumer, need, or use with a defined ability to pay is seeking some combination of space-time attributes he can afford.

1. Feasibility is a non-financial concept of fitting a real estate solution and service package to a context of public priorities and customer needs. The project must fit the general customer needs. The project must fit the general market, a specific consumer group, the environmental limits of the land, the nature of existing usable improvements, legal and political controls imposed by the public, the need for compatibility with the total and natural man-made environment, and the limits of physical design construction. (See Exhibit 2)
2. Real estate investment is "buying" a set of financial assumptions accepted and realizations achieved, between proforma estimates and profit and loss realized.

II. Financial management is control of variance in the various assumptions which combine to define net outlays and receipts. The uncontrollable risk remains so there must be a tolerance for surprise in any financial plan. Yield on investment is simply the ratio of receipts to outlays over time and that is the simple part, the essential question is how reliable are the estimates of outlays and receipts, how sensitive are they to surprise.

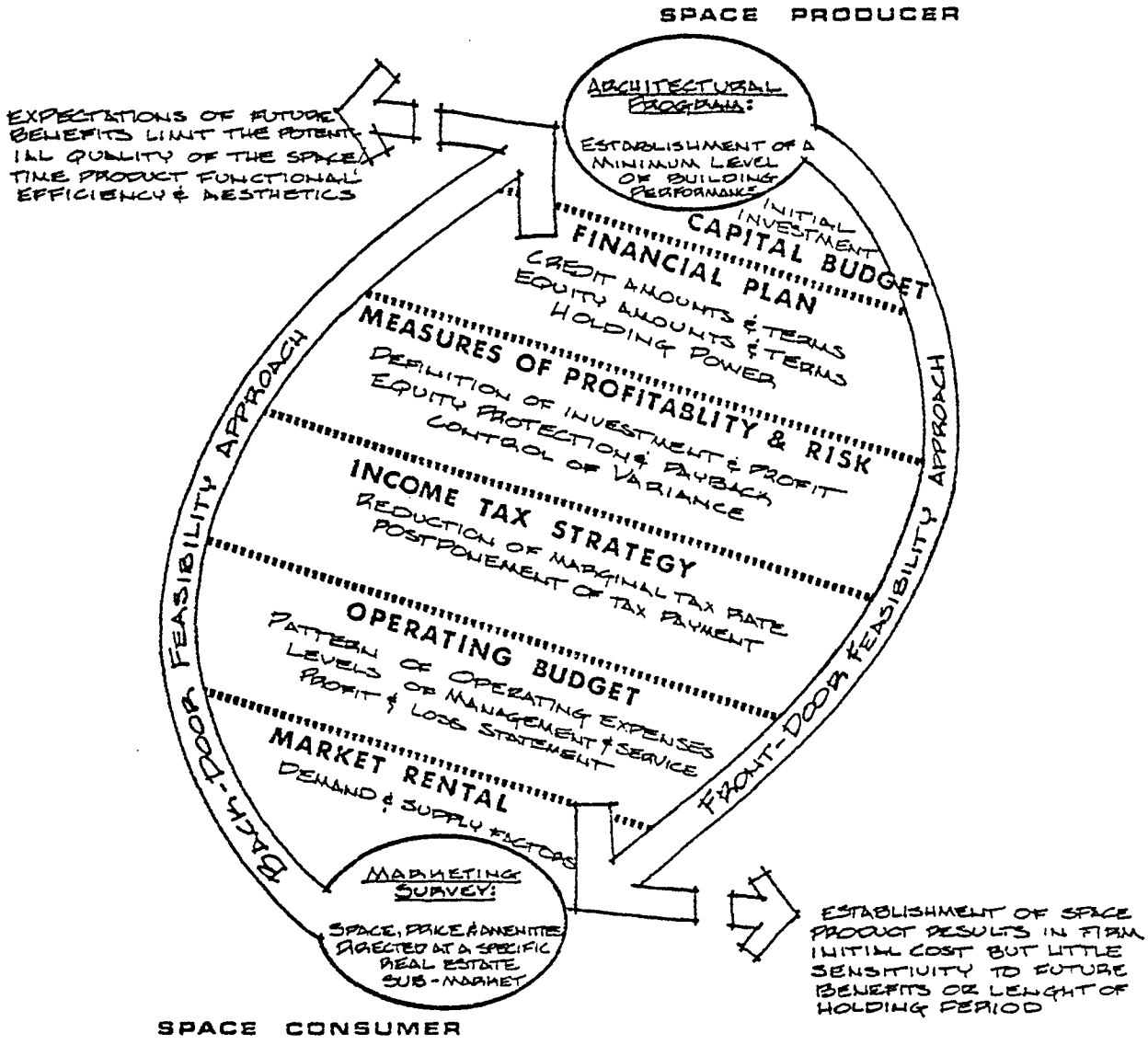
A. An investment in a bond can be defined as to when it begins in time, when it is sold, when coupons are collectable and total costs and total receipts under alternative outcomes. Thus, yield is easily computed and risk depends on whether you can rely on the promisor.

EXHIBIT I



THE REAL ESTATE DEVELOPMENT SYSTEM

EXHIBIT 2



TWO SIDES OF THE COIN

1. Real estate financial analysis seldom enjoys such a rigid set of financial specifications and therefore seldom enjoys reasonable conditions of certainty.

2. In place of rigid time tables and amounts, the real estate investor supplies many assumptions about the business future and its many alternative outcomes.

3. To talk about risk and compare it between investments implies some explicit measures rather than simply subjective doubt--expressed by a shrug of the shoulders.

B. Modern management defines risk as the potential variance between expectations and realizations, i.e., between proforma prospects and historical balance sheet and P & L statements.

1. Variance sometimes is a binary--yes-no question. You will or you won't receive zoning approval.

2. Variance sometimes is the possible range around an average or a median--a distribution of alternative costs or revenue possibilities.

C. For ease of analysis there are two kinds of risks:

1. Static risks (uncontrollable, or external events) are those which can only cause a loss due to surprise upset of a plan.

2. Dynamic risks (partially controllable internal events) can produce profit or loss and are best controlled by the finesse of management execution of a plan.

D. Risk evaluation or comparison grows out of the function of risk management for an enterprise.

1. Risk management has two objectives:

   a. First priority - conservation of existing enterprise assets despite surprise events.
   b. Second priority - realization of budgeted expectations despite surprise events.

2. The process of risk management involves systematic and continuous:

   a. Identification of significant exposures to loss
   b. Estimation of potential loss frequency and severity
   c. Identification of alternative methods to avoid loss
   d. Selection of a risk management method
   e. Monitoring execution of risk management plan

3. The risk management process is both a philosophy of inquiry or analysis and a checklist of management concern, which is attempting to answer systematically "WHAT IF...?" questions, to anticipate surprise and to provide for a response or adjustment in advance of the contingency.

E. Identification of significant exposures to loss can begin by using standard business documents as reminders, such as:

1. Review of balance sheet accounts
2. Review of profit and loss statement accounts
3. Review of business organization or function chart
4. Review of elements of financial feasibility analysis

F. Significant has to do with potential loss frequencey, loss severity, and degree of uncertainty.

1. Very frequent and minor become expense accounts
2. Less frequent but predictable and major become reserves or budget allowances.
3. Infrequent, uncertain but very severe become issues of risk management.
4. A 50/50 probability is the most uncertain outcome.

G. The alternative methods of avoiding loss which everyone sub-consciously uses include:

1. Eliminate risk exposure
2. Reduce frequency or severity of loss (diversification or mortgage loan closing process)
3. Combine risks to increase predictability (reserves for expenses)
4. Shift risk by contract (subcontracts or escalator clauses)
5. Shift risk by combination (diversification) by contract (insurance)
6. Limit maximum loss (corporate shell or limited partnership)
7. Hedging (sale and leaseback, options, contingent sales)

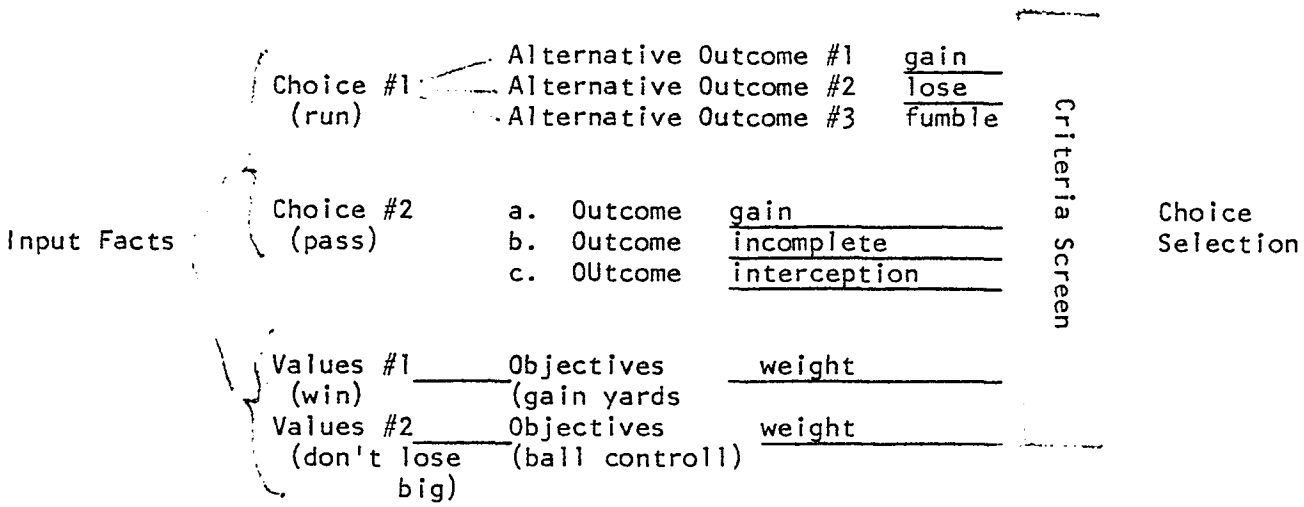
H. Selection of a risk management method depends on whether you are talking about a dynamic or static risk and the trade practices of a particular industry or business type.

1. A mortgage is a risk management contract
2. A lease is a risk management contract
3. Any form of equity ownership is a trade-off between risk avoidance and degree of control desired of management or tax decisions.
4. It should be noted that the principles are appropriate to any enterprise and not just real estate. Real estate education has been too quick to be inbred, to regard its problems as unique, rather than to relate to the evolution of management science in general.
5. Risk management theory in the abstract simply represents a careful structuring of the common sense which you have successfully applied to your own business.

III. Financial decisions have the same form as any decision process. Alternative courses of action are identified, ranked in terms of their possible results, and then one course of action is selected and acted upon.

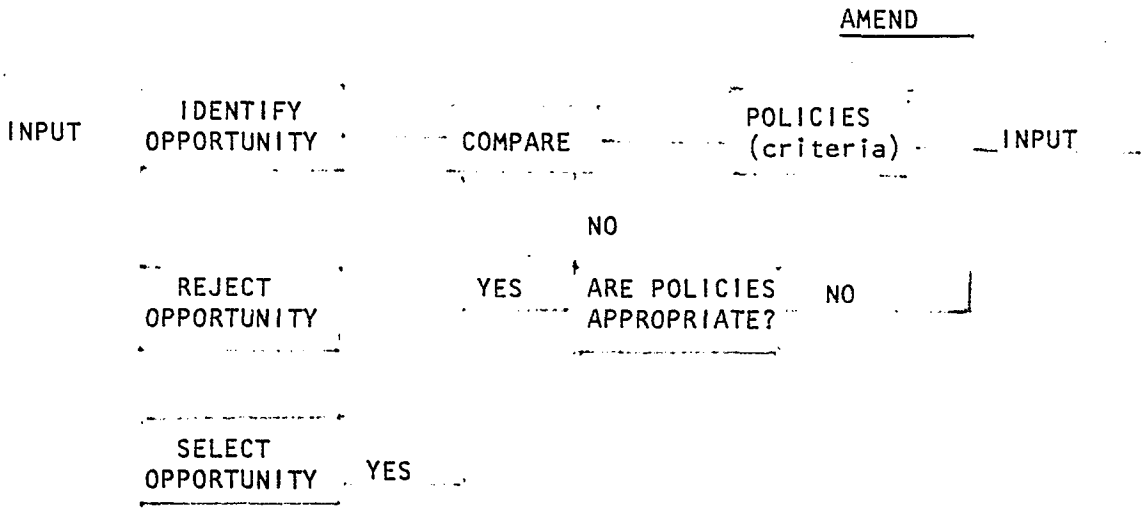
A. Even Woody Hayes talks about alternative outcomes and their desirability, he might diagram his thinking on the blackboard as in Exhibit 3.

EXHIBIT 3



B. The systems engineer might describe a decision with a simple flow chart as below in Exhibit 4.

EXHIBIT 4



C. Real estate decision like many others are so complex and require such systematic and comprehensive analysis of many relationships among variables that it is useful to talk in terms of models.

1. Models may be physical representations of an airplane fuselage or site topography.
2. Models may also be used to communicate complex relationships in simple ways which may be more relevant to the decision maker. A report format is a model.
3. Models can be used to state mathematical relationships, such as the capture rate of a given project relative to total demand for lots, apartments, or sq. ft. of office space. This seminar is concerned with financial models.

D. Any model has three basic requirements:

1. A careful statement of the question or decision
2. Determination of available or obtainable data
3. A statement (hypothesis) about the relationship of the data to the question

E. Constraints on the use of models to answer any particular problem requirement and models should be judged in terms of how they meet these constraints:

1. What are the limitations of the analyst who intends to use the model? Does he understand the implications and can he do the analysis?
2. Communication of the results must have credibility with the decision maker. The client who has succeeded with decisions made using the net income multiplier may not accept an improved analysis as a result of cash flow projections or regression analysis.
3. In all cases the cost of executing a particular model must be appropriate to the utility value of the result. The cost-benefit ratio must favor the decision model technique selected.

F. Models are intended to describe alternative outcomes which can be ranked by some common denominators for their desirability, their vulnerability to surprise, and their efficiency in achieving objectives. Thus financial analysis is not interested in a specific number or set of numbers; rather it is interested in organizing facts quickly to represent alternative outcomes, to represent these outcomes in a form of ratios and comparative units which permit the investor to decide based on a firm set of criteria applied with judgment.

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

1. Context includes those elements which are fixed, given, or objectives and to which any solution must adapt.
2. Form giving elements are those variables within the artists control, i.e., options or alternatives at a particular time.
3. A solution is judged for its correctness or success in terms of the degree of fit of the form proposed to the context.
4. Feasibility analysis is concerned with the degree of fit or the extent of misfit between a proposed course of action and the context within which it must operate or fit.

H. The concept of feasibility is elusive and much abused. Combining the systems concept of enterprise under conditions of uncertainty and the physical design concept of fit leads to the following definition:

> "A real estate project is 'feasible' when the real estate analyst determines that there is a reasonable liklihood of satisfying explicit objectives when a selected course of action is tested for fit to a context of specific constraints and limited resources.

I. The problem of defining objectives and measuring success depends almost entirely on correctly defining the problem and values of the client.

The majority of enterprises are not solely interested in rate of return on investment or lowest cost.

Most decisions must fit a combination of success "measures" with each decision maker weighting the overall importance of each item differently. Examples of such measures would be:

1. A check list of physical attributes
2. A check list of critical linkage attributes
3. A check list of dynamic behavioral attributes
4. A check list of attributes or services (given weighted point scores)
5. Financial ratios measuring risk, such as cash break-even, rate of capital recapture, loan ratios or sensitivity to specified contingencies
6. Probability distributions of alternative outcomes and standard error of the estimate
7. Psychological gratifications
8. Specified legal attributes
9. Measures of impact on environment

J. The definition also implies uncertainty - a reasonable liklihood of succeeding. That statement is deliberately short of a statistical probability statement. However, analytical judgments can produce some verbal probability statements (that horse is a nag while the black stallion is an odds on favorite) so that the measures of success should lend themselves to explicit recognition of the degree of uncertainty with which success might be achieved.

K. The general theory of the management process for any enterprise can be converted to real estate semantics for feasibility:.

Values, objectives, policy	Strategic format
Search for opportunity alternatives	Market trend analysis
Selection of an opportunity	Merchandising target with monopoly character
Program to capture opportunity	Legal-political constraints Ethical-aesthetic constraints Physical-technical constraints Financial constraints
Construction of program	Project development
Operation of program	Property management
Monitoring and feedback	Real estate research

L. The analyst must also identify and measure or define the limited resources of the client in terms of personnel, expertise, available cash resources, and the time line of expectations and commitment since time available to achieve the solution is often a critical resource and constraint relative to alternative choices.

M. These basic elements and definitions then lead to a correct title for the report required. Most feasibility reports go wrong on the title page because the analyst did not clearly understand to which elements of context and form his report was to be addressed. Seldom does the analyst do a complete feasibility study as a single report on his own. Components may be provided by others and the sequence of sets may differ in each case depending on how the consultant understands the client. Therefore, a report should be entitled as one of the following:

1. Strategy study: selection of objectives, tactics, and decision criteria.
2. Market analysis: economic base studies or other related aggregate data review.
3. Merchandising studies: consumer surveys, competitive property analysis, marketability evaluation, etc.
4. Legal studies: opinion on potential legal constraints, model contracts or forms of organization, and political briefs.
5. Compatability studies of project to community planning, conservation standards, or other public policies.
6. Engineering, land planning, and architectural studies.
7. Financial studies: economic modeling, capital budgets, present value and discounted cash flow forecasts, rate of return analysis, financial packages.

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IV. What is the Problem as Perceived by the Client?

The original problem as perceived by the client is seldom the real issue of feasibility analysis that will need to be examined by the analyst.

A. The appraiser is conditioned to having the client specify the function of the appraisal, such as for fire insurance or eminent domain and then having the client's attorney or the court jurisdiction define the definition of fair market value, the question which the appraiser then begins to answer.

B. However, the client may ask for an appraisal when he needs a feasibility study. He may ask what he should pay for a piece of property before he has determined that his strategic needs are best met by purchase rather than by leasing by avoiding ownership of additional space altogether (by sub-contracting certain functions of others by the way in which he purchases services and supplies).

1. Since everyone is an expert on real estate the client will probably presume that a certain procedure will be followed.
2. The architect will presume that the real estate expert will show the financial implications of a final design, when in fact the real estate expert should first assist in the pre architectural program of design objectives.
3. Almost every client will overlook some of the basic issues because of the natural bias of his position.
4. The consultant must begin by attempting to discover what is taken for granted and that search will continue to condition his relationship ith his client.

C. When the client first contacts the consultant the question provided by the client will conceal some implicit client preferences and assumptions. The consultant will need to interview his client by asking him explicitly about:

1. His concept as to the "essence" of his business
2. His preferred method of meeting entrepreneurial risk
3. His preferred method of personnel compensation
4. His style of value decision trade-offs between qualitative and quantitative issues.
5. His perception of his risk position and his risk utility "curve."
6. His personal non-business objective.
7. His reasons for being involved with real estate (a simple question revealing in most cases tremendous naivete and lack of indepth preparation by the client).

D. The client is often skeptical of the ability of the consultant to contribute anything new since he may regard the consultant as one "who tells him the time by reading the client's own watch."

Test of Financial Feasibility Not referenced directly in lecture. notes

Exhibit 1

THE ADVANCED FRONT-DOOR APPROACH

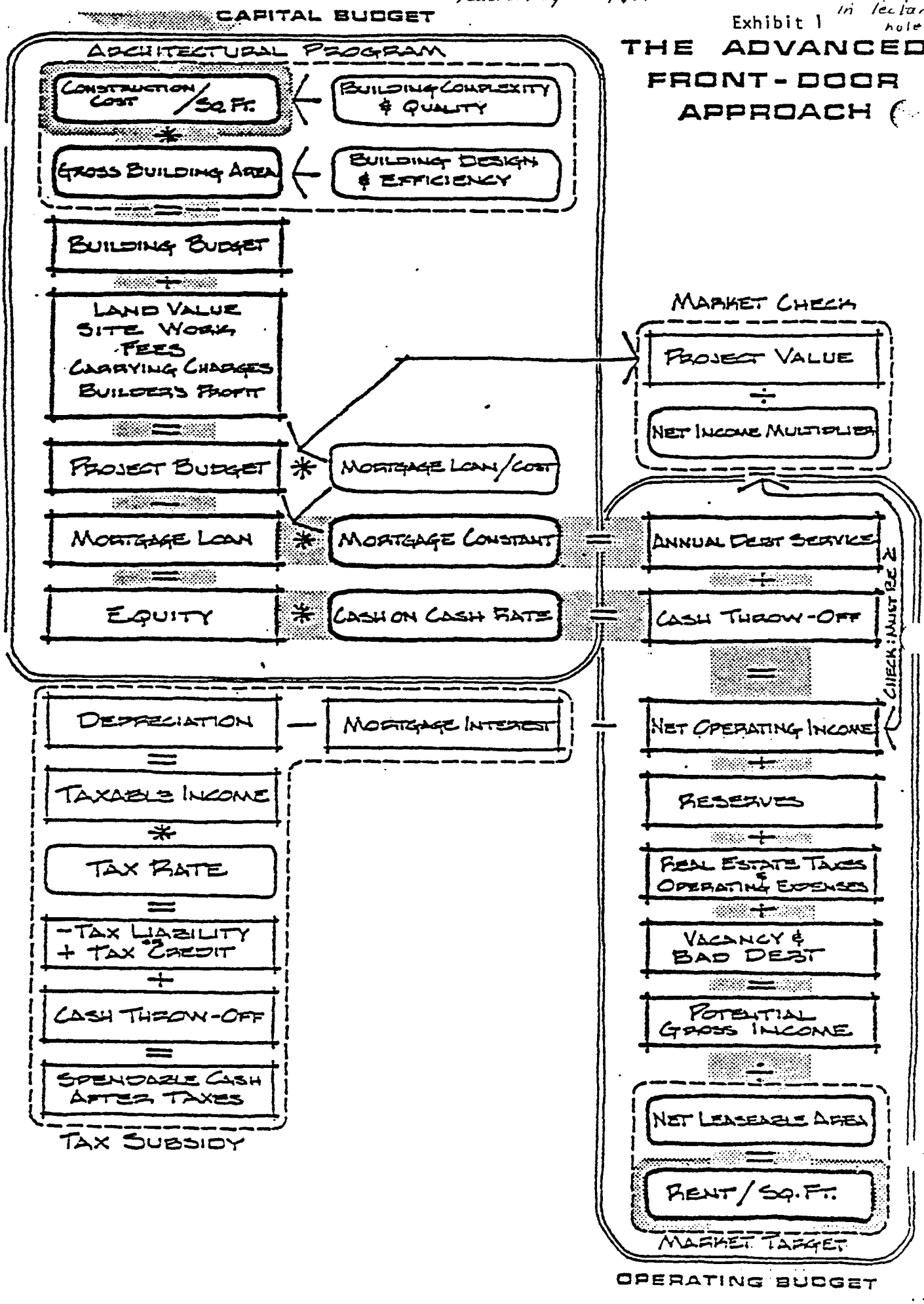
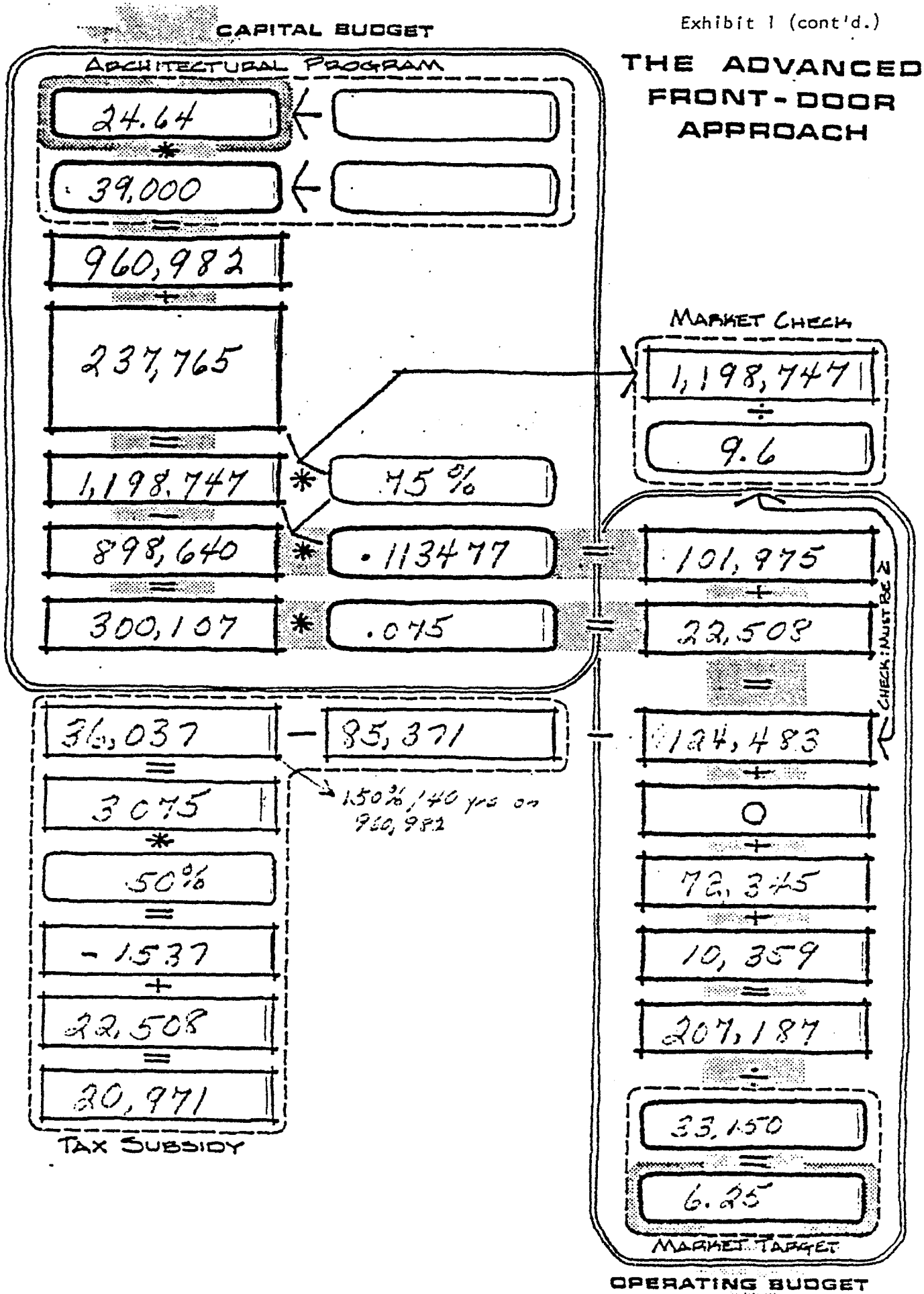


Exhibit 1 (cont'd.)

THE ADVANCED FRONT-DOOR APPROACH



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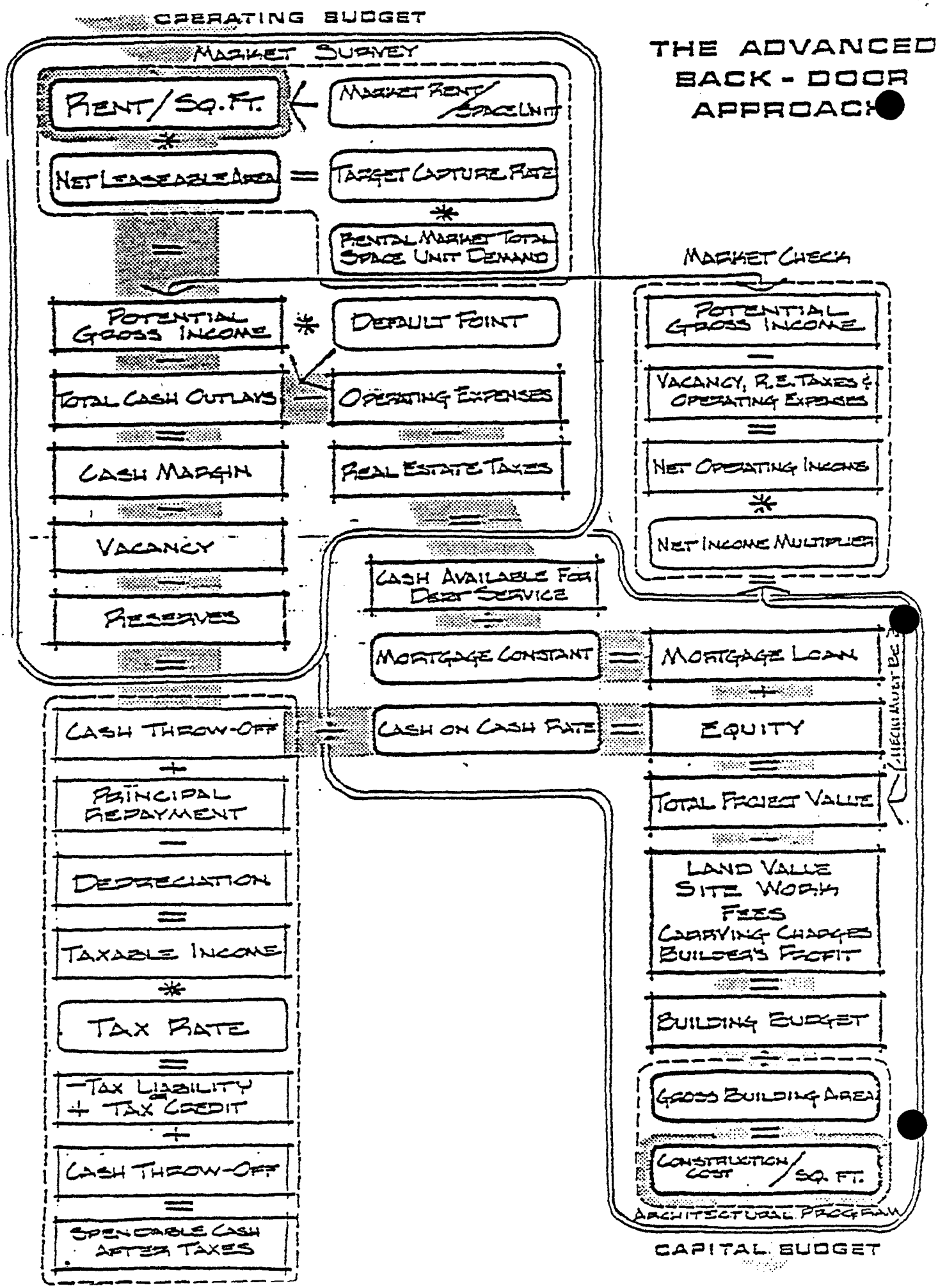
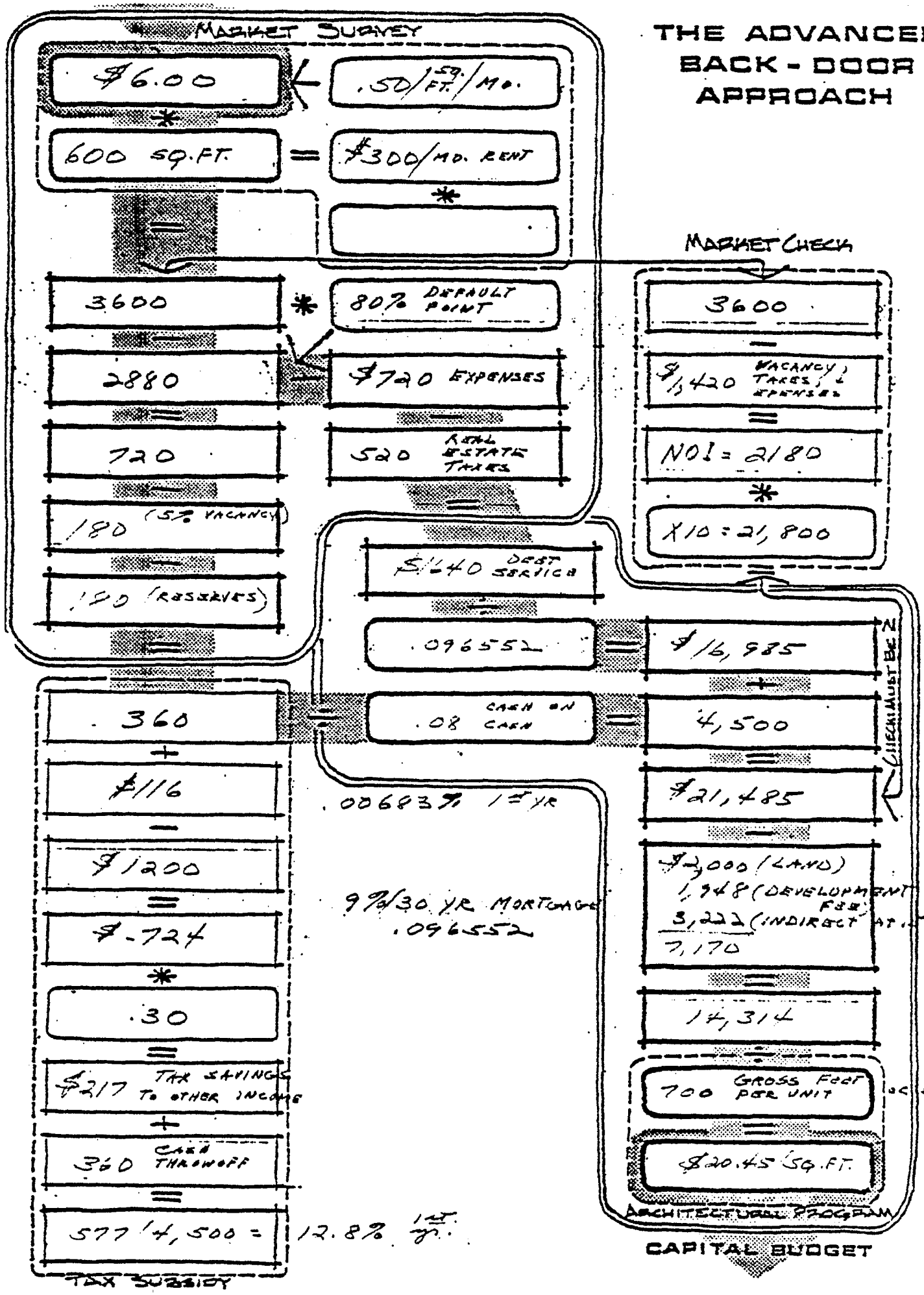
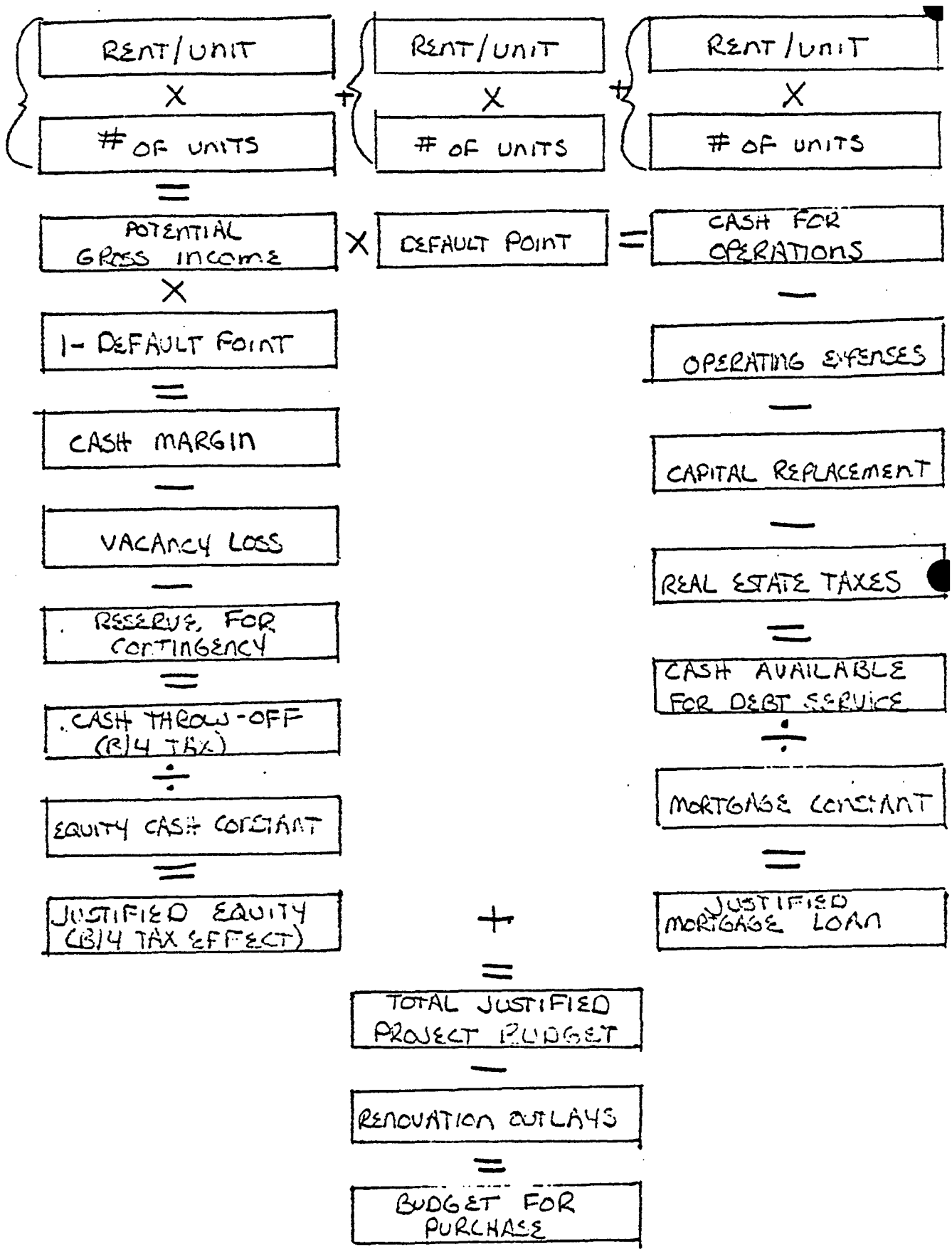
THE ADVANCED BACK-DOOR APPROACH



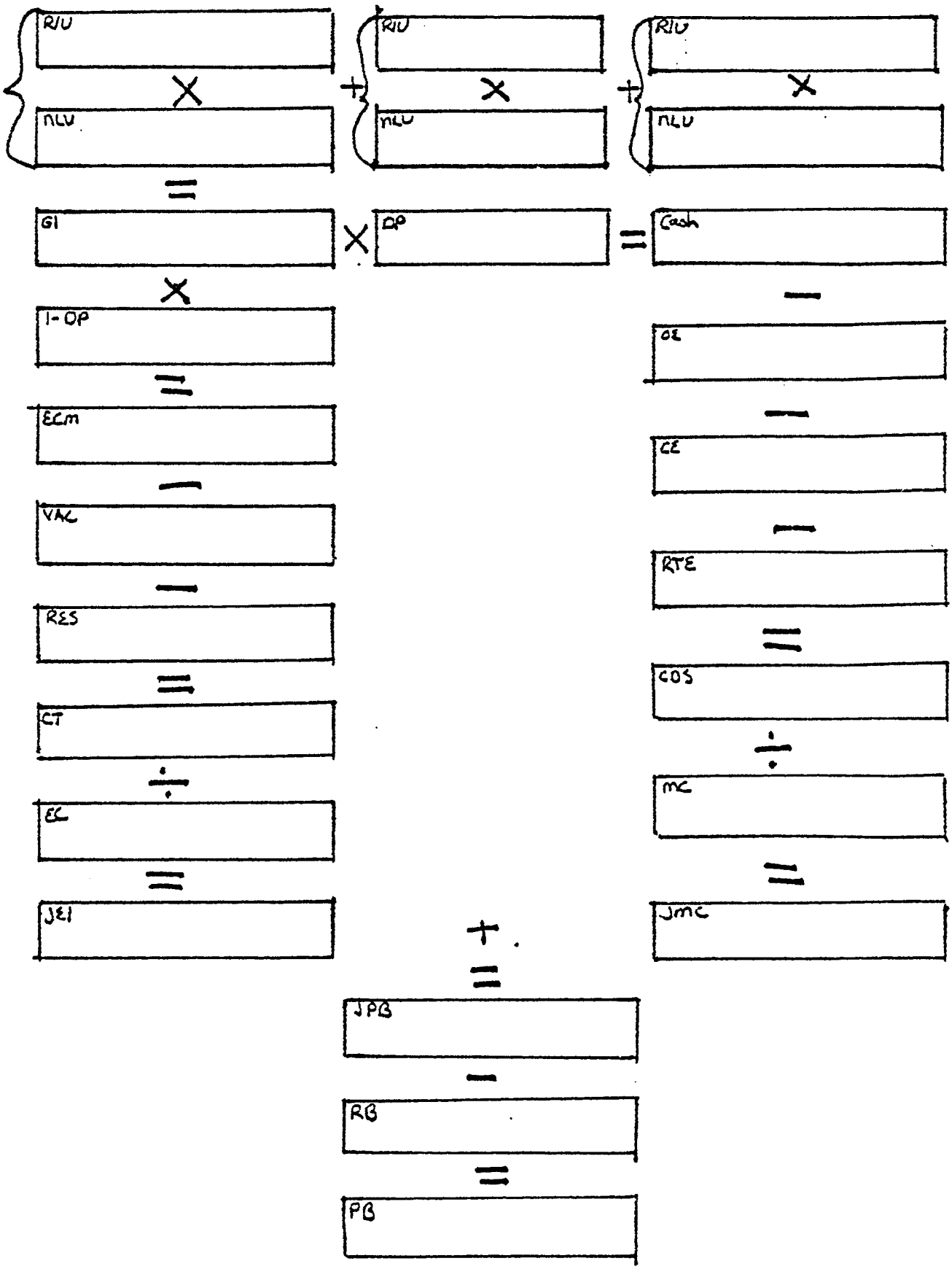
THE ADVANCED BACK-DOOR APPROACH



BACKDOOR APPROACH FORMAT
FOR RANKING MOST PROBABLE USE



BACKDOOR APPROACH FORMAT
FOR RANKING MOST PROBABLE USE



CASH FLØW PRØ FØRMA USING PARAMETER NØRMS

SENSITIVITY APT. DEMØ

U. W. REAL ESTATE DEPT.

DATE: 2/14/1977
BLDG: 1
RUN : 1

GRØSS SQUARE FEET IN BUILDING:		700.
BUILDING EFFICIENCY	:	85.0 PCT
NET LEASEABLE SQUARE FØØTAGE	:	595.
LAND AND CØNSTRUCTIØN CØST	: $	19500.
LØAN TØ CØST RATIØ	:	75.0 PCT
ØRIGINAL LØAN AMØUNT	: $	14625.
EQUITY REQUIREMENT	: $	4875.
PERMANENT INTEREST RATE	:	9.000 PCT
TERM ØF LØAN		30. YEARS
ANNUAL DEBT SERVICE	: $	1412.

	ANNUAL DØLLARS
GRØSS INCØME : 595. SQ FT AT $ 6.00	3570.
LESS: VACANCY ØF 5.00 PCT	179.
GRØSS ADJUSTED INCØME	3392.
PLUS: PARKING INCOME	150.
PLUS: ØTHER INCØME	24.
GRØSS EFFECTIVE INCØME	3566.
LAND LEASE EXPENSE	100.
ØPERATING EXPENSES: 595. SQ FT AT $ 2.76	1642.
NET ØPERATING INCØME	1823.
DEBT SERVICE (9.66 PCT CØNSTANT)	1412.
PRØ FØRMA CASH FLØW	411.

RETURN ØN EQUITY 8.43 PERCENT

DEBT SERVICE CØVERAGE: 1.291

DEFAULT RATIØ : 83.48 PERCENT

LØAN DATA FØR EACH SET ØF FINANCIAL CØNDITIØNS

AMØUNT FINANCED $ 14625. EQUITY $ 4875.

LØAN RATIØ 75.00 PCT

INTEREST	TERM	CØNSTANT	DEBT SERVICE ANNUAL	PER SQ FT	PER UNIT
9.000	30.0	9.6555	1412.	2.3733	
9.250	30.0	9.8721	1444.	2.4265	
9.500	30.0	10.0903	1476.	2.4802	
8.500	30.0	9.2270	1349.	2.2680	
8.000	30.0	8.8052	1288.	2.1643	

AMØUNT FINANCED $ 15600. EQUITY $ 3900.

LØAN RATIØ 80.00 PCT

INTEREST	TERM	CØNSTANT	DEBT SERVICE ANNUAL	PER SQ FT	PER UNIT
9.000	30.0	9.6555	1506.	2.5315	
9.250	30.0	9.8721	1540.	2.5883	
9.500	30.0	10.0903	1574.	2.6455	
8.500	30.0	9.2270	1439.	2.4192	
8.000	30.0	8.8052	1374.	2.3086	

AMØUNT FINANCED $ 16575. EQUITY $ 2925.

LØAN RATIØ 85.00 PCT

INTEREST	TERM	CØNSTANT	DEBT SERVICE ANNUAL	PER SQ FT	PER UNIT
9.000	30.0	9.6555	1600.	2.6897	
9.250	30.0	9.8721	1636.	2.7501	
9.500	30.0	10.0903	1672.	2.8109	
8.500	30.0	9.2270	1529.	2.5704	
8.000	30.0	8.8052	1459.	2.4529	

AMØUNT FINANCED $ 17550. EQUITY $ 1950.

LØAN RATIØ 90.00 PCT

INTEREST	TERM	CØNSTANT	DEBT SERVICE ANNUAL	PER SQ FT	PER UNIT
9.000	30.0	9.6555	1695.	2.8480	
9.250	30.0	9.8721	1733.	2.9119	
9.500	30.0	10.0903	1771.	2.9762	
8.500	30.0	9.2270	1619.	2.7216	
8.000	30.0	8.8052	1545.	2.5972	

AMØUNT FINANCED $ 18525. EQUITY $ 975.

LØAN RATIØ 95.00 PCT

INTEREST	TERM	CØNSTANT	DEBT SERVICE ANNUAL	PER SQ FT	PER UNIT
9.000	30.0	9.6555	1789.	3.0062	
9.250	30.0	9.8721	1829.	3.0736	
9.500	30.0	10.0903	1869.	3.1415	
8.500	30.0	9.2270	1709.	2.8728	
8.000	30.0	8.8052	1631.	2.7414	

PRØ FØRMA CASH FLØW TABLE

SENSITIVITY APT. DEMØ

U. W. REAL ESTATE DEPT.

FIXED PARAMETERS — PAGE 1 OF 12

SITE	: 2000. SQUARE FEET	DATE	2-14-1977
BUILDING	: 700. SQUARE FEET	BLDG	1
EFFICIENCY:	85.00 PCT(595. SQ FT)		
LØAN RATIØ:	75.00 PCT ØF $ 19500.		
LØAN	: $ 14625.		
EQUITY	: $ 4875.		
FINANCING	: 30. YEARS 9.000 PCT		
ØTR INCØME:	$ 174. ANNUALLY	RUN	1
EXPENSES	: $ 2.76 PER SQ FT		
LAND LEASE:	$ 100.		

ANNUAL CASH FLØWS

VACANCY ALLØWANCE

RENTAL RATES ANNUAL $/SQ FT	3.00 PCT	4.00 PCT	5.00 PCT	7.00 PCT	10.00 PCT
$ 4.80	-210.	-239.	-267.	-324.	-410.
$ 5.40	136.	104.	72.	8.	-89.
$ 6.00	483.	447.	411.	340.	233.
$ 6.60	829.	790.	750.	672.	554.
$ 7.20	1175.	1132.	1089.	1004.	875.

BREAKEVEN RENTAL RATES

VACANCY ALLØWANCE

RENTAL RATES ANNUAL $/SQ FT	3.00 PCT	4.00 PCT	5.00 PCT	7.00 PCT	10.00 PCT
	5.16	5.22	5.27	5.39	5.57

PRØ FØRMA CASH FLØW TABLE

SENSITIVITY APT. DEMØ

U. W. REAL ESTATE DEPT.

FIXED PARAMETERS

SITE	: 2000. SQUARE FEET	DATE	2-14-1977
BUILDING	: 700. SQUARE FEET	BLDG	1
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LØAN RATIØ	: 75.00 PCT ØF $ 19500.		
LØAN	: $ 14625.		
EQUITY	: $ 4875.		
FINANCING	: 30. YEARS 9.000 PCT		
VACANCY	: 5.00 PCT ØF LEASEABLE		
ØTR INCØME	: $ 174. ANNUALLY	RUN	1
LAND LEASE	: $ 100.		

ANNUAL CASH FLØWS

ANNUAL EXPENSE RATES PER SQ FT

RENTAL RATES ANNUAL $/SQ FT	$ 2.40	$ 2.64	$ 2.76	$ 3.00	$ 3.36
$ 4.80	-53.	-196.	-267.	-410.	-624.
$ 5.40	286.	143.	72.	-71.	-285.
$ 6.00	625.	483.	411.	268.	54.
$ 6.60	965.	822.	750.	608.	393.
$ 7.20	1304.	1161.	1089.	947.	732.

BREAKEVEN RENTAL RATES

ANNUAL EXPENSE RATES PER SQ FT

RENTAL RATES ANNUAL $/SQ FT	$ 2.40	$ 2.64	$ 2.76	$ 3.00	$ 3.36
	4.89	5.15	5.27	5.53	5.90

PRØ FØRMA CASH FLØW TABLE

SENSITIVITY APT. DEMØ

U. W. REAL ESTATE DEPT.

FIXED PARAMETERS

SITE	: 2000. SQUARE FEET	DATE	2-14-1977
BUILDING	: 700. SQUARE FEET	BLDG	1
EFFICIENCY:	85.00 PCT(595. SQ FT)		
LØAN RATIØ:	75.00 PCT ØF $ 19500.		
LØAN	: $ 14625.		
EQUITY	: $ 4875.		
VACANCY	: 5.00 PCT ØF LEASEABLE		
ØTR INCØME:	$ 174. ANNUALLY	RUN	1
EXPENSES	: $ 2.76 PER SQ FT		
LAND LEASE:	$ 100.		

ANNUAL CASH FLØWS

FINANCING PARAMETERS

S T		30. YEARS 9.00 PCT	30. YEARS 9.25 PCT	30. YEARS 9.50 PCT	30. YEARS 8.50 PCT	30. YEA 8.00 P
		R C				
RENTAL RATES ANNUAL $/SQ FT						
$	4.80	-267.	-299.	-331.	-204.	-143.
$	5.40	72.	40.	8.	135.	196.
$	6.00	411.	380.	348.	474.	536.
$	6.60	750.	719.	687.	813.	875.
$	7.20	1089.	1058.	1026.	1152.	1214.

BREAKEVEN RENTAL RATES

FINANCING PARAMETERS

S T		30. YEARS 9.00 PCT	30. YEARS 9.25 PCT	30. YEARS 9.50 PCT	30. YEARS 8.50 PCT	30. YEA 8.00 P
		R C				
RENTAL RATES ANNUAL $/SQ FT						
		5.27	5.33	5.39	5.16	5.05

PRØ FØRMA CASH FLØW TABLE

SENSITIVITY APT. DEMØ

U. W. REAL ESTATE DEPT.

FIXED PARAMETERS — PAGE 4 OF 12

SITE	: 2000. SQUARE FEET	DATE	2-14-1977
BUILDING	: 700. SQUARE FEET	BLDG	1
LØAN RATIØ	: 75.00 PCT ØF $ 19500.		
LØAN	: $ 14625.		
EQUITY	: $ 4875.		
FINANCING	: 30. YEARS 9.000 PCT		
VACANCY	: 5.00 PCT ØF LEASEABLE		
ØTR INCØME	: $ 174. ANNUALLY	RUN	1
EXPENSES	: $ 2.76 PER SQ FT		
LAND LEASE	: $ 100.		

ANNUAL CASH FLØWS

BUILDING EFFICIENCY (PCT ØF GRØSS)

LØAN TØ CØST RATIØ	75.00 PCT	78.00 PCT	80.00 PCT	82.00 PCT	85.00 PCT
	75.00 PCT	80.00 PCT	85.00 PCT	90.00 PCT	95.00 PCT
RENTAL RATES ANNUAL $/SQ FT					
$ 4.80	-393.	-355.	-330.	-305.	-267.
$ 5.40	-94.	-44.	-11.	22.	72.
$ 6.00	205.	267.	308.	349.	411.
$ 6.60	505.	578.	627.	677.	750.
$ 7.20	804.	890.	947.	1004.	1089.

BREAKEVEN RENTAL RATES

BUILDING EFFICIENCY (PCT ØF GRØSS)

LØAN TØ CØST RATIØ	75.00 PCT	78.00 PCT	80.00 PCT	82.00 PCT	85.00 PCT
	75.00 PCT	80.00 PCT	85.00 PCT	90.00 PCT	95.00 PCT
RENTAL RATES ANNUAL $/SQ FT					
	5.59	5.49	5.42	5.36	5.27

PRØ FØRMA CASH FLØW TABLE

SENSITIVITY APT. DEMØ

U. W. REAL ESTATE DEPT.

FIXED PARAMETERS

SITE	:	2000. SQUARE FEET	DATE 2-14-1977
BUILDING	:	700. SQUARE FEET	BLDG 1
EFFICIENCY:		85.00 PCT(595. SQ FT)	
FINANCING	:	30. YEARS 9.000 PCT	
VACANCY	:	5.00 PCT ØF LEASEABLE	
ØTR INCØME:		$ 174. ANNUALLY	RUN 1
EXPENSES	:	$ 2.76 PER SQ FT	
LAND LEASE:		$ 100.	

ANNUAL CASH FLØWS

LØAN TØ CØST RATIØ

RENTAL RATES ANNUAL $/SQ FT	75.00 PCT	80.00 PCT	85.00 PCT	90.00 PCT	95.00 PCT
$ 4.80	-267.	-361.	-455.	-550.	-644.
$ 5.40	72.	-22.	-116.	-210.	-305.
$ 6.00	411.	317.	223.	129	35.
$ 6.60	750.	656.	562.	468.	374.
$ 7.20	1089.	995.	901.	807.	713.

BREAKEVEN RENTAL RATES

LØAN TØ CØST RATIØ

RENTAL RATES ANNUAL $/SQ FT	75.00 PCT	80.00 PCT	85.00 PCT	90.00 PCT	95.00 PCT
	5.27	5.44	5.61	5.77	5.94

PRØ FØRMA CASH FLØW TABLE

SENSITIVITY APT. DEMØ

U. W. REAL ESTATE DEPT.

FIXED PARAMETERS

SITE :	2000. SQUARE FEET	DATE 2-14-1977
BUILDING :	700. SQUARE FEET	BLDG 1
EFFICIENCY:	85.00 PCT(595. SQ FT)	
LØAN RATIØ:	75.00 PCT ØF $ 19500.	
LØAN :	$ 14625.	
EQUITY :	$ 4875.	
FINANCING :	30. YEARS 9.000 PCT	
REVENUE :	$ 6.00 PER SQ FT	
ØTR INCØME:	$ 174. ANNUALLY	RUN 1
LAND LEASE:	$ 100.	

ANNUAL CASH FLØWS

ANNUAL EXPENSE RATES PER SQ FT

VACANCY RATES	$ 2.40	$ 2.64	$ 2.76	$ 3.00	$ 3.36
3.00 PCT	697.	554.	483.	340.	126.
4.00 PCT	661.	518.	447.	304.	90.
5.00 PCT	625.	483.	411.	268.	54.
7.00 PCT	554.	411.	340.	197.	-17.
10.00 PCT	447.	304.	233.	90.	-124.

BREAKEVEN RENTAL RATES

ANNUAL EXPENSE RATES PER SQ FT

VACANCY RATES	$ 2.40	$ 2.64	$ 2.76	$ 3.00	$ 3.36
3.00 PCT	4.79	5.04	5.16	5.41	5.78
4.00 PCT	4.84	5.09	5.22	5.47	5.84
5.00 PCT	4.89	5.15	5.27	5.53	5.90
7.00 PCT	5.00	5.26	5.39	5.64	6.03
10.00 PCT	5.17	5.43	5.57	5.83	6.23

PRØ FØRMA CASH FLØW TABLE

SENSITIVITY APT. DEMØ

U. W. REAL ESTATE DEPT.

FIXED PARAMETERS

SITE	2000. SQUARE FEET	DATE 2-14-1977
BUILDING	700. SQUARE FEET	BLDG 1
EFFICIENCY:	85.00 PCT(595. SQ FT)	
LØAN RATIØ:	75.00 PCT ØF $ 19500.	
LØAN	$ 14625.	
EQUITY	$ 4875.	
REVENUE	$ 6.00 PER SQ FT	
ØTR INCØME:	$ 174. ANNUALLY	RUN 1
EXPENSES	$ 2.76 PER SQ FT	
LAND LEASE:	$ 100.	

ANNUAL CASH FLØWS

FINANCING PARAMETERS

S T		30. YEARS 9.00 PCT	30. YEARS 9.25 PCT	30. YEARS 9.50 PCT	30. YEARS 8.50 PCT	30. YEA 8.00 P
			R C			
VACANCY RATES						
	3.00 PCT	483.	451.	419.	545.	607.
	4.00 PCT	447.	415.	383.	510.	571.
	5.00 PCT	411.	380.	348.	474.	536.
	7.00 PCT	340.	308.	276.	402.	464.
	10.00 PCT	233.	201.	169.	295.	357.

BREAKEVEN RENTAL RATES

FINANCING PARAMETERS

S T		30. YEARS 9.00 PCT	30. YEARS 9.25 PCT	30. YEARS 9.50 PCT	30. YEARS 8.50 PCT	30. YEA 8.00 P
			R C			
VACANCY RATES						
	3.00 PCT	5.16	5.22	5.27	5.06	4.95
	4.00 PCT	5.22	5.27	5.33	5.11	5.00
	5.00 PCT	5.27	5.33	5.39	5.16	5.05
	7.00 PCT	5.39	5.44	5.50	5.27	5.16
	10.00 PCT	5.57	5.62	5.68	5.45	5.33

PRØ FØRMA CASH FLØW TABLE

SENSITIVITY APT. DEMØ

U. W. REAL ESTATE DEPT.

FIXED PARAMETERS — PAGE 8 OF 12

SITE	: 2000. SQUARE FEET	DATE	2-14-1977
BUILDING	: 700. SQUARE FEET	BLDG	1
LØAN RATIØ	: 75.00 PCT ØF $ 19500.		
LØAN	: $ 14625.		
EQUITY	: $ 4875.		
FINANCING	: 30. YEARS 9.000 PCT		
REVENUE	: $ 6.00 PER SQ FT		
VACANCY	: 5.00 PCT ØF LEASEABLE		
ØTR INCØME	: $ 174. ANNUALLY	RUN	1
LAND LEASE	: $ 100.		

ANNUAL CASH FLØWS

BUILDING EFFICIENCY (PCT ØF GRØSS)

EXPENSE RATES ANNUAL $/SQ FT		75.00 PCT	78.00 PCT	80.00 PCT	82.00 PCT	85.00 PCT
		LØAN TØ CØST RATIØ				
		75.00 PCT	80.00 PCT	85.00 PCT	90.00 PCT	95.00 PCT
$	2.40	394.	464.	510.	556.	625.
$	2.64	268.	333.	375.	418.	483.
$	2.76	205.	267.	308.	349.	411.
$	3.00	79.	136.	174.	212.	268.
$	3.36	-110.	-60.	-28.	5.	54.

BREAKEVEN RENTAL RATES

BUILDING EFFICIENCY (PCT ØF GRØSS)

EXPENSE RATES ANNUAL $/SQ FT		75.00 PCT	78.00 PCT	80.00 PCT	82.00 PCT	85.00 PCT
		LØAN TØ CØST RATIØ				
		75.00 PCT	80.00 PCT	85.00 PCT	90.00 PCT	95.00 PCT
$	2.40	5.21	5.11	5.04	4.98	4.89
$	2.64	5.46	5.36	5.29	5.23	5.15
$	2.76	5.59	5.49	5.42	5.36	5.27
$	3.00	5.84	5.74	5.67	5.61	5.53
$	3.36	6.22	6.12	6.05	5.99	5.90

PRØ FØRMA CASH FLØW TABLE

SENSITIVITY APT. DEMØ

U. W. REAL ESTATE DEPT.

FIXED PARAMETERS — PAGE 9 OF 12

SITE	: 2000. SQUARE FEET	DATE	2-14-1977
BUILDING	: 700. SQUARE FEET	BLDG	1
LØAN RATIØ	: 75.00 PCT ØF $ 19500.		
LØAN	: $ 14625.		
EQUITY	: $ 4875.		
REVENUE	: $ 6.00 PER SQ FT		
VACANCY	: 5.00 PCT ØF LEASEABLE		
ØTR INCØME	: $ 174. ANNUALLY	RUN	1
EXPENSES	: $ 2.76 PER SQ FT		
LAND LEASE	: $ 100.		

ANNUAL CASH FLØWS

BUILDING EFFICIENCY (PCT ØF GRØSS)

75.00 PCT 78.00 PCT 80.00 PCT 82.00 PCT 85.00 PCT

LØAN TØ CØST RATIØ

FINANCING	75.00 PCT	80.00 PCT	85.00 PCT	90.00 PCT	95.00 PCT
30.YR 9.00PCT	205.	267.	308.	349.	411.
30.YR 9.25PCT	174.	235.	277.	318.	380.
30.YR 9.50PCT	142.	204.	245.	286.	348.
30.YR 8.50PCT	268.	330.	371.	412.	474.
30.YR 8.00PCT	330.	391.	433.	474.	536.

BREAKEVEN RENTAL RATES

BUILDING EFFICIENCY (PCT ØF GRØSS)

75.00 PCT 78.00 PCT 80.00 PCT 82.00 PCT 85.00 PCT

LØAN TØ CØST RATIØ

FINANCING	75.00 PCT	80.00 PCT	85.00 PCT	90.00 PCT	95.00 PCT
30.YR 9.00 PCT	5.59	5.49	5.42	5.36	5.27
30.YR 9.25 PCT	5.65	5.55	5.48	5.42	5.33
30.YR 9.50 PCT	5.72	5.61	5.54	5.48	5.39
30.YR 8.50 PCT	5.46	5.36	5.30	5.24	5.16
30.YR 8.00 PCT	5.34	5.25	5.19	5.13	5.05

PRØ FØRMA CASH FLØW TABLE

SENSITIVITY APT. DEMØ

U. W. REAL ESTATE DEPT.

FIXED PARAMETERS — PAGE 10 OF 12

SITE	:	2000. SQUARE FEET	DATE 2-14-1977
BUILDING	:	700. SQUARE FEET	BLDG 1
EFFICIENCY:		85.00 PCT(595. SQ FT)	
LØAN RATIØ:		75.00 PCT ØF $ 19500.	
LØAN	:	$ 14625.	
EQUITY	:	$ 4875.	
FINANCING	:	30. YEARS 9.000 PCT	
VACANCY	:	5.00 PCT ØF LEASEABLE	
ØTR INCØME:		$ 174. ANNUALLY	RUN 1
EXPENSES	:	$ 2.76 PER SQ FT	

ANNUAL CASH FLØWS

RENTAL RATES ANNUAL $/SQ FT	LAND LEASE CØST $ 100.	$ 150.	$ 200.	$ 250.	$ 300.
$ 4.80	-267.	-317.	-367.	-417.	-467.
$ 5.40	72.	22.	-28.	-78.	-128.
$ 6.00	411.	361.	311.	261.	211.
$ 6.60	750.	700.	650.	600.	550.
$ 7.20	1089.	1039.	989.	939.	889.

BREAKEVEN RENTAL RATES

RENTAL RATES ANNUAL $/SQ FT	LAND LEASE CØST $ 100.	$ 150.	$ 200.	$ 250.	$ 300.
	5.27	5.36	5.45	5.54	5.63

PRØ FØRMA CASH FLØW TABLE

SENSITIVITY APT. DEMØ

U. W. REAL ESTATE DEPT.

FIXED PARAMETERS — PAGE 11 OF 12

SITE	: 2000. SQUARE FEET	DATE	2-14-1977
BUILDING	: 700. SQUARE FEET	BLDG	1
EFFICIENCY	: 85.00 PCT(595. SQ FT)		
LØAN RATIØ	: 75.00 PCT ØF $ 19500.		
LØAN	: $ 14625.		
EQUITY	: $ 4875.		
FINANCING	: 30. YEARS 9.000 PCT		
REVENUE	: $ 6.00 PER SQ FT		
VACANCY	: 5.00 PCT ØF LEASEABLE		
ØTR INCØME	: $ 174. ANNUALLY	RUN	1

ANNUAL CASH FLØWS

LAND LEASE CØST

EXPENSE RATES ANNUAL $/SQ FT	$ 100.	$ 150.	$ 200.	$ 250.	$ 300.
$ 2.40	625.	575.	525.	475.	425.
$ 2.64	483.	433.	383.	333.	283.
$ 2.76	411.	361.	311.	261.	211.
$ 3.00	268.	218.	168.	118.	68.
$ 3.36	54.	4.	-46.	-96.	-146.

BREAKEVEN RENTAL RATES

LAND LEASE CØST

EXPENSE RATES ANNUAL $/SQ FT	$ 100.	$ 150.	$ 200.	$ 250.	$ 300.
$ 2.40	4.89	4.98	5.07	5.16	5.25
$ 2.64	5.15	5.23	5.32	5.41	5.50
$ 2.76	5.27	5.36	5.45	5.54	5.63
$ 3.00	5.53	5.61	5.70	5.79	5.88
$ 3.36	5.90	5.99	6.08	6.17	6.26

SENSITIVITY TABLE

SENSITIVITY APT. DEMØ

U. W. REAL ESTATE DEPT.

FIXED PARAMETERS — PAGE 12 OF 12

SITE	: 2000. SQUARE FEET	DATE	2-14-1977
BUILDING	: 700. SQUARE FEET	BLDG	1
EFFICIENCY:	85.00 PCT ØF GRØSS		
LØAN RATIØ:	75.00 PCT ØF $ 19500.		
EQUITY	: $ 4875.		
FINANCING	: 30. YEARS 9.000 PCT		
REVENUE	: $ 6.00 PER SQ FT		
VACANCY	: 5.00 PCT ØF LEASEABLE		
PARK/ØTHER:	$ 174. ANNUALLY	RUN	1
EXPENSES	: $ 2.76 PER SQ FT		
LAND LEASE:	$ 100. ANNUALLY		

CØNSTRUCTIØN AND LAND CØST 19500.

EFFECT ØF SELECTED CHANGES IN PARAMETERS

PARAMETER CHANGE	INCREASE IN CASH FLØW
INCREASE BUILDING EFFICIENCY 1 PCT	21.
INCREASE RENTAL RATE $ .10 PER SQ FT	57.
DECREASE VACANCY RATE 1PCT	36.
DECREASE ØPERATING RATE $ .10 PER SQ FT	60.
DECREASE PERMANENT RATE .25PCT	31.
DECREASE PERMANENT LØAN TERM BY 1 YEAR	-10.
DECREASE PERMANENT LØAN TERM BY 5 YEARS	-61.
DECREASE THE LØAN RATIØ BY 5 PERCENT	94.
DECREASE LAND LEASE BY 10% 100.	

EQUIVALENT EFFECT TØ YIELD
A $ 100. INCREASE IN ANNUAL CASH FLØW

INCREASE BUILDING EFFICIENCY BY	4.86	PCT
INCREASE RENT RATE BY	$ 0.18	PER SQ FT
DECREASE VACANCY BY	2.80	PCT
DECREASE EXPENSE RATE BY	$ 0.17	PER SQ FT
DECREASE PERMANENT RATE BY	0.79	PCT
INCREASE PERMANENT LØAN TERM BY	8.2	YEARS
DECREASE LØAN RATIØ BY	5.3	PERCENT
DECREASE LAND LEASE BY $	100.	

1.	MRCAP BACKDOOR DEMO		* MICHAEL ROBBINS *			
	Project Title		User Name			
10.	1977	0	.85	1000		
	Starting Year	Data Sets	Default Ratio	Cash-On-$		
20.	1	2	.85	.09		
	Back-Door	Back-Door Loans	Investment Default	B/4 Tax		
30.	1	1.0	10			
	Classification	% Owned Year 1	Holding Period(1-25)			
40.	229600	.04	*			
	Fixed Income	2	3	4	5	
41.						
	6	7	8	9	10	
42.						
	11	12	13	14	15	
43.						
	16	17	18	19	20	
44.						
	21	22	23	24	25	
50.	11900	.05	*			
	Variable Income	2	3	4	5	
51.						
	6	7	8	9	10	
52.						
	11	12	13	14	15	
53.						
	16	17	18	19	20	
54.						
	21	22	23	24	25	
60.	.05	*				
	Vacancy Rate	2	3	4	5	
61.						
	6	7	8	9	10	
62.						
	11	12	13	14	15	
63.						
	16	17	18	19	20	
64.						
	21	22		24	25	

70,	.22 Real Estate Tax	.05 2	* 3	4	5	
71,	6	7	8	9	10	
72,	11	12	13	14	15	
73,	16	17	18	19	20	
74,	21	22	23	24	25	
80,	.20 Fixed Expenses	.055 2	* 3	4	5	
81,	6	7	8	9	10	
82,	11	12	13	14	15	
83,	16	17	18	19	20	
84,	21	22	23	24	25	
90,	Variable Expenses	2	3	4	5	
91,	6	7	8	9	10	
92,	11	12	13	14	15	
93,	16	17	18	19	20	
94,	21	22	23	24	25	
100,	.13 Discount Rate	.50 Income Tax Rate	.05 Reinvestment Rate			
101,	1000 Extraordinary Exp.	.02 Project Growth Rate	6 Project Growth Type			
102,	.12 Working Capital Loan	1 Ownership	.065 Resale Cost Rate			
103,	5000 Reserves Witheld	7000 Equity Reserves	.025 Equity Reserve Rate	25000 Reserve Maximum		

PARTNERSHIPS

110. 1. Real Estate Dynamics
Title (20 character maximum)

111. 1. 1.0 (Income Tax) . .15 (% of Spendable) . .10 (% Equity Contribution)

112. 1. .0 (% Equity Reserve) . .10 (% Tax Loss) . .10 (% Tax Payment) . .10 (Discount Rate)

113. 1. .05 (Reinvestment Rate) . .0 (% Mortgage Liability) . 0 (General Partner)

110. 2. Jack Jones
Title

111. 2. .50 (Income Tax) . .30 (% of Spendable) . .40 (% Equity Contribution)

112. 2. .50 (% Equity Reserve) . .40 (% Tax Loss) . .40 (% Tax Payment) . .13 (Discount Rate)

113. 2. .06 (Reinvestment Rate) . .0 (% Mortgage Liability) . 0 (General Partner)

110. 3. Lean-2 Homes
Title

111. 3. 2.0 (Income Tax) . .55 (% of Spendable) . .50 (% Equity Contribution)

112. 3. .50 (% Equity Reserve) . .50 (% Tax Loss) . .50 (% Tax Payment) . .14 (Discount Rate)

113. 3. .07 (Reinvestment Rate) . .0 (% Mortgage Liability) . 1 (General Partner)

110. 4. _____
Title

111. 4. _____ (Income Tax) . _____ (% of Spendable) . _____ (% Equity Contribution)

112. 4. _____ (% Equity Reserve) . _____ (% Tax Loss) . _____ (% Tax Payment) . _____ (Discount Rate)

113. 4. _____ (Reinvestment Rate) . _____ (% Mortgage Liability) . _____ (General Partner)

110. 5. _____
Title

111. 5. _____ (Income Tax) . _____ (% of Spendable) . _____ (% Equity Contribution)

112. 5. _____ (% Equity Reserve) . _____ (% Tax Loss) . _____ (% Tax Payment) . _____ (Discount Rate)

113. 5. _____ (Reinvestment Rate) . _____ (% Mortgage Liability) . _____ (General Partner)

110. 6. _____
Title

111. 6. _____ (Income Tax) . _____ (% of Spendable) . _____ (% Equity Contribution)

112. 6. _____ (% Equity Reserve) . _____ (% Tax Loss) . _____ (% Tax Payment) . _____ (Discount Rate)

113. 6. _____ (Reinvestment Rate) . _____ (% Mortgage Liability) . _____ (General Partner)

COMPONENT ENTRIES

200, 1. Land
Title(20 character maximum)

201, 1. .13 (Original Cost) . .0 (% Depreciable) . 0 (Depreciation Method)

202, 1. 1 (Starting Year) . 0 (Useful Life) . 0 (Switching)

200, 2. Building
Title

201, 2. .87 (Original Cost) . 1.0 (% Depreciable) . 5 (Depreciation Method)

202, 2. 1 (Starting Year) . 33 (Useful Life) . 0 (Switching)

200, 3. Parking
Title

201, 3. 8000 (Original Cost) . .50 (% Depreciable) . 5 (Depreciation Method)

202, 3. 1 (Starting Year) . 7 (Useful Life) . 0 (Switching)

200, 4. Furnishings
Title

201, 4. 15000 (Original Cost) . .85 (% Depreciable) . 5 (Depreciation Method)

202, 4. 1 (Starting Year) . 10 (Useful Life) . 0 (Switching)

200, 5. Title

201, 5. Original Cost . % Depreciable . Depreciation Method

202, 5. Starting Year . Useful Life . Switching

200, 6. Title

201, 6. Original Cost . % Depreciable . Depreciation Method

202, 6. Starting Year . Useful Life . Switching

200, 7. Title

201, 7. Original Cost . % Depreciable . Depreciation Method

202, 7. Starting Year . Useful Life . Switching

200, 8. Title

201, 8. Original Cost . % Depreciable . Depreciation Method

202, 8. Starting Year . Useful Life . Switching

MORTGAGE ENTRIES

300, 1.	Permanent Mortgage				
	Title(20 character maximum)				
301, 1.	.75	.095	0	27	
	Principal Amount	Annual Interest	Payment Period	Term	
302, 1.	12	1	3	3	
	Payments/Year	Year Began	Year End	Refinanced by *	
303, 1.					
	Bonus Interest	Base Amount	Base Type	Mortgage Factor	
300, 2.	Land Contract				
	Title				
301, 2.	.13	.08	0	7	
	Principal Amount	Annual Interest	Payment Period	Term	
302, 2.	1	1	3	3	
	Payments/Year	Year Began	Year End	Refinanced by *	
303, 2.					
	Bonus Interest	Base Amount	Base Type	Mortgage Factor	
300, 3.	Refinance Mortgage				
	Title				
301, 3.	.85	.09	0	25	
	Principal Amount	Annual Interest	Payment Period	Term	
302, 3.	4	4	29	0	
	Payments/Year	Year Began	Year End	Refinanced by *	
303, 3.	.035	130000	5		
	Bonus Interest	Base Amount	Base Type	Mortgage Factor	
300, 4.					
	Title				
301, 4.					
	Principal Amount	Annual Interest	Payment Period	Term	
302, 4.					
	Payments/Year	Year Began	Year End	Refinanced by *	
303, 4.					
	Bonus Interest	Base Amount	Base Type	Mortgage Factor	
300, 5.					
	Title				
301, 5.					
	Principal Amount	Annual Interest	Payment Period	Term	
302, 5.					
	Payments/Year	Year Began	Year End	Refinanced by *	
303, 5.					
	Bonus Interest	Base Amount	Base Type	Mortgage Factor	
300, 6.					
	Title				
301, 6.					
	Principal Amount	Annual Interest	Payment Period	Term	
302, 6.					
	Payments/Year	Year Began	Year End	Refinanced by *	
303, 6.					
	Bonus Interest	Base Amount	Base Type	Mortgage Factor	

OUTPUT OPTIONS (Enter "0" to suppress report printing; Enter "1" to permit report printing)

___ 400 5 (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

* = Position #1 of Card 400

5* = Auto 1, 2, 3, 4, 5, 6, 7, 10

9* = Auto All

3* = Select Specific Line #'s (10 maximum)

GRAPHIC OUTPUT (Enter output line I.D. numbers 1-48, in any order)

___ 401 5 , 18 , 23 , 48 , 36

___ 402 37 , 40 , 45 , 46 , 47

PRINT YEARS (Enter any year number 1-25, in any order)

___ 403 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , ___ , ___

___ 404 ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

___ 405 ___ , ___ , ___ , ___ , ___

P R O F O R M A
INVESTMENT ANALYSIS OF

MRCAP BACKDOOR DEMO

FOR

* MICHAEL ROBBINS *

* GROSS RENT	$	258442.	* RATE OF GROWTH OF GROSS RENT		.0086
* EXPENSES	$	59124.	* RATE OF GROWTH OF EXPENSES		.0521
* R E TAXES	$	63533.	* RATE OF GROWTH OF R E TAXES		.0476
INCOME TAX RATE		.5000	PROJECT VALUE GROWTH OF		6.0000
* VACANCY RATE		.0475	WORKING CAPITAL LOAN RATE		.1200
EQUITY DISCOUNT		.1300	EXTRAORDINARY EXPENSES	$	1000.
RESALE COST		.0650	REINVESTMENT RATE		.0500
WKG CAPITAL RS	$	7000.	CAPITAL RESER INTEREST RATE		.0250
INITIAL COST	$	1088778.	INITIAL EQUITY REQUIRED	$	134328.

ALL '*' VALUES ARE AVERAGE AMOUNTS FOR HOLDING PERIOD. OF 10 YRS.

C O M P O N E N T S U M M A R Y

TITLE	PCT. DEPR	BEGIN USE	USEFUL LIFE	DEPR METHOD		COST	SCH
LAND	0.	1	0.	0	$	138551.	0
BUILDING	1.00	1	33.	5	$	927227.	0
PARKING	0.50	1	7.	5	$	8000.	0
FURNISHINGS	0.85	1	10.	5	$	15000.	0

M O R T G A G E S U M M A R Y

TITLE	INTR RATE	BEGIN YR.	END YR.	TERM		ORIG BALC	PCT VALUE
FIRST MORTGAGE	.0950	1	3	27	$	815951.	0.752
LAND CONTRACT	.0800	1	3	7	$	142499.	0.131
REFINANCE MORTGAGE	.0900	4	29	25	$	1086275.	0.940

P R O J F O R M A
INVESTMENT ANALYSIS OF

MRCAP BACKDOOR DEMO

FOR

* MICHAEL ROBBINS *

CASH FLOW ANALYSIS

		1977	1978	1979	1980
1	GROSS RENT	241500.	251279.	261455.	261455.
2	LESS VACANCY	11480.	11939.	12417.	12417.
3	LESS REAL ESTATE TAXES	50512.	53038.	55689.	58474.
4	LESS EXPENSES	46920.	48446.	51110.	53921.
5	NET INCOME	132588.	137857.	142239.	136643.
6	LESS DEPRECIATION	61481.	56822.	51592.	48121.
7	LESS INTEREST	88907.	86950.	84823.	97591.
8	TAXABLE INCOME	-17800.	-5916.	5824.	-9069.
9	PLUS DEPRECIATION	61481.	56822.	51592.	48121.
10	LESS PRINCIPAL PAYMENTS	22818.	24775.	26902.	12250.
11	CASH THROW-OFF	20863.	26132.	30514.	26801.
12	LESS TAXES	0.	0.	2912.	0.
13	LESS RESERVES AT 5000.000	5000.	5000.	5000.	1511.
14	CASH FROM OPERATIONS	15863.	21132.	22602.	224610.
15	WORKING CAPITAL LOAN(CUM B)	0.	0.	0.	0.
16	DISTRIBUTABLE CASH AFR TAX	15863.	21132.	22602.	224610.
17	TAX SAVING ON OTHER INCOME	8900.	2958.	0.	4535.
18	SPENDABLE CASH AFTER TAXES	24763.	24090.	22602.	229145.

CASH FLOW ANALYSIS

		1977	1978	1979	1980
	MARKET VALUE				
19	BY METHOD - 6 - AT 0.0200	1110554.	1132765.	1155420.	1178528.
20	LESS RESALE COST	72186.	73630.	75102.	76604.
21	LESS LOAN BALANCES	938632.	913857.	886956.	1074025.
22	PLUS CUM. CASH RESERVES	12175.	17479.	22916.	25000.
23	B/4 TAX NET WORTH	111911.	162757.	216278.	52899.
24	CAPITAL GAIN (IF SOLD)	-20466.	30245.	81372.	132923.
25	CAPITAL GAINS TAX	-5117.	7561.	23480.	41523.
26	INCOME TAX ON EXCESS DEP	15769.	29208.	40032.	49120.
27	TOTAL TAX ON SALE	13210.	36769.	63512.	90643.
48	AFTER TAX NET WORTH	98700.	125988.	152767.	-37744.

YEAR OF ANALYSIS	1977	1978	1979	1980
BEFORE TAX RATIO ANALYSIS				
28 RETURN ON NET WORTH B/4 TAX	-0.0116	0.6879	0.5163	0.2901
29 CHANGE IN NET WORTH B/4 TAX	-22418.	50847.	53521.	-163379.
30 CASH RTN ON ORIG CASH EQUIY	0.1553	0.1945	0.2272	0.1995
31 PERCENT ORIG EQUITY PAYBACK	0.1181	0.2754	0.4437	2.1158
32 PRESENT VALUE OF PROJECT	1078949.	1127840.	1171417.	1195233.

YEAR OF ANALYSIS	1977	1978	1979	1980
AFTER TAX RATIO ANALYSIS				
33 RETURN ON NEW WORTH AFT TAX	-0.0809	0.5205	0.3919	0.2529
34 CHANGE IN NET WORTH AFT TAX	-35628.	27288.	26778.	-190510.
35 CASH RTN ON ORIG CASH EQUIY	0.1844	0.1793	0.1683	1.7059
36 PERCENT ORIG EQUITY PAYBACK	0.1844	0.3637	0.5319	2.2378
37 PRESENT VALUE OF PROJECT	1070710.	1100897.	1123769.	1260110.
38 NET INCOME-MARKET VALUE RTO	0.1194	0.1217	0.1231	0.1159
39 LENDER BONUS INTEREST RATE	0.	0.	0.	0.0002
40 DEFAULT RATIO	0.8661	0.8485	0.8358	0.8500

YEAR OF ANALYSIS	1977	1978	1979	1980
MODIFIED INTERNAL RATE OF RETURN ANALYSIS				
RETURN ANALYSIS WITHOUT SALE				
41 CUM. AFT TAX SPENDABLE CASH	24763.	50091.	75198.	308103.
42 MOD. I.R.R. ON ORIG EQUITY	-0.8156	-0.3893	-0.1758	0.2306
43 MOD. I.R.R. ON CUM. EQUITY	-0.8157	-0.3893	-0.1758	0.2306
RETURN ANALYSIS WITH SALE				
44 CUM. CASH LESS ORIG EQUITY	-10865.	41751.	93636.	136031.
45 CUM. CASH LESS CUM. EQUITY	-10865.	41751.	93636.	136031.
46 MOD I.R.R. ON ORIG EQUITY	-0.0809	0.1449	0.1928	0.1911
47 MOD I.R.R. ON CUM. EQUITY	-0.0809	0.1449	0.1928	0.1911

TO CHANGE CASH RETURN BEFORE TAXES BY 1000.
CHANGE ANY ONE OF THE FOLLOWING

REAL ESTATE TAXES	BY	0.0198	0.0189	0.0180	0.0171
TOTAL EXPENSES	BY	0.0213	0.0206	0.0196	0.0185
FIXED EXPENSES	BY	0.0218	0.0206	0.0196	0.0185
VARIABLE EXPENSES	BY	0.	0.	0.	0.
TOTAL INTEREST PMTS.	BY	0.0112	0.0115	0.0118	0.0102
TOTAL PRINCIPAL PMTS.	BY	0.0438	0.0404	0.0372	0.0816
WORKING CAPITAL LOAN	BY	0.	0.	0.	0.
GROSS INCOME	BY	0.0041	0.0040	0.0038	0.0038
FIXED INCOME	BY	0.0044	0.0042	0.0040	0.0040
VARIABLE INCOME	BY	0.0840	0.0800	0.0762	0.0762

COMPONENTS
==========

INITIAL INVESTMENT	BY	0.0198	0.0189	0.0180	0.0171
LAND	BY	0.1556	0.1482	0.1411	0.1344
BUILDING	BY	0.0232	0.0221	0.0211	0.0201
PARKING	BY	2.6944	2.5661	2.4439	2.3275
FURNISHINGS	BY	1.4370	1.3686	1.3034	1.241

MORTGAGES
=========

FIRST MORTGAGE	BY	0.0119	0.0119	0.0119	0.
LAND CONTRACT	BY	0.0365	0.0365	0.0365	0.
REFINANCE MORTGAGE	BY	0.	0.	0.	0.0091

SENSITIVITY ANALYSIS

DEFAULT RATE -	NEEDED -	0.8500	0.8500	0.8500	0.8500
DEFAULT RATE -	ACTUAL -	0.8661	0.8485	0.8358	0.8500
	DIFFER -	-0.0161	0.0015	0.0142	0.

TO CHANGE THE DEFAULT RATE .01
CHANGE ANY ONE OF THE FOLLOWING

CASH OUTLAYS		1977	1978	1979	1980
REAL ESTATE TAXES	BY	-0.0478	0.0474	0.0469	0.0447
TOTAL EXPENSES	BY	-0.0515	0.0519	0.0512	0.0485
FIXED EXPENSES	BY	-0.0526	0.0519	0.0512	0.0485
VARIABLE EXPENSES	BY	0.	0.	0.	0.
TOTAL INTEREST PMTS.	BY	-0.0272	0.0289	0.0308	0.0268
TOTAL PRINCIPAL PMTS.	BY	-0.1058	0.1014	0.0972	0.2134
WORKING CAPITAL LOAN	BY	0.	0.	0.	0.
GROSS INCOME	BY	0.0087	-0.0085	-0.0084	-0.0085
FIXED INCOME	BY	0.0091	-0.0089	-0.0088	-0.0089
VARIABLE INCOME	BY	0.1758	-0.1706	-0.1666	-0.1694

COMPONENTS					
INITIAL INVESTMENT	BY	-0.0478	0.0474	0.0469	0.0447
LAND	BY	-0.3757	0.3723	0.3689	0.3514
BUILDING	BY	-0.0561	0.0556	0.0551	0.0525
PARKING	BY	-6.5069	6.4480	6.3896	6.0853
FURNISHINGS	BY	-3.4703	3.4389	3.4078	3.2455

MORTGAGES					
FIRST MORTGAGE	BY	-0.0286	0.0298	0.0310	0.
LAND CONTRACT	BY	-0.0882	0.0918	0.0955	0.
REFINANCE MORTGAGE	BY	0.	0.	0.	0.0239

PARTNERSHIP INVESTMENT SUMMARY

FOR

LEAN-2 HOMES

OWNERSHIP FORM
CORPERATION WITH OUTSIDE EARNINGS

MODIFIED INTERNAL RATE OF RETURN ANALYSIS

RETURN ANALYSIS WITHOUT SALE	1977	1978	1979	1980
CUM.AFT TAX SPENDABLE CASH,	15747.	32641.	50311.	180376.
MOD. I.R.R. ON ORIG EQUITY	-0.7655	-0.3029	-0.0918	0.2801
MOD. I.R.R. ON CUM. EQUITY	-0.7656	-0.3029	-0.0918	0.2801

RETURN ANALYSIS WITH SALE	1977	1978	1979	1980
CUM. CASH LESS ORIG EQUITY	-1852.	29207.	62307.	98323.
CUM. CASH LESS CUM. EQUITY	-11927.	19132.	52232.	88246.
MOD. I.R.R. ON ORIG EQUITY	-0.0276	0.1979	0.2445	0.2529
MOD. I.R.R. ON CUM. EQUITY	-0.0276	0.1979	0.2445	0.2529

PARTNERSHIP INVESTMENT SUMMARY

FOR

LEAN-2 HOMES

OWNERSHIP FORM
CORPERATION WITH OUTSIDE EARNINGS

INCOME TAX RATE	.4800	SHARE OF EQUITY CONTRIBUTION	.5000
MAX. CAPITAL GAIN RATE	.2400	INITIAL CASH CONTRIBUTION	57090.
DISCOUNT RATE	.1400	SHARE OF EQUITY REVERSION	.5000
REINVESTMENT RATE	.0700	SHARE OF DISTRIBUTABLE CASH	.5500
SHARE INC TAX PMT	.5000	MAX. BASIS AMOUNT	610302.
GENERAL PARTNER W/ CONTRACT LIABILITY OF	10075.	SHARE OF TAX LOSSES	.5000

CASH FLOW	1977	1978	1979	1980
TAXABLE INCOME	-8900.	-2958.	2912.	-4535.
CASH THROW-OFF	11475.	14372.	16783.	14741.
LESS TAXES	0.	0.	1398.	0.
DISTRIBUTABLE CASH AFTER TAX	11475.	14372.	15385.	124366.
TAX SAVINGS ON OTHER INCOME	4272.	1420.	0.	2177.
SPENDABLE CASH AFTER TAXES	15747.	15792.	15385.	126543.
NET WORTH OF SHARE	55955.	81379.	108139.	26450.
CAPITAL GAIN (IF SOLD)	-10233.	15123.	40686.	66461.
CAPITAL GAIN TAX,	-1179.	3629.	9765.	17761.
INCOME TAX ON EXCESS DEPR	7569.	14020.	19215.	23578.
TOTAL TAX ON SALE	6390.	17649.	28980.	41339.
AFTER TAX NET WORTH	49565.	63729.	79159.	-14889.

BEFORE TAX RATIO ANALYSIS	1977	1978	1979	1980
CASH RTN ON ORIG CASH EQUITY	0.1486	0.1861	0.2173	0.1908
PERCENT ORIG EQUITY PAYBACK	0.1486	0.3346	0.5338	2.1440
PRESENT VALUE OF SHARE	59149.	83743.	105443.	56841.

AFTER TAX RATIO ANALYSIS	1977	1978	1979	1980
CASH RTN ON ORIG CASH EQUITY	0.2039	0.2045	0.1992	1.6383
PERCENT ORIG EQUITY PAYBACK	0.2039	0.4083	0.6075	2.2459
PRESENT VALUE OF SHARE	57291.	75002.	89779.	102457.

PARTNERSHIP INVESTMENT SUMMARY

FOR

JACK JONES

OWNERSHIP FORM
INDIVIDUAL

MODIFIED INTERNAL RATE OF RETURN ANALYSIS

RETURN ANALYSIS WITHOUT SALE	1977	1978	1979	1980
CUM.AFT TAX SPENDABLE CASH,	9819.	19431.	28586.	99951.
MOD. I.R.R. ON ORIG EQUITY	-0.8173	-0.3986	-0.1897	0.1679
MOD. I.R.R. ON CUM. EQUITY	-0.8173	-0.3987	-0.1897	0.1679

RETURN ANALYSIS WITH SALE	1977	1978	1979	1980
CUM. CASH LESS ORIG EQUITY	5438.	28694.	52807.	29848.
CUM. CASH LESS CUM. EQUITY	5438.	28694.	52807.	29848.
MOD. I.R.R. ON ORIG EQUITY	0.1012	0.2386	0.2563	0.1168
MOD. I.R.R. ON CUM. EQUITY	0.1012	0.2386	0.2563	0.1168

PARTNERSHIP INVESTMENT SUMMARY

FOR

JACK JONES

OWNERSHIP FORM
INDIVIDUAL

INCOME TAX RATE	.5000	SHARE OF EQUITY CONTRIBUTION	.4000
MAX. CAPITAL GAIN RATE	.2500	INITIAL CASH CONTRIBUTION	53731.
DISCOUNT RATE	.1300	SHARE OF EQUITY REVERSION	.5000
REINVESTMENT RATE	.0600	SHARE OF DISTRIBUTABLE CASH	.3000
SHARE INC TAX PMT	.4000	MAX. BASIS AMOUNT	488241.
LIMITED PARTNER-		SHARE OF TAX LOSSES	.4000

CASH FLOW	1977	1978	1979	1980
TAXABLE INCOME	-7120.	-2366.	2329.	-3628.
CASH THROW-OFF	6259.	7840.	9154.	8040.
LESS TAXES	0.	0.	1165.	0.
DISTRIBUTABLE CASH AFTER TAX	6259.	7840.	7989.	67836.
TAX SAVINGS ON OTHER INCOME	3560.	1183.	0.	1814.
SPENDABLE CASH AFTER TAXES	9819.	9023.	7989.	69650.
NET WORTH OF SHARE	55955.	81379.	108139.	26450.
CAPITAL GAIN (IF SOLD)	-10233.	15123.	40686.	66461.
CAPITAL GAIN TAX,	-1279.	3781.	10172.	18261.
INCOME TAX ON EXCESS DEPR	7884.	14604.	20016.	24560.
TOTAL TAX ON SALE	6605.	18384.	30187.	42821.
AFTER TAX NET WORTH	49350.	62994.	77952.	-16372.

BEFORE TAX RATIO ANALYSIS	1977	1978	1979	1980
CASH RTN ON ORIG CASH EQUITY	0.1165	0.1459	0.1704	0.1496
PERCENT ORIG EQUITY PAYBACK	0.1165	0.2624	0.4111	1.6736
PRESENT VALUE OF SHARE	55057.	75410.	92969.	39176.

AFTER TAX RATIO ANALYSIS	1977	1978	1979	1980
CASH RTN ON ORIG CASH EQUITY	0.1827	0.1679	0.1487	1.2963
PERCENT ORIG EQUITY PAYBACK	0.1827	0.3507	0.4994	1.7956
PRESENT VALUE OF SHARE	52362.	65089.	75317.	53969.

PARTNERSHIP INVESTMENT SUMMARY

FOR

REAL ESTATE DYNAMICS

OWNERSHIP FORM
CORPERATION WITHOUT OUTSIDE EARNINGS

MODIFIED INTERNAL RATE OF RETURN ANALYSIS

RETURN ANALYSIS WITHOUT SALE	1977	1978	1979	1980
CUM.AFT TAX SPENDABLE CASH,	3521.	7747.	12583.	47330.
MOD. I.R.R. ON ORIG EQUITY	-0.7379	-0.2406	-0.0215	0.3701
MOD. I.R.R. ON CUM. EQUITY	-0.7379	-0.2406	-0.0215	0.3701

RETURN ANALYSIS WITH SALE	1977	1978	1979	1980
CUM. CASH LESS ORIG EQUITY	-9912.	-5686.	-849.	33897.
CUM. CASH LESS CUM. EQUITY	-9912.	-5686.	-849.	33897.
MOD. I.R.R. ON ORIG EQUITY	-0.7379	-0.2406	-0.0215	0.3701
MOD. I.R.R. ON CUM. EQUITY	-0.7379	-0.2406	-0.0215	0.3701

PARTNERSHIP INVESTMENT SUMMARY

FOR

REAL ESTATE DYNAMICS

OWNERSHIP FORM
CORPERATION WITHOUT OUTSIDE EARNINGS

INCOME TAX RATE	.2200	SHARE OF EQUITY CONTRIBUTION	.1000
MAX. CAPITAL GAIN RATE	.1100	INITIAL CASH CONTRIBUTION	13433.
DISCOUNT RATE	.1000	SHARE OF EQUITY REVERSION	.
REINVESTMENT RATE	.0500	SHARE OF DISTRIBUTABLE CASH	.1500
SHARE INC TAX PMT	.1000	MAX. BASIS AMOUNT	122060.
LIMITED PARTNER		SHARE OF TAX LOSSES	.1000

CASH FLOW	1977	1978	1979	1980
TAXABLE INCOME	-1780.	-592.	582.	-907.
CASH THROW-OFF	3129.	3920.	4577.	4020.
LESS TAXES	0.	0.	128.	0.
DISTRIBUTABLE CASH AFTER TAX	3129.	3920.	4449.	33918.
TAX SAVINGS ON OTHER INCOME	392.	130.	0.	200.
SPENDABLE CASH AFTER TAXES	3521.	4050.	4449.	34118.
NET WORTH OF SHARE	0.	0.	0.	0.
CAPITAL GAIN (IF SOLD)	0.	0.	0.	0.
CAPITAL GAIN TAX,	0.	0.	0.	0.
INCOME TAX ON EXCESS DEPR	0.	0.	0.	0.
TOTAL TAX ON SALE	0.	0.	0.	0.
AFTER TAX NET WORTH	0.	0.	0.	0.

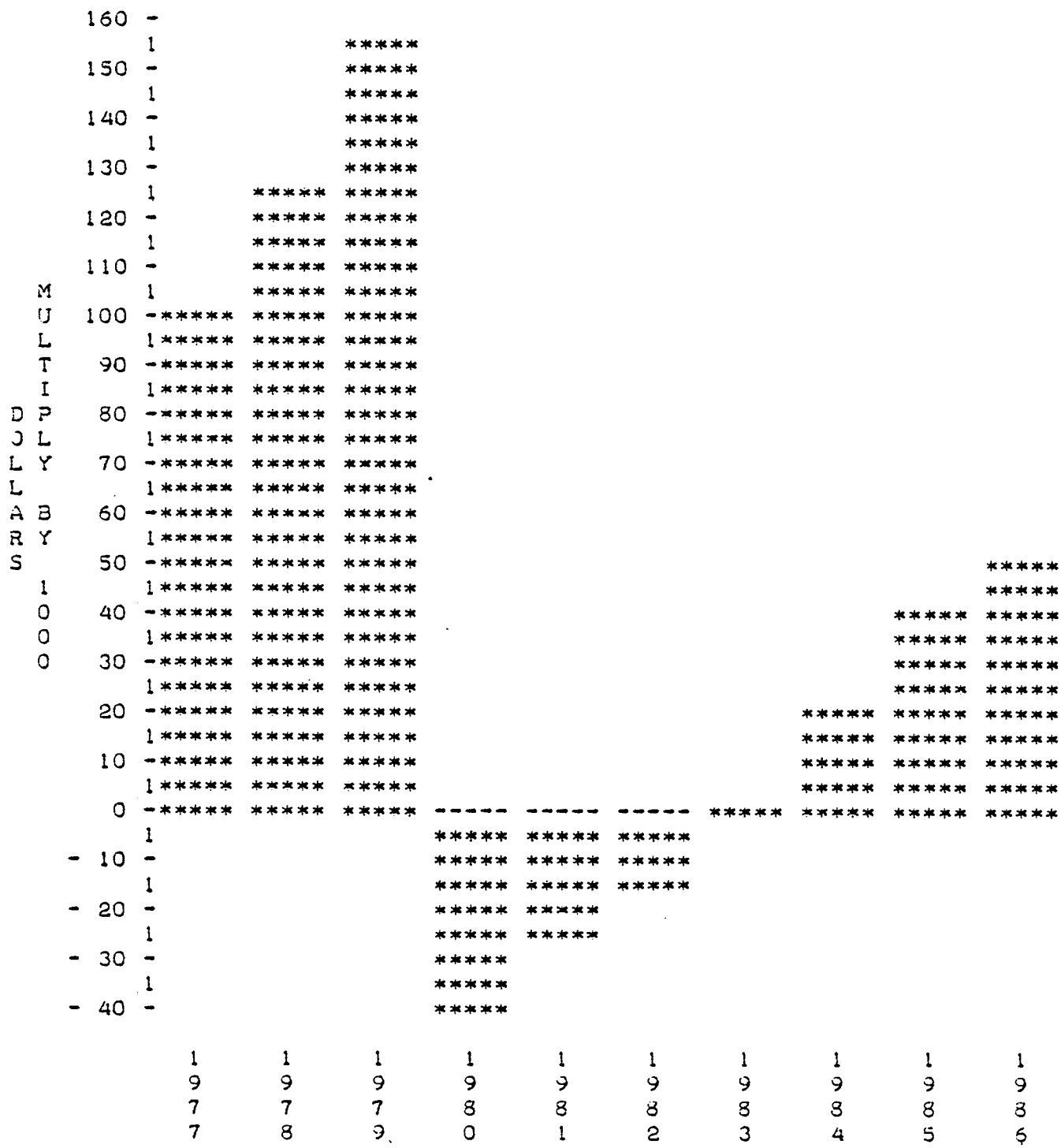
BEFORE TAX RATIO ANALYSIS	1977	1978	1979	1980
CASH RTN ON ORIG CASH EQUITY	0.2330	0.2918	0.3407	0.2993
PERCENT ORIG EQUITY PAYBACK	0.2330	0.5248	0.8560	3.3810
PRESENT VALUE OF SHARE	2845.	6084.	9523.	12269.

AFTER TAX RATIO ANALYSIS	1977	1978	1979	1980
CASH RTN ON ORIG CASH EQUITY	0.2621	0.3015	0.3312	2.5399
PERCENT ORIG EQUITY PAYBACK	0.2621	0.5636	0.8948	3.4347
PRESENT VALUE OF SHARE	3201.	6548.	9891.	33193.

08/12/77

MRCAP BACKDOOR DEMO

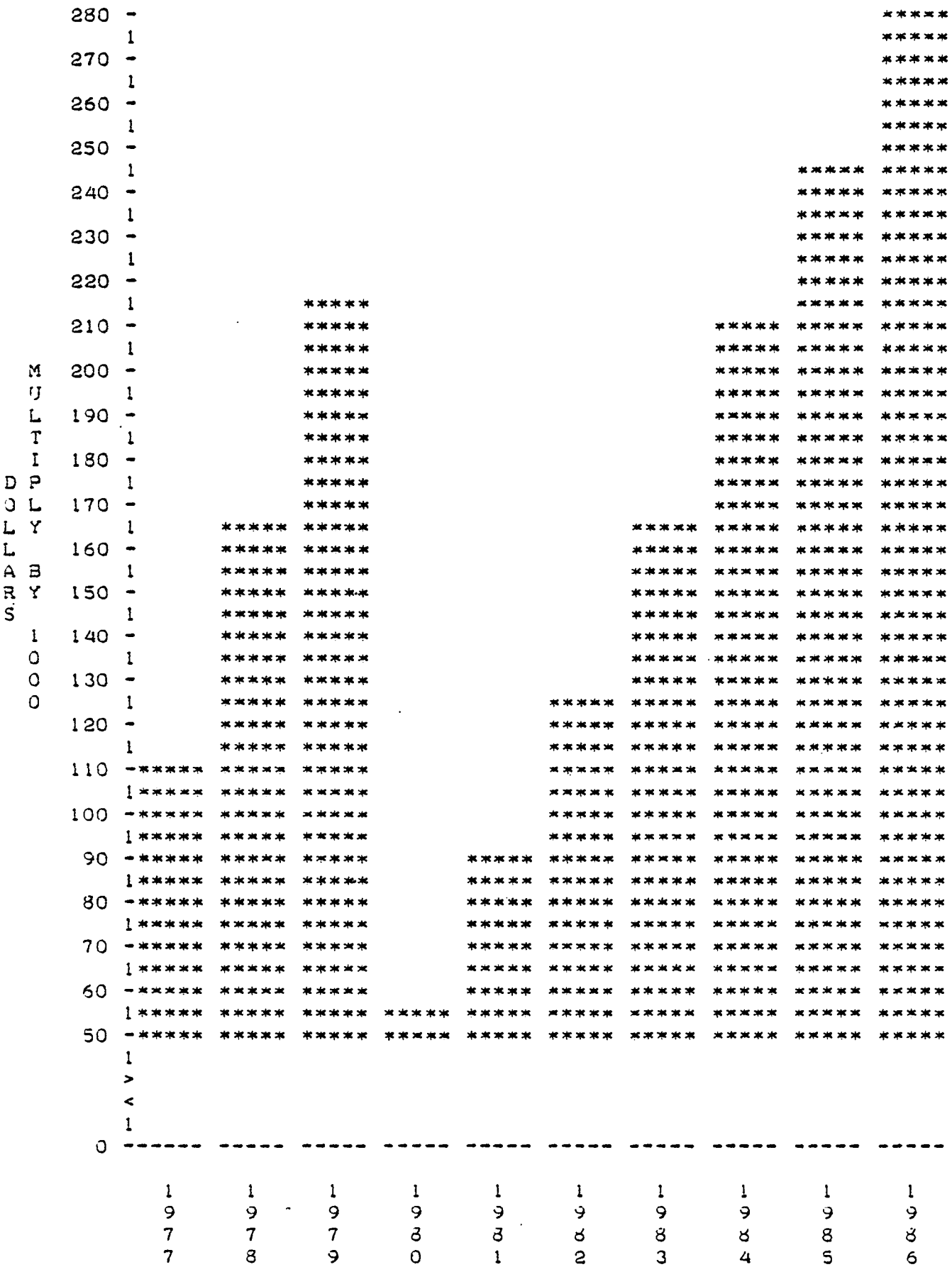
* = AFTER TAX NET WORTH



08/12/77

MRCAP BACKDOOR DEMO

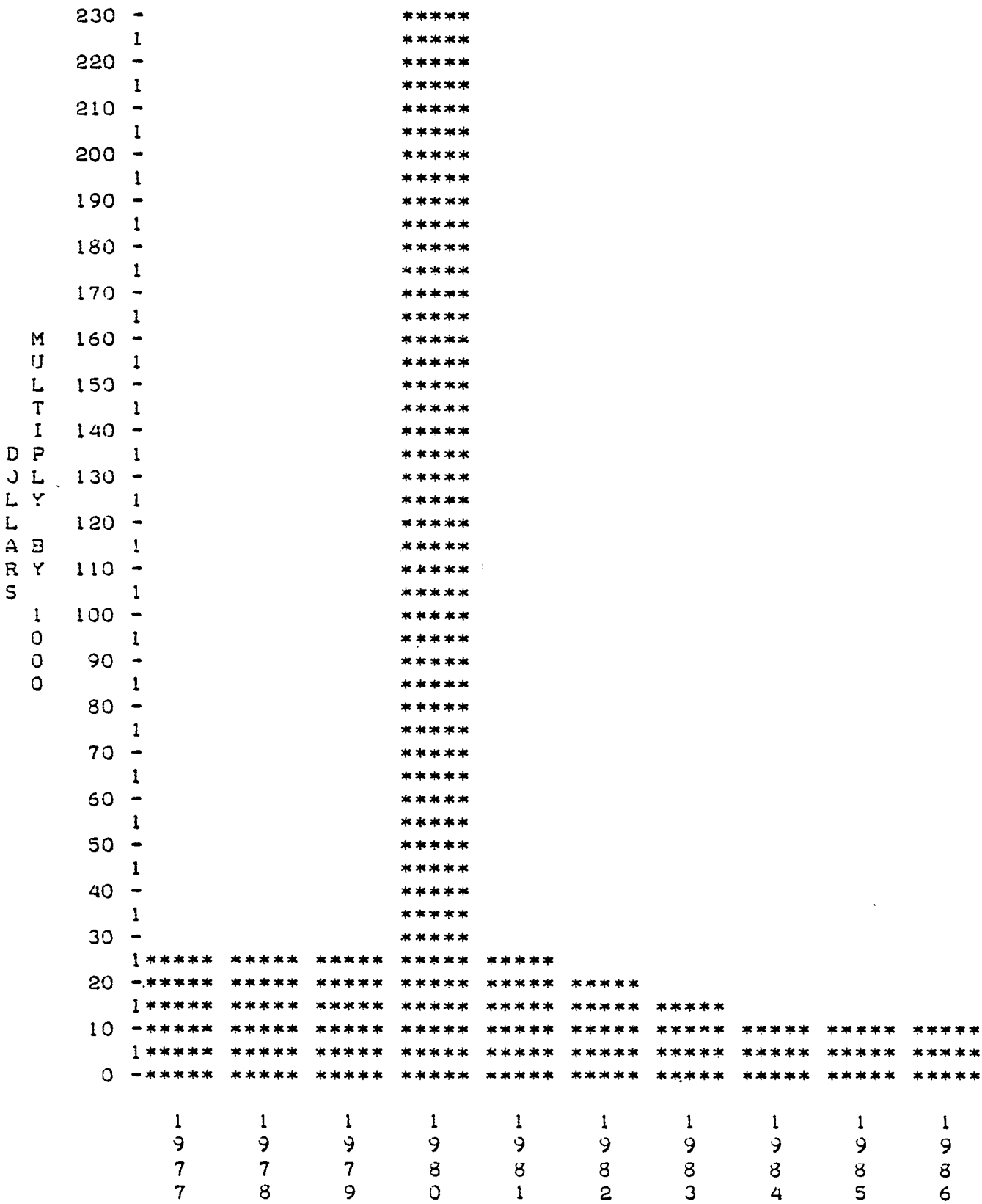
* = 3/4 TAX NET WORTH



08/12/77

MRCAP BACKDOOR DEMO

* = SPENDABLE CASH AFTER TAX



```
USED     80.37 UNITS
RUN COST


COST          20:47CDT     08/12/77


ACCRUED CHARGES SINCE SIGNIN
$ 10.55 COMPUTER
  26.71 CONNECT
   8.78 CHARACTERS
 -17.75 EDU DISC
$ 28.29 TOTAL
EFFICIENCY =  32.9

USED       .41 UNITS
BYE
00083.85  CRU     0002.13  TCH     0069.86  KC

OFF AT 20:47CDT 08/12/77.
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— Preliminary Draft — Incomplete

CONTEMPORARY REAL ESTATE ANALYSIS METHODS

SECOND MORNING SESSION

2.000 The Basic Case - A Site in Search of a Market

Feasibilities may begin with a site already owned for which a fitting use is sought; an appraisal always begins with a specific property in search of a most fitting use. While a consumer orientation would preferably select a site after a specific use had been defined, the more common situation is a client whose flexibility and alternative courses of action are greatly reduced to those inherent in a single site.

2.100 To begin with the familiar and to make it strange with more careful identification of attributes than is the appraisal custom does not mean that intensive specialty analysis and its inherent cost is necessary before preliminary economic tests are made; much of the analysis can essentially be defined potential uses and a priority of limiting conditions on the report.

2.200 Site analysis begins with a specific site and structures or stems from the market revenue approach as a set of site specifications which will control the search for alternatives. There is no such thing today as raw land or a vacant lot. A site suitability study recognizes every site has:

- 2.210 Static attributes - physical characteristics of sixe, shape, topography, soils, etc.
- 2.220 Legal attributes - public controls, private agreements and potential legislation defining use.
- 2.230 Linkage attributes - relationships to other sites which may tend to generate movements of goods and people to the subject site.
- 2.240 Dynamic attributes - characteristics which affect behavior such as visibility, prestige, or feeling of fear or anxiety.
- 2.250 Environmental impact attributes on physical, social, or economic factors off-site.

2.300 Static attributes analyzed should include the facts and the implications of the following:

- 2.310 Size, shape, and area
- 2.320 Topography, soils, slope stability, potential for subsidance
- 2.330 Water table, water resources (streams & ponds) and bulkhead lines
- 2.340 All set-back lines and building envelopes
- 2.350 Access routes (proximity is not accessibility)
- 2.360 Concealed utility easements, old foundations, etc.
- 2.370 Flood plains which have been determined by Corp. of Engineers, etc.
- 2.380 Scarce environmental elements which may mean environmental impact litigation
- 2.390 Landmarks or historical structures

2.400 Legal attributes inventory should include both specific controls such as zoning, and identify external public or private controls on use or potential legislation or administrative attitudes and procedures which would impact on owner alternatives for use.

2.410 Legal uses under zoning alternatives and limitations on FAR, parking, signing, etc.

2.420 Special zoning options such as PUD, down zoning alternatives, etc. available at owners option.

2.430 Premises of community master plans still in incubation process

2.440 Tax conservancy or abatement commitments

2.450 Extra territorial zoning or subdivision powers

2.460 Attitudes of sewer, water, and highway commissions

2.470 Contractual agreements among previous buyers and sellers which may or may not run with the land

2.480 Planner views of physical barriers to restrict "sprawl"

2.490 Existing or impending legislation should be anticipated relative to:

2.491 Septic tank installation
2.492 Ground water, depth and conservation of high water recharge areas
2.493 Salt water encroachment
2.494 Conservation of environmental edges
2.495 Conservation of prime agricultural land
2.496 Water quality standards
2.497 Air quality standards

2.500 Analysis of the static and legal attributes should be summarized in terms of competitive advantages and disadvantages for costs, pricing, and marketing.

2.510 Some attributes lead to higher cost which the front door approach (See Section 3.000) may reveal as leading to excessive rents or prices.

2.520 Some static or legal attributes can provide monopoly advantages because its suitability is unique relative to lands all around it, because of exemption from certain regulations, or existing approvals of development plans, including licenses for dredging, building code variances, etc.

2.530 Static attributes will also help identify "best use" or the most probable buyer.

2.540 Lack of fit between static site attributes and merchandising data is a basic cause of unsuccessful projects.

2.600 Linkage attributes have to do with functional relationships or points of interaction with activity centers which may generate users or provide the infrastructure of improvements which support the site.

2.610 Streets, sidewalks, rail, and transit systems serving the site.

2.620 Access points

2.621 Traffic department controls, present and proposed
2.622 Rail switching and truck tariff zones
2.623 Indirect controls imposed by factors affecting behavior. (See dynamic attributes, 5.000)

2.630 Utility services arelinkages, too.

2.631 Sewer and storm water capacities
2.632 Water, gas, and electric hook-ups, availability and capacity
2.633 Community energy supplies and sources
2.634 Implicit resources such as stock of wild game, labor pools, alternatives to the auto, etc.

2.640 Capacity of existing transportation systems to absorb unit volume generated on site and implications for off-site improvements budgets.

2.650 Relationship of subject site to generators of potential needs and uses for the subject site.

2.651 Employment centers
2.652 School system alternatives
2.653 Retail services
2.654 Complimentary existing nearby uses
2.655 Recreational services
2.656 Health care systems
2.657 Security systems
2.658 Waste disposal services

2.660 Neighborhood demographics (population, age, employment, income, etc.)

2.670 Relationship to competitive alternatives and projects and exposure to interception of linkages.

2.700 Dynamic attributes have to do with the mental or emotional responses which a site or project stimulates as it affects decision making behavior. These decision makers may be property buyers, regulators of site use, customers of establishments located on the site, or peer groups which set community attitudes or make decisions for others by proxy (Board of Elderly Care Organization).

2.710 Image conditioning of the approach zone

2.720 Visual factors in terms of prominence of the site, views from the site, potential for controlled sight lines, etc.

2.730 Anxiety factors of access and security

2.740 Noise as a function of traffic count (FHA noise pollution manual).

2.750 Prevailing air currents and airborne pollution (phosphate plants or sulphite paper mills, for example).

2.760 Political images established for a site by the public positions of local politicians or vested interest groups.

2.770 Historical community reputation and values attached to the project site and structures.

2.771 Recycling of old buildings within existing urban areas is fashionable among architects and the upper class.

2.772 Recycling may establish historical roots and images.

2.800 The real estate product today must respond not only to the needs of the individual consumer in the marketplace but to the collective community of consumers which represent the community political environment. The landscape builds like a reef, the cumulative bones of thousands of individual decisions. This decade will witness a final transition from relative laissez faire attitudes of land as a commodity to highly democratic regulation of land as a public resource and land use as a privilege granted by the public. If the proposal won't sell at City Hall there will be no opportunity to market the product to individuals. Therefore the project must consider in its feasibility procedures and in constraints imposed by pre-architectural programs the impact on the environment of?

2.810 Physical factors of the environment

2.811 Soil stability and water tables beyond the site boundaries

2.812 Eutrophication of lakes and streams

2.813 Disruption of environmental edges, plant, and wildlife areas
2.814 Impact on energy resources
2.815 Contribution to social disintegration
2.816 Aesthetic and urban design

2.820 Social factors of the environment

2.821 Displacement of existing residents and neighborhood units
2.822 Contribution to social integration or mobility barriers
2.823 Contribution to land use heterogeneity
2.824 Contribution to regional and community master plans

2.830 Economic factors of the environment

2.831 Direct impact on real estate tax revenues
2.832 Direct impact on other governmental revenue
2.833 Direct impact on incremental government
2.834 Secondary contributions to local government revenues
2.835 Secondary cost burdens created for local communities

2.840 Real estate business ethic environment

2.841 Impact on supply equilibrium
2.842 Impact on associated contractors
2.843 Impact on families of project sponsor
2.844 Ligitimacy of financing structure

2.850 Silhouette of proposed project in terms of public perception of impact.

2.860 Relationship of impact assessment to:

2.861 Scale of project
2.862 Vulnerability of project sponsor to secondary consequences of political discretion
2.863 Stamina of project sponsor in the face of public pressure

7.000 Selecting Market Targets or a Market Position Within a Defined Market Opportunity

Notwithstanding the feasibility analyst is a generalist, whose conclusions must be confirmed at a later stage of planning, the analyst is expected to place his major effort on development of a merchandising strategy designed to secure a competitive market position for the project proposal.

7.100 Free enterprise is the art of creating one's own monopoly, if only for a moment, in the mind of the buyer, monopoly characteristics depend on careful market segmentation.

7.110 Site and building characteristics of an existing building already provide a product profile which suggests the market segments.

7.120 Preferably careful identification of the prospect will permit development of a customer profile who will be the source of a product profile that would provide the most satisfaction.

7.200 As a result of merchandising research the analyst should be able to construct a hypothetical marketing program which defines:

7.210 The most probable user groups and their effective demand constraints.

7.220 The timing of their effective demand in the market.

7.230 The competitive standard product minimum.

7.240 The competitive product edge necessary for monopoly advantage

7.250 Basic elements of a required promotion program

7.300 To build these assumptions or marketing hypothesis the first clue to segmentation may be found in correctly understanding the essence of buyer motivation or of the activity to be housed.

7.310 Retailing is a break point for goods (a warehouse grocery), or a service industry, or a theater using lighting, staging, and mood to reinforce a role played by the buyer.

7.320 A restaurant may be to provide a quick food break (high turnover, pedestrian flow, conditioned ordering), or to provide recreational entertainment and consumption of an evening, or to provide a staging for business, social, or publicity roles.

7.800 Generalized Format of Merchandising Report Summary

Cash flows ultimately depend on sales or rental revenues and further refinements of the frontdoor-backdoor approaches depend on establishing an explicit set of assumptions about the geographical market area, the user segment within that market area, and so on. All you buy in a real estate investment is a set of assumptions about the market. Therefore, the analyst should provide and identify a marketing assumption checklist for the reader:

7.810 Definition of geographic and demographic market.

7.811 Primary trade area to be served

7.812 Profile of prospects by current location, status, income, etc. in primary carefully segmented area.

7.813 Secondary trade area to be served

7.814 Profile of prospects by current location, status, income, etc. in secondary carefully segmented area.

7.820 Definition of principal competitors

7.821 Esisting supply.

7.822 Prospective supply with timeline advantage.

7.823 Competitive standard package of project features.

7.824 Unique features of successful competitors.

7.825 Probable cause of unsuccessful competitors.

7.826 Merchandising appeals of competitors.

7.827 Definition of market penetration and competitive gap.

7.830 Establishment of merchandising strategy logic

7.831 Competition
- Standard product
- Price and quality
- Competitive edge opportunity

7.832 Positioning strategy
- Sales themes
- Name and byline
- Site and unit features
- Strong sales points

7.833 Construction and architecture
- Sales area
- Models
- Entrance and signs
- Project amenities
- Roads and paving
- Site plan
- Construction schedule

7.840 Definition of prospect target for subject property

7.841 Recommendations on site location

7.842 Recommendations on site linkages and dynamics

7.843 Recommendations on building types and numbers

7.844 Recommendations on basic unit features

7.845 Recommendations on basic unit options

7.846 Recommendations on level of quality

7.847 Recommendations on basic price targets

8.000 Structuring the Feasibility Report

Ultimately the budget established for analysis and the need to communicate the findings represent a severe constraint on the feasibility process. Priorities and critical assumptions necessary to achieve the desired outcome must be separated from the great mass of detail and presented tersely.

8.100 Format of the report should rely on three elements:

8.110 An executive summary which tersely identifies alternative courses of action and recommendations as to how client can make the choice.

8.120 A basic reference document which includes all the detail analysis.

8.130 A collection of reports by contributing professionals incorporated by reference.

8.200 To be terse the executive summary should depend on:

8.210 Simple charts of choices of alternative outcomes (See Exhibit 21).

8.220 Simple flow charts (Such as Exhibits 3,7,13,22).

8.230 Specific criteria used to measure "liklihood of success"

8.300 Statement of limiting conditions should first begin with a definition of the word "feasible" (as per Institute of Appraisal Terminology Handbook), and then state that it was the purpose of the study to define the context of the situation and the parameters within which a solution might be found to fit the major constraints with a reasonable liklihood of success. It should carefully point out that the generalist has made a series of explicit assumptions which may nevertheless need confirmation by more detailed study best done by specialists. The statement of limiting conditions should further emphasize the constraints and objectives placed on the study by identifying who:

8.310 Defined the constraints

8.320 Defined success

8.330 Provided the data and assumptions

8.340 Permitted key assumptions to remain untested for economy or speed

8.350 Accepted assumptions of conditions of uncertainty

8.360 Assembled proforma financial statements and projections

8.370 Executed feasibility confirmation of key assumptions with aid of specialists.

8.380 Placed limitations on use and confidentiality.