JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS
VII. INDUSTRY EDUCATIONAL COURSES - LONG TERM
    E.   Chemical Bank
        1.   "Contemporary Real Estate Analysis", Training
              Seminar, November 30-December 2, 1978:
              Includes handouts for participants with some
              pages missing

SEMINAR
REAL ESTATE
ANALYSIS

Proposed Outline
Real Estate Training Seminar
CHEMICAL NATIONAL BANK
November 30-December 2, 1978

Thursday, November 30, 1978 (Graaskamp)

9:00-10:30   Basic Definitions and Concepts

               A. Real Estate, Real Estate Enterprise, Real Estate Process,
                   and Land Defined
               B. Enterprise Concept and Cash Solvency Test
               C. Risk and Enterprise Management Defined
               D. Strategic concepts of a mortgage
               E. Strategic Elements of Equity Investment

10:30-10:45   Coffee Break

10:45-12:00   Elements of Feasibility Analysis

               A. Real Estate Management as an Art
               B. Real Estate Enterprise as an Industrial System
               C. Feasibility Defined
               D. Feasibility Report Formats
               E. Feasibility as a Pre-Architectural Program
               F. Feasibility and Appraisal Compared

Lunch

1:00-2:00   Systematic Analysis of Site and Structure to Define Alternative
               Uses

               A. Physical Attributes
               B. Legal-Political Attributes
               C. Linkage Attributes
               D. Dynamic Attributes
               E. Environmental Attributes
               F. Financial Limits on Alternative Uses
               G. Most probable use sinarios

2:00-3:00   Market Analysis and Absorption Rates

               A. Market Data Models
               B. Definition of Market Opportunity Groups

3:00-3:15   Coke Break

3:15-4:30   Merchandise Planning and the Capture Rate

               A. Identification of Sales Unit
               B. Naming and Profiling Prospect Group
               C. Survey Research to Profiel Competitive Standard
               D. Survey Research of Consumer to Identify Competitive Edge
               E. Survey Research of Political Constituency
               F. Pre-Architectural Merchandise Plan

4:30-5:00   Basic Financial Planning With Ratios

               A. Rent Required by Specified Capital Budget
               B. Capital Budget Justified by Market Rents
               C. Sensitivity Ratios
               D. Elements of Total Financial Planning

Friday, December 1 (Graaskamp & Robbins)

9:00-9:30   Introduction to Neighborhood Shopping Center Case

9:30-10:30   Introduction to Computer Terminal With BFCF*

10:30-10:45   Coffee Break

10:45-12:00   Preliminary Sensitivity Analysis With BFCF and DAP

Lunch

1:00-3:00   Structuring Loans on After Tax Cash Flows Using IMV

3:00-3:15   Coke Break

3:15-5:00   Introduction to MR. CAP

Saturday, December 2, 1978

9:00-10:15   MR. CAP Continued

10:15-10:30   Coffee Break

10:30-1:00   Selected Case Applications of MR. CAP

CONTEMPORARY REAL ESTATE ANALYSIS
Training Seminar - Chemical National Bank
November 30-December 2, 1978

Instructors: James A. Graaskamp
Michael L. Robbins

FIRST MORNING
9:00 A.M.-10:30 A.M.

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

1.   A real estate business is any business which provides expertise
necessary to relate space-time need to money-time requirements
and includes architects, brokers, city planners, mortgage bankers,
and all other special skills.
2.   The true profit centers in real estate are in the delivery of
services and cash capital. Money is an energy transfer system.
3.   Equity ownership is the degree to which one enterprise controls
or diverts cash from another real estate enterprise.
4.   Public has direct ownership to the degree real estate taxes
take a percentage of tenant income in excess of service cost.
5.   Consumer must view space as a total consumption system involving
direct cost, surface cost, transportation cost and negative in-
come of risk.
6.   The best real estate project is the one which has the lowest net
present value of cost as the sum of cost to the consumer prod-
uction sector and public sector.

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 break even 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.
5. 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. Land is the point where demand and supply forces find cash solvency. Location is a manufactured attribute. Site attributes are exploited to reduce outlays and to increase receipts and include:
1. Physical attributes
2. Legal-political attributes
3. Linkage attributes
4. Dynamic attributes
5. Environmental attributes

E. Recognition of the fact that profit maximization must be limited by concerns for physical environment and community priorities for land use has resulted in redefinition of the most basic concept in appraisal; i.e. highest and best use, in the authorized terminology handbook sponsored by the American Institute of Real Estate Appraisers and the Society of Real Estate Appraisers. Compare the 1971 definition with that for 1975:

> Highest and best use concept-
> "A valuation concept that can be applied to either the land or improvements. It normally is used to mean that use of a parcel of land (without regard to any improvements upon it) that will maximize the owner's wealth by being the most profitable use of the land. The concept of highest and best use can also be applied to a property which has some improvements upon it that have a remaining economic life. In this context, highest and best use can refer to that use of the existing improvements which is most profitable to the owner. It is possible to have two different highest and best uses for the same property: one for the land ignoring the improvements; and another that recognizes the presence of the improvements.:
> p. 57, Real Estate Appraisal Principles and Terminology, Second Edition, Society of Real Estate Appraisers 1971.

Exhibit 1
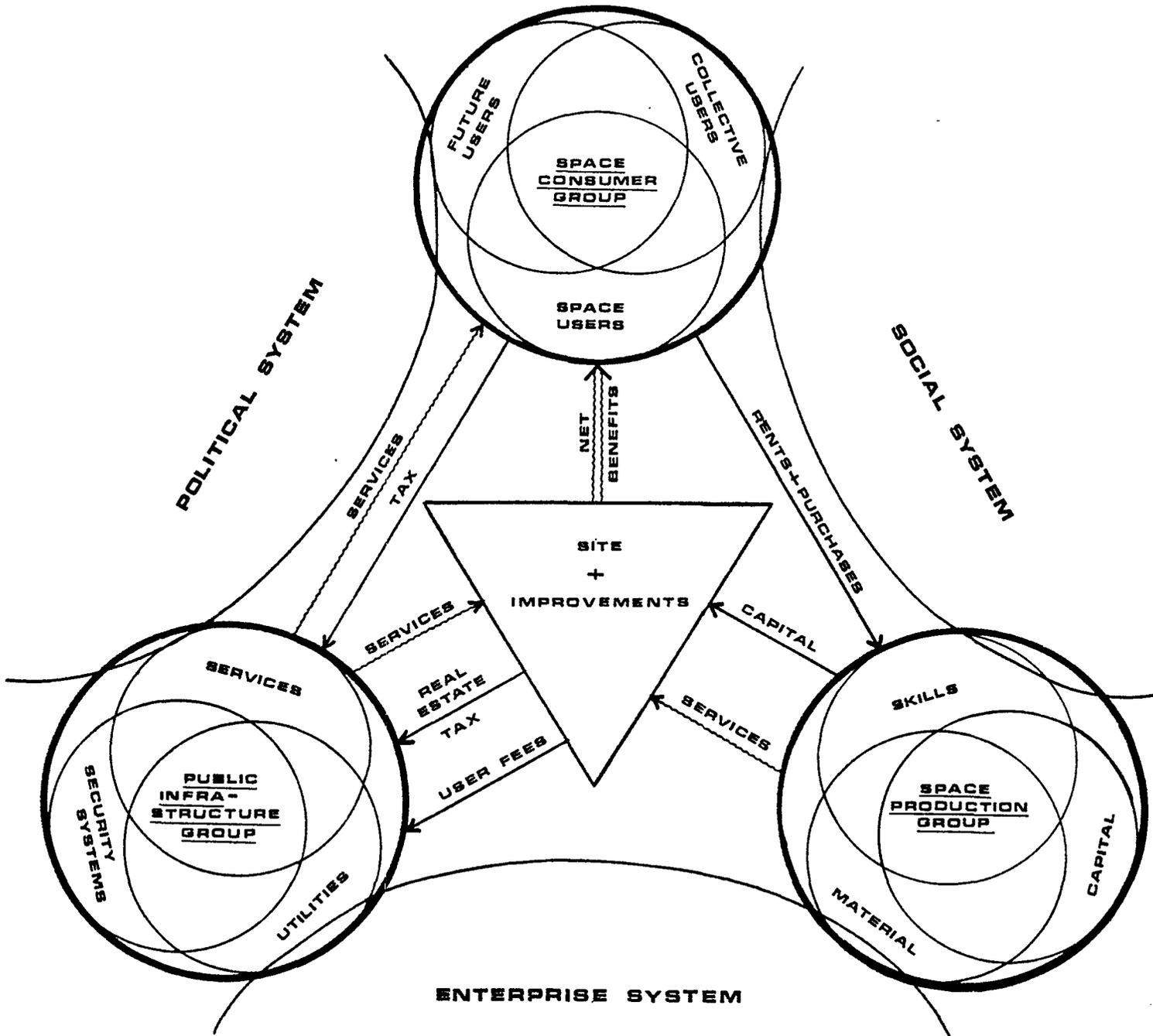
THE REAL ESTATE PROCESS

"Highest and Best Use: That reasonable and probable use that will
support the highest present value, as defined, as of the effective
date of the appraisal. Alternatively, that use, from among reason-
ably probable and legal alternative uses, found to be physically
possible, appropriately supported, financially feasible, and which
results in highest land value. The definition immediately above
applies specifically to the highest and best use of land. It is
to be recognized that in cases where a site has existing improve-
ments on it, the highest and best use may very well be determined
to be different from the existing use. The existing use will con-
tinue, however, unless and until land value in its highest and
best use exceeds the total value of the property in its existing
use. Implied within these definitions is recognition of the con-
tribution of that specific use to community environment or to
community development goals in addition to wealth maximization of
individual property owners. Also implied is that the determination
of highest and best use results from the appraisers judgement and
analytical skill, i.e., that the determined from analysis represents
an opinion, not a fact to be found. 'In appraisal practice, the con-
cept of highest and best use represents the premise upon which value
is based. In the context of most probable selling price (market
value) another appropriate term to reflect highest and best use
would be most probable use. In the context of investment value an
alternative term would be most profitable use."
Real Estate Appraisal Terminology, Edited by Byrl II. Boyce,
Ph.D. SRPA, Ballinger Publishing Co., Cambridge, Mass. 1975

F. The purchase of a piece of real estate today involves the acceptance
of a great many assumptions about the future. Those who take care
to validate these assumptions in a period of transition as to pub-
lic land use control tend to have the most successful investment.

  1. Business decisions today make explicit recognition of their
     assumptions and the need to act under conditions of uncertainty.
  2. Business risk is the difference between assumptions about the
     future and realizations, the proforma budget and the end of
     the year income statement.
  3. Risk management is the control of variance between key assum-
     ptions and realizations.
  4. An appraisal is a set of assumptions about the future prod-
     uctivity of a property under conditions of uncertainty.

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

  1. The most fitting use is that use which is the optimal reconcil-
     iation 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 <u>most probable use</u> 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.

4. <u>Most probable use</u> means that an appraisal is first a feasibility study of alternative uses for a site in search of a user, an investor, and in need of public consent.

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

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

2. The individual consumer with needs and a budget is the drive wheel.

3. The public sector represents the community owned consumer service delivery system, seeking to minimize marginal cost to the consumer and average cost to the community at large.

4. The production sector responds to a derivative demand for engineering and management expertise.

I. Critiquing the form and adequacy of a real estate solution is analogous to the artistic 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.

5. Success therefore depends on how appropriately the problem is defined; testing feasibility depends primarily upon accurate and comprehensive definition of the context.

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

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

2. The system engineer uses "power of the environment" as a dynamic alternative to the static implications of context and adds dynamic element of behavior to the elective responses of the form giver.

II. Financial Management and Risk Management

Investment is a real estate enterprise as mortgage lender or equity investor is simply buying a set of financial assumptions about the interaction of the project to its context, of the firm to its environment. Real estate analysis is to control the variance between expectations and realizations, between proforma prospects and historical balance sheets and profit and loss statements.

A. Analysis is risk management, control of variance.
B. There are essentially two types of risk exposures:

    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.

C. 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.

D. 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

E. Significant has to do with potential loss frequency, loss severity, and degree of uncertainty.

    1. Very frequent and minor become expense accounts
    2. Less frequent but predicatable 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.

F. The alternative methods of avoiding loss which everyone subconsciously 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 expense)
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)

G. Risk management concepts leads to understanding of the true essence of a mortgage contract and an equity commitment

1. A mortgage is a classic straddle in two markets for the borrower; it is a call on a space-time commodity in a rising market and a put to the lender in a falling market. It is also a straddle in the money market. The mortgage contract is a risk management agreement to provide coverage of static risks and an imperfect straddle on the dynamic risks. Protection for the lender is revenue to the borrower, negative incentives, and salvage.

2. Equity ownership is the degree to which you can divert cash flow and maintain control within an acceptable level of risk avoidance.

III. Feasibility Analysis

A. 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 likelihood of satisfying explicit objectives when a selected course of action is tested for fit to a context of specific constraints and limited resources.

B. 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. Pshychological gratifications
8. Specified legal attributes
9. Measures of impact on environment

C. The definition also implies uncertainty - a reasonable likelihood of succeeding. That statement is deliberately short of a statistical probability statement. However, analystical 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.

D. 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

E. 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.

F. 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.

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."

1. Moreover, he may be using the consultant to double
check another source of information and therefore
expects a consultant to begin from scratch as a way
of confirming the original source.
2. Nevertheless, the feasibility analyst must eventually
extract from the client, preferably in writing, an
agreement as to what the stated objectives of the study
are and the input which will be provided by others
than the analyst.
3. This step will probably only be accomplished after the
consultant has come to a better understanding of the
real problems faced by the client.

V. What is the Problem as Understood by the Consultant?

The problem as perceived by the client almost always must be
converted into a sequence of problems as understood by the consultant.
The perceived question of "How much should I pay for the land,"
may come to be understood as "Why do I need to invest in land"?

A. The feasibility analyst should be the devil's disciple for
in order to define what needs doing, he must first discover
what has been done, what assumptions have been made, and
whether those who made the assumptions knew what they were doing.

1. A useful technique is to reverse the question or the
alternative in order to have better perspective on
the assumed area of solution. If asked to organize
a non-profit partnership to create a counseling
facility, approach the problem as how to dissolve a
partnership of non-profit contributors. If asked
the feasibility of restaurant expansion, investigate
the possibility of reducing the size of the kitchen
instead.

2. To gain perspective, one creative think system (Synectics)
recommends conversion of the familiar to the strange
and the strange to the familiar by analogy. Thus any
multi-user real estate becomes analagous to a retailing
model while any single user real estate decision becomes
an industrial location model.

3. Statement of the problem as a "compressed conflict" by
describing it in two words which appear to be mutually
exclusive or contradictory may be useful in understanding
a problem. For example, customer control as "channeled
freedom" or land use control has "fixed state of flux"
can then lead to discovery of more remote analogies.
Analogies serve as reiliminary models suggesting
opportunity areas for a solution.

B. In search of the real problem as opposed to the initial problem perceived by the client, the analyst should retreat to some basic classification and task identification check-lists. First there are only three alternative feasibility situations:

    1. A site or a project owned by a specific client in search of a market.
    2. An identified market segment or use in search of the site and project to be provided by a specific client.
    3. A specific client desiring to search for an opportunity in real estate enterprise.

C. Next the analyst must know the viewpoint of the audience for his report, written or oral, because the elements considered important by a mortgage lender may be significantly different than those of a general partner or those of a limited partner or those of a large tenant.

D. Since there are so many facets to the context of a real estate project and measurement of its success, not to mention the assumptions on which the determination of feasibility depends, it is important to have the client agree on what elements of feasibility are to be provided by which expert or analyst.

    1. Analyst should be an expert on experts
    2. It is useful to include a standard checklist of components with a letter or proposal as that checklist later becomes the really significant portion of the statement of limiting conditions (hold harmless agreements) which are part of the final report. A sample of one such checklist is provided in Exhibit 2.

E. With a review of which elements are to be provided by which experts it then becomes possible to assist the client in choosing which report title or titles are properly the responsbility of the real estate analyst. (See 1.360)

F. With definition of the report expected and the information to be provided by others, the analyst can prepare a budget and a schedule for staging the report so that he and the client can begin to establish priorities both in time and money available for research to define the feasibility assignment on which the analyst is to proceed.

G. Despite the necessity of defining the assignment in light of the clients problem, it is necessary for the analyst to recall that he is to remain an independent analyst an advocate of his own opinion:

    1. There is a difference between a justified feasibility opinion about the total project and the more limited feasibility of justifying a mortgage loan from a credit source not generally known for its analytical ability.

EXHIBIT 2   Feasibility Assignment and Accountability Worksheet
                              XYZ Appraisal Company
              xxx Street   Anywhere U.S.A.

Name of Client _____   Date _____

Assignment Description _____

Feasibility Input	Provided by	Approved by	Sequence and date available
1. Definition of questions and strategic objectives			
2. Definition of success criterion			
3. Ranking of criteria by priority			
4. Definition of specific site			
5. Definition of market opportunity			
6. Space user profile			
7. Space consumer preference survey			
8. Space product definition			
9. Aggregate and market forecast and absorption rate			
10. Merchandising capture rate by product mix			
11. Legal and political constraints assumed for user and investor			
12. Site constraints and site development plan			
13. Architectural constraints and plans			
14. Environmental impact assumptions			
15. School district impact assumption			
16. Municipal infrastructure and revenue impact			
17. Aesthetic and social impact			
18. Land cost assumptions			
19. Improvement cost assumptions			
20. Indirect cost assumptions			
21. Operational cash-flow budget assumptions			
22. Income tax liability assumptions			
23. Financing and refinancing assumption			
24. Other			

Accepted by Client _____
                                  (Date)

Worksheet suggested in part by John Rasmussen, Feasibility Research Group,
210 Michigan Theater Building, Ann Arbor, Michigan 48108.

2. The analyst must be careful not to be a subcontractor to an architect, engineer, or other service organization where he cannot make his own report directly to the client, critical of his professional associates as it may be. It is recommended that the feasibility analyst as a generalist have a primary contract with his client.

H. Correctly defining the context in all its basic dimensions requires a generalist; an appraiser is a generalist. A feasibility study produces a set of parameters, a set of predesigned or preoperational specifications within which a program proposal should work. The analyst and his client should always remember that the second stage of the feasibility study will be confirmation of the feasibility assumptions and parameters by technical analysis and planning by the specialists.

I. An appraisal is a forecast of productivity of a property relative to the needs of a certain buyer group and a prediction of the price at which it would sell to the most probable buyer.

1. Anticipation of an economic behavior by the buyer leads to the highest price he would be willing to pay.

2. Anticipation of the behavior of the seller leads to an estimate of the least he would be willing to accept.

3. Analysis of the influence of outside factors affecting price supply and demand leads to an estimate central tendency between buyer and seller maximum.

4. The upper and lower ranges specify a transaction zone within which a most probable price will occur. The most probable sales price does not need to be at the center of the zone nor do the alternatives need to follow a normal distribution curve. The zone and the distribution most typically are statements of verbal probability.

J. An appraisal is therefore a feasibility study of alternative courses of action and these alternatives are matched to the most probable user/investment group to be seeking such a property opportunity at that time.

The appraisal process as a feasibility study lends itself to the following logical process;

1. What is the problem for which the appraisal is to serve as a benchmark?

2. Which definition of value would best serve the decision process?

3. What does an inventory of site attributes reveal as to the positive and negative contributions of the site to alternative uses?

4. What does an inventory of improvement attributes existing on the site reveal as to the positive and negative contributions of the improvements to alternative uses?

5. What basic alternative use programs or scenarios may be considered as plausible alternatives motivating buyers as of the date of the appraisal?

6. Which alternative use appears to be the most probable use when screened by external factors including effective market demand, political controls, forecasting risk, and potential profitability as perceived by investor/buyers.

7. What is the profile of the most probable buyer/investor for the most probable use to the degree that the profile can define the search for comparable transactions?

8. Could the appraiser simulate the purchase guidelines of a most probable buyer group if there were no sales which were thought to be comparable and appropriate to the subject situation?

9. What is the value to be justified by the appraiser using normative, traditional measures of what a buyer should do, such as the cost approach or conventional income approach?

VI. Property analysis to determine alternative uses

A. Elements of analysis are approached as an inductive research problem moving progressively from on-site facts to external conditions. The appraiser needs to examine the following elements in sequence: (See Exhibit 3)

1. Physical attributes of site and improvement.

2. Legal-political constraints on alternative uses.

3. Basic financial parameters of alternative uses.

4. Existence of effective market demand for remaining alternatives.

5. Comparative risk and return evaluation of alternatives for which there may be demand.

B. A physical analysis of inventory of site and improvement attributes should include the five following subsets:

1. Physical attributes (static) include site dimensions, soils, geology, topography, site improvements and capacity, and on-site flora and fauna.

2. Legal-political attributes include not only zoning and sub-dividing codes at the local level but also relevent federal, state, or private controls which might direct or restrict site use. As appropriate, the appraiser should note administrative patterns relevant to application of law to use of subject site.

3. Linkage attributes identify relationships of site to networks, populations or activities centers that might generate potential demand for the subject property.

4. Dynamic attributes are those attributes which exist in the mind of others in terms of status, anxiety, beauty, imagery, sentimentality or other perceptions which attach to the subject property to the degree that these are economically significant.

5. Environmental attributes of the site concern with off-site natural systems of which the subject property may be a part such as riparian rights, pollution down wind, storm water runoff, etc. Even the shadow cast by the structure off-site may become significant in the era of solar energy. Impacts on others may be perceptual (i.e. dynamic) or fiscal (legal-political) as well.

C. Static site attributes which begin to narrow the potential market to alternative uses should include both the facts and their implications for productive use in such topic areas as:

1. Size, shape, and lot area

2. Topography, soils, geology, slope stability, bearing capacity, septic suitability, potential for subsidance, etc.

3. Water table, wells, streams, ponds, storm water swales, shoreland edges, and bulkhead lines, flood plain designations, etc.

4. Flora and fauna which enhance marketability or which might cause environmental impact litigation

5. Concealed utility easements, old foundations, etc.

6. Existing on-site utility services and capacity

7. Access points to public thoroughfares or private right-of-ways

8. Site improvements such as paving, retaining walls, pedestrian paths, culverts, etc.

9. Landmark attributes or historical site features

D. An inventory of legal attributes should move from specific site controls imposed by local zoning ordinances to state and federal regulations as well as private controls which may intervene. The appraiser has an obligation to report foreseeable attitues or future legislation which will affect administration of these ordinances relative to future uses of the site.

1. All alternative setback lines and building envelope interpretations relative to site

2. Legal uses under applicable zoning and critical limitations of each relative to FAR, bulk, parking requirements, DU count, etc.

3. Special zoning options which may be available at owners option such as rezoning, downzoning, PUD zoning, etc.

4. Special controls imposed by extra-territorial zoning, tax conservancy commitments, subdivision process, urban renewal districts, tax increment districts, etc.

5. Special state or federal constraints under airport approach zone districts, harbor commissions, coastal zones, Office of Environmental Protection Agency, etc.

6. Public attitudes of public commissions for sewer, water, highway, planning, or building administration

7. Public and planning premises of community master plans relative to sprawl, restoration, redevelopment, and other land use priorities as these attitudes will affect administraion of the law

8. Existing or impending legislation relative to such matters as:

   a. Septic tank installation
   b. Water quality for ground water, water recharge areas, storm water runoff, salt water encroachment, etc.
   c. Air quality standards relative to use, HVAC performance, micro-climate interference, etc.
   d. Conservation of envrionmental edges, prime agricultural land, wet lands

9. Define physical system sub-systems

   a. Foundation system
   b. Structural system
   c. Floor system
   d. Ceiling system
   e. Roof system
   f. Exterior wall system
   g. Interior wall system
   h. Horizontal circulation sytsem (provacy, interaction, congestion, confusion)
   i. Vertical circulation system (handicapped code, cost, economy of scale and height)

10. Delineation of functional systems

   a. Bay spaces
   b. Module unit
   c. Ceiling heights
   d. Visual codes - such as mass, entrance, claustrophobic signals

11. Public controls on possible alternative special uses such as restaurants, places of public assembly, schools, etc.

EXHIBIT 3

Static Attributes

Physical

Legal

Linkage

Environmental

Building Envelope
& Orientation of
Technical Alternatives

Market Attributes

General Market
Patterns

Micro Markets

Neighborhood
Expectations

Future Markets

Possible Alternative
Use Scenarios

Consumer profiles, price range, and product description

Alternative revenue justified capital budgets and source and application financing structure

Solvency Tests

Justified Private Capital
- Required Capital
  Investment
+ Public Capital Subsidy
= Net Private Capital
  Exposure

Acceptable Alternative Uses

Preliminary environmental, political, and fiscal constraints

Infrastructure Tests

Environmental Tolerance

Public Service Capacity

Fiscal Impact

Public Priorities and
Subsidy

Financially Solvent
Most Fitting Use

After-tax cash flows, financial ratios, and qualitative screens

Investment Tests

Investor Limitations
& Objectives

Acceptable Risk Sensitivity
Parameters

Most Probable Use of Site
In Search of Use

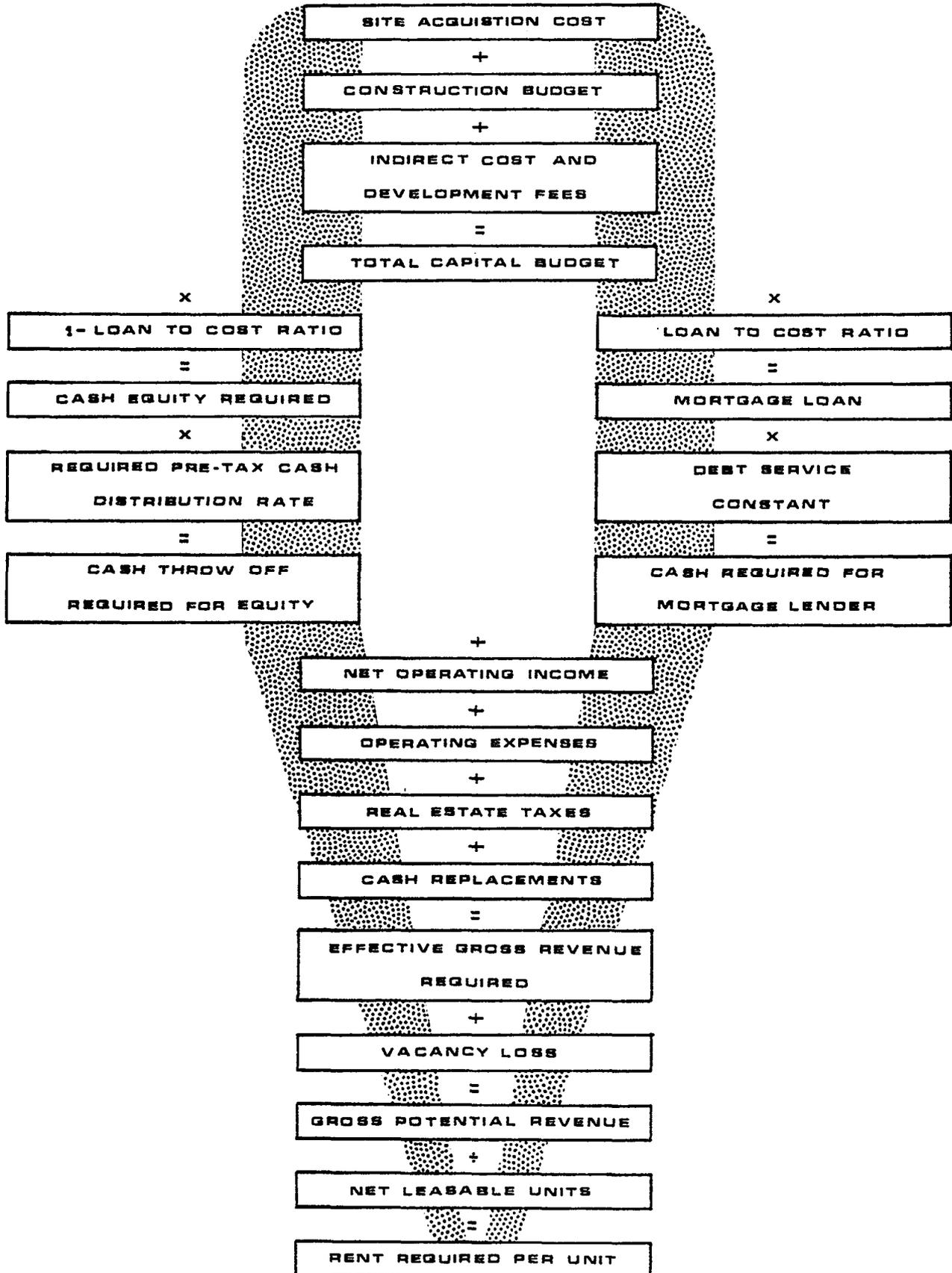12/1/78

F. Analysis of the static and legal/political attributes of site and structure should be summarized in terms of competitive advantages and disadvantages of plausible alternative uses for costs, pricing, marketing, and political administration of compatibility.

1. Some static attributes may help identify most probable user types (Ex. special display window sizes may be suitable for antique or art display) while attributes will make certain uses unlikely (Ex. floor load limitations of fire proofing weights required of places of public assembly).

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

3. Some attributes lead to higher cost which the front door approach may reveal as leading to excessive rents or prices.

G. Linkage attributes relate to subject property to both networks of supporting infra-structure which contributes toward effective demand for the property as economic space time or the supply and demand impact of related activity centers which may interact with the subject property.

1. Analysis moves best from the borders of the subject property outward to expanding zones of potential demand or competitive supply.

2. Utility services are network linkages in terms of:

    a. Limitations on sewage processing, storm water retention or runoff constraints
    b. Community energy supplies, priorities, and capacity
    c. Water processing and chemistry as applicable
    d. Possible dependency on resources such as wild game and fish, underutilized labor pools, fire department coverage zones, etc.

3. Street, sidewalk, rail, and public transit systems including access points, traffic department controls, etc.

4. Relationship of subject site to contiguous properties, balance of city block, and neighborhood layout pattern.

5. Relationship of subject site to generators of potential needs and uses for the subject site, such as:

    a. Employment centers
    b. School system alternatives
    c. Retail services
    d. Complimentary existing nearby uses
    e. Recreational services
    f. Health care systems
    g. Security systems
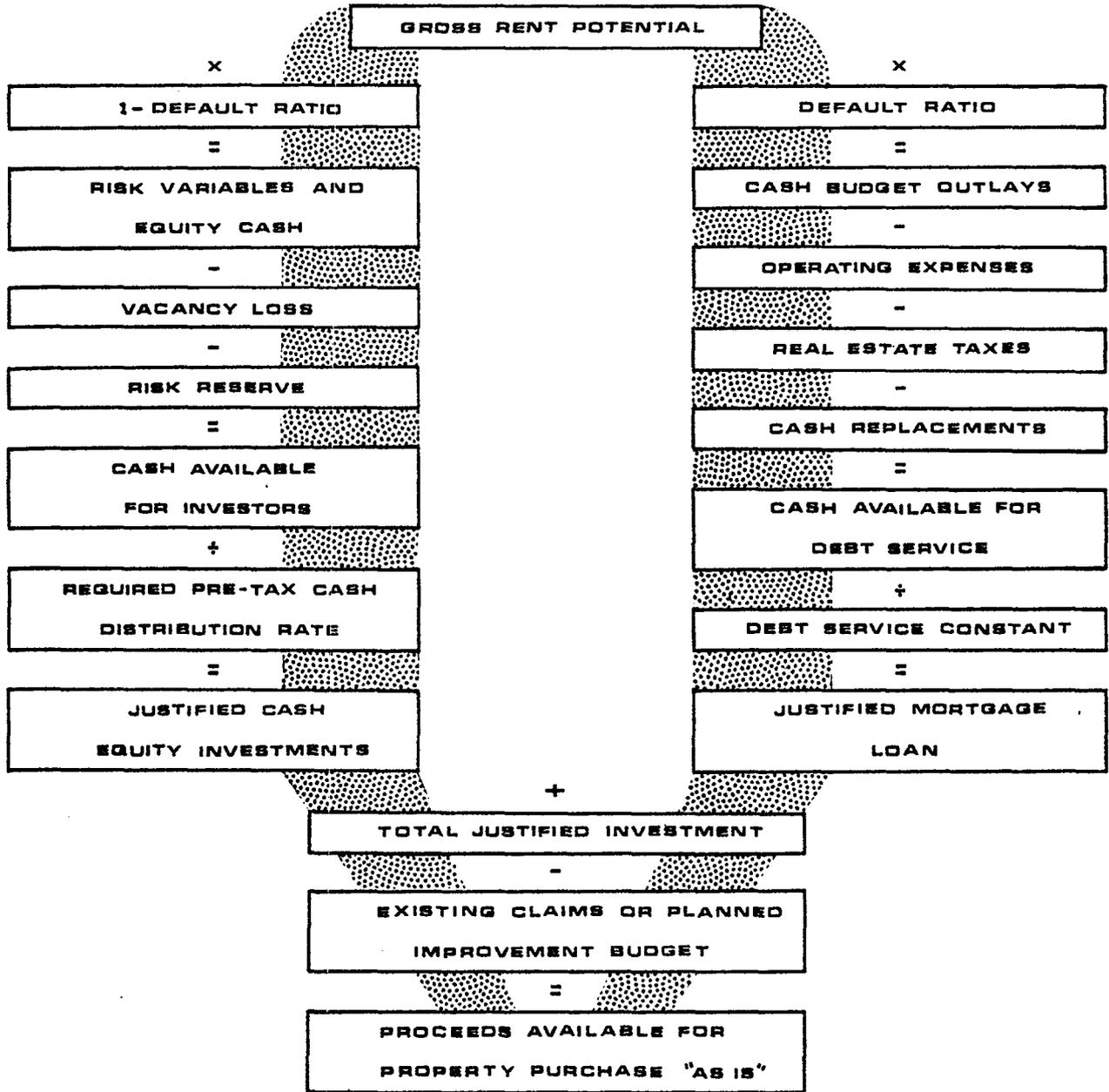   h. Waste disposal services

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

7. Relationship to competitive alternative and estimate of supply of available space, competitive ranking, and exposure of subject site to competitive interception of potential demand.

H. Dynamic attributes are those characteristics which exist in the minds of the beholder, which are mental or emotional responses which a site or project stimulates and which affect decision making behavior.

   1. Image conditioning of the approach zone

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

   3. Prestige and status

   4. Anxiety factors of access and security

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

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

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

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

I. Environmental attributes of the site recognize that 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 represented by the community political administrators. Land use must be sold to both "markets." If the proposal won't sell at City Hall, there will be little opportunity to market the product individually. Pre-architectural programs must not only consider physical factors of environmental impact off-site, but in addition:

   1. Silhouette of social impact in terms of public perceptions of:

      a. Displacement of existing residents and neighborhood units
      b. Contribution to social integration or mobility barriers
      c. Contribution to land use heterogeneity
      d. Contribution to regional and community master plans

   2. Fiscal impact on the community where appropriate:

      a. Direct impact on real estate tax revenues
      b. Direct impact on other governmental revenue
      c. Direct impact on incremental government
      d. Secondary contributions to local government revenues
      e. Secondary cost burdens created for local communities

   3. Social factors in the ethical environment:

a. Impact on supply/demand equilibrium
b. Stamina of project sponsor in the face of public pressure
c. Vulnerability of potential project buyers to secondary political pressures and counter attack
d. Potential uses requiring unique political resources or private/public consortiums

J. For the experienced real estate analyst systamatic narrowing of alternative uses from study of the attributes leads to a limited series of alternatives which can then be given a final screening in terms of preliminary financial analysis and effective demand. The analyst may review these attributes to identify alternative uses by emphasizing one or more of the following angles of inquiry.

1. Does any site of site attributes suggest a special space/time - to money/time configuration? For example, a high floor area ratio but little parking may suggest a building with a low person occupancy, such as a switchboard building or luxury apartment with minimum number of dwelling units.

2. What attributes of the subject site provide monopoly characteristics or are inferior to alternative sites?

3. What patterns in adjacent or competitive structure represent a trend to which the subject property should adapt?

4. What patterns of use is revealed by transactions in similar properties on nearby locations?

K. A program of use or reuse can be called a scenario and may be suggested by physical characteristics of the property, contiguous property trends and conditions, or known supply shortages with which the appraiser is familiar. Some examples of scenarios are provided in Exhibit 1.

L. Ranking of these scenarios for economic power is accomplished by means of the Back Door approach, i.e., the revenue justified investment for the property, as is alternative whrksheets for this approach using the default point and the debt cover ratio as the critical conversion of income to capital are provided in Exhibits 4-10.

M. Economic power has to be qualified in terms of marketing risks and capital budgeting risks of each of the alternative uses before alternative uses can be ranked in summary fashion as in Exhibit 6.

1. Note that Exhibit 6 integrates the basic elements of preliminary feasibility analysis.

2. Remaining disucssion will emphasize market risk which is the primary cause of misleading appraisal conclusions

Exhibit 4

REVENUE REQUIRED BY CAPITAL BUDGET
LOAN TO COST RATIO APPROACH

SITE ACQUISITION COST

+

CONSTRUCTION BUDGET

+

INDIRECT COST AND DEVELOPMENT FEES

=

TOTAL CAPITAL BUDGET

x   x

1- LOAN TO COST RATIO		LOAN TO COST RATIO
=		=
CASH EQUITY REQUIRED		MORTGAGE LOAN
x		x
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

Exhibit 5

REVENUE JUSTIFIED CAPITAL BUDGET
DEFAULT RATIO APPROACH

GROSS RENT POTENTIAL

Left	Right
x	x
1- DEFAULT RATIO	DEFAULT RATIO
=	=
RISK VARIABLES AND EQUITY CASH	CASH BUDGET OUTLAYS
-	-
VACANCY LOSS	OPERATING EXPENSES
-	-
RISK RESERVE	REAL ESTATE TAXES
=	-
CASH AVAILABLE FOR INVESTORS	CASH REPLACEMENTS
÷	=
REQUIRED PRE-TAX CASH DISTRIBUTION RATE	CASH AVAILABLE FOR DEBT SERVICE
=	÷
JUSTIFIED CASH EQUITY INVESTMENTS	DEBT SERVICE CONSTANT
	=
	JUSTIFIED MORTGAGE LOAN

+

TOTAL JUSTIFIED INVESTMENT

-

EXISTING CLAIMS OR PLANNED IMPROVEMENT BUDGET

=

PROCEEDS AVAILABLE FOR PROPERTY PURCHASE "AS IS"

Exhibit 6

REVENUE JUSTIFIED CAPITAL BUDGET
DEBT COVER RATIO APPROACH

GROSS RENT POTENTIAL

-

VACANCY LOSS

=

EFFECTIVE GROSS REVENUE

-

OPERATING EXPENSES

-

REAL ESTATE TAXES

-

CASH REPLACEMENTS

=

NET OPERATING INCOME AVAILABLE

FOR DEBT PAYMENT, INCOME TAX, CASH DIVIDENDS

-                                    ÷

DEBT SERVICE CASH   DEBT COVER RATIO

                                    REQUIRED BY LENDERS

=   =

CASH AVAILABLE FOR   CASH AVAILABLE FOR

INCOME TAX AND INVESTORS   DEBT SERVICE

÷   ÷

REQUIRED PRE-TAX CASH   DEBT SERVICE CONSTANT

DISTRIBUTION RATE

=   =

JUSTIFIED CASH   JUSTIFIED MORTGAGE

EQUITY INVESTMENT   LOAN

+

TOTAL JUSTIFIED INVESTMENT

-

EXISTING CLAIMS OR PLANNED

IMPROVEMENT BUDGET

=

PROCEEDS AVAILABLE FOR

.PROPERTY PURCHASE AS IS

CAPITAL BUDGET

Exhibit 7

FRONT DOOR APPROACH

ARCHITECTURAL PROGRAM

CONSTRUCTION COST PER SQ. FT. ← BUILDING COMPLEXITY AND QUALITY

*

GROSS BUILDING AREA ← BUILDING DESIGN AND EFFICIENCY

=

BUILDING BUDGET

=

LAND VALUE, SITE WORK, FEES, CARRYING CHARGE, BUILDERS PROFIT

=

PROJECT BUDGET * MORTGAGE LOAN / COST

=

MORTGAGE LOAN * MORTGAGE CONSTANT = ANNUAL DEBT SERVICE

=

EQUITY * CASH ON CASH RATE = CASH THROW-OFF

MARKET CHECK

PROJECT VALUE

÷

NET INCOME MULTIPLIER

=

DEPRECIATION — MORTGAGE INTEREST

=

TAXABLE INCOME

*

TAX RATE

=

− TAX LIABILITY OR + TAX CREDIT

+

CASH THROW-OFF

=

SPENDABLE CASH AFTER TAXES

TAX SUBSIDY

NET OPERATING INCOME

+

RESERVES

+

REAL ESTATE TAXES AND OPERATING EXP.

+

VACANCY & BAD DEBT

=

POTENTIAL GROSS INC.

÷

NET LEASEABLE AREA

=

RENT PER SQ. FT.

MARKET   TARGET

OPERATING BUDGET

Exhibit 8
FRONT DOOR - MINIMUM RENT REQUIRED

$$\boxed{\$20/\text{sq. ft.}}$$

X

$$\boxed{20,000 \text{ sq. ft.}}$$

=

$$\boxed{\$400,000}$$

÷

$$\boxed{\$200,000}$$

=

$$\boxed{\$600,000}$$

-

(80% LTV)

| $480,000 | X | (.1025 constant) | = | $49,200 |

+

| $120,000 | X | .07 | = | $8,400 |

=

$$\boxed{\$57,600}$$

+

$$\boxed{\$2,400}$$

+

$$\boxed{\$50,000}$$

+

$$\boxed{\$6,000}$$

=

$$\boxed{\$116,000}\quad \text{90\% NLA}$$

÷

$$\boxed{\$18,000}$$

=

$$\boxed{\$6.44\text{-}6.50/\text{sq. ft.}}$$

Default ratio:

$$\frac{\text{Debt service + expenses}}{\text{Gross rent}}$$

$$\frac{\$49,200 + 50,000}{\$116,000} = 86\%$$

Payback before taxes:

$$\frac{\text{Equity cash investment}}{\text{Equity dividend}}$$

$$\frac{120,000}{8,400} = 14+ \text{ yrs.}$$

Debt cover ratio:

$$\frac{\text{Net operating income}*}{\text{Debt service}}$$
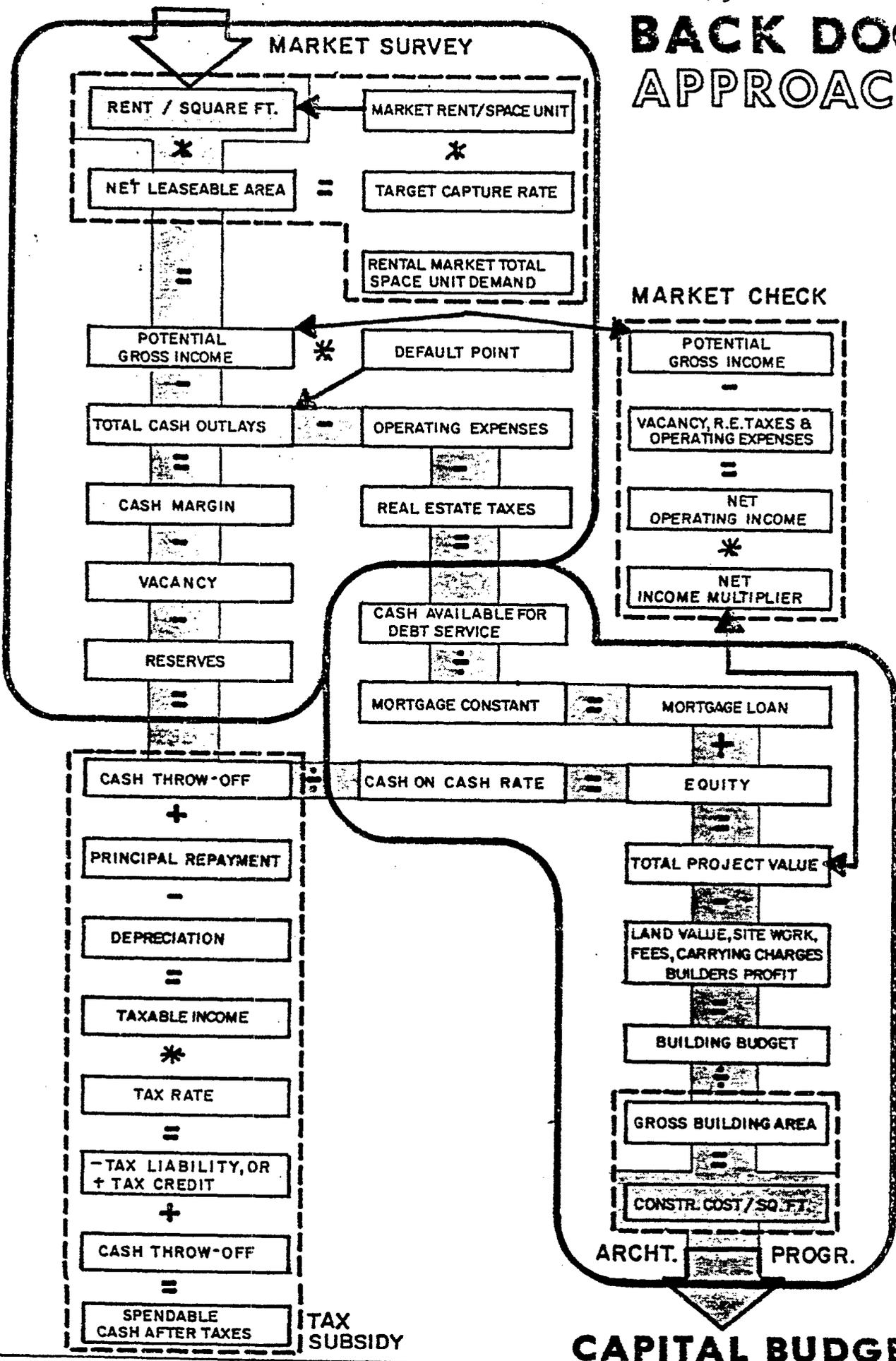
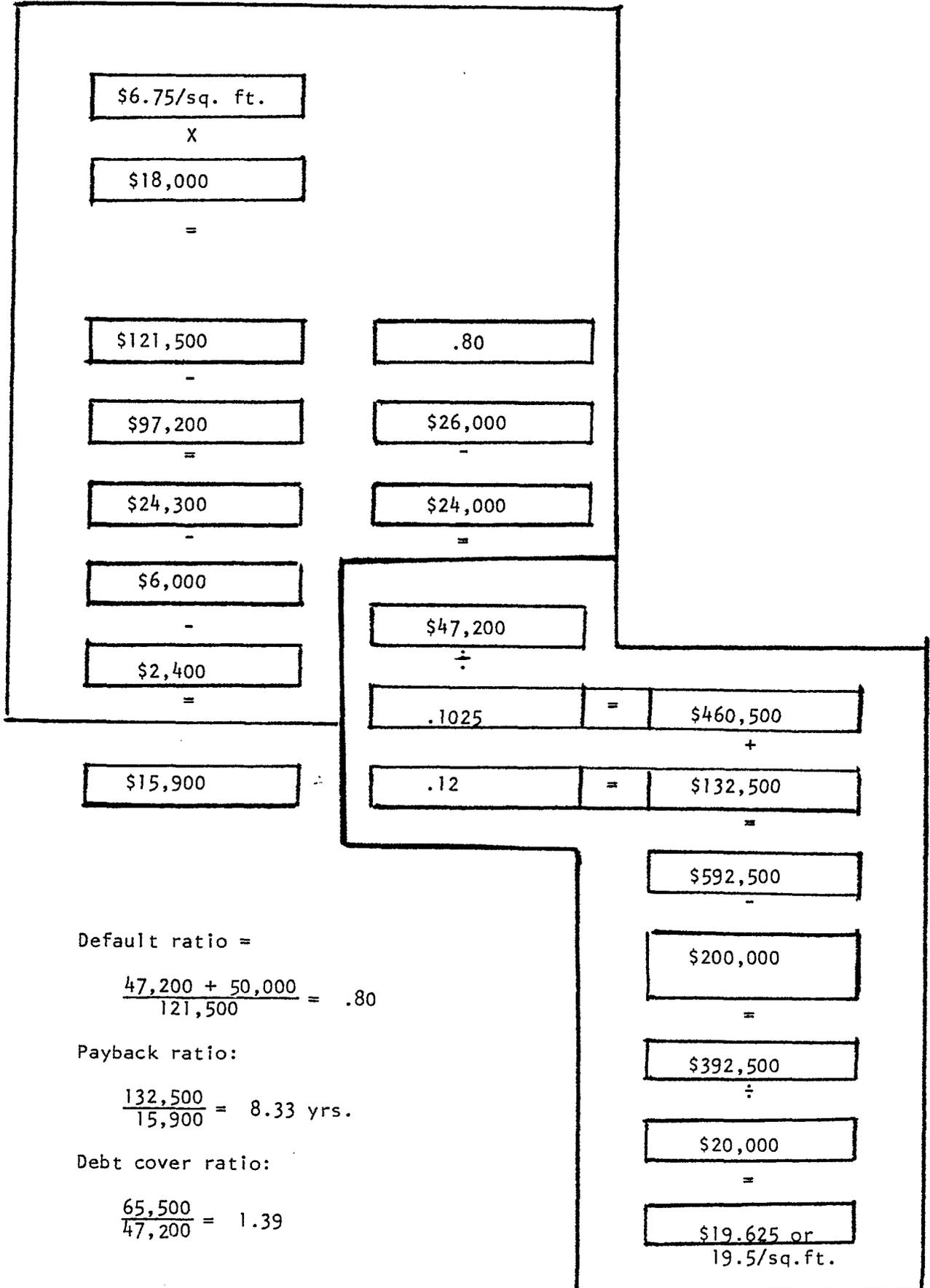$$\frac{60,000}{49,200} = 1.22$$

* NOI = gross rent - vacancy - expenses

OPERATING BUDGET

Exhibit 9

BACK DOOR APPROACH

MARKET SURVEY

RENT / SQUARE FT. ← MARKET RENT/SPACE UNIT

*

NET LEASEABLE AREA = TARGET CAPTURE RATE

*

RENTAL MARKET TOTAL SPACE UNIT DEMAND

=

POTENTIAL GROSS INCOME   *   DEFAULT POINT

—

TOTAL CASH OUTLAYS — OPERATING EXPENSES

=

CASH MARGIN   REAL ESTATE TAXES

—

VACANCY

—

RESERVES

CASH AVAILABLE FOR DEBT SERVICE

=

MORTGAGE CONSTANT = MORTGAGE LOAN

=

MARKET CHECK

POTENTIAL GROSS INCOME

—

VACANCY, R.E. TAXES & OPERATING EXPENSES

=

NET OPERATING INCOME

*

NET INCOME MULTIPLIER

CASH THROW-OFF = CASH ON CASH RATE = EQUITY

+ +

PRINCIPAL REPAYMENT

—

DEPRECIATION

=

TAXABLE INCOME

*

TAX RATE

=

— TAX LIABILITY, OR + TAX CREDIT

+

CASH THROW-OFF

=

SPENDABLE CASH AFTER TAXES   TAX SUBSIDY

TOTAL PROJECT VALUE

=

LAND VALUE, SITE WORK, FEES, CARRYING CHARGES BUILDERS PROFIT

=

BUILDING BUDGET

÷

GROSS BUILDING AREA

=

CONSTR. COST / SQ. FT.

ARCHT.   PROGR.

CAPITAL BUDGET

$6.75/sq. ft.

X

$18,000

=

$121,500   .80

-

$97,200 $26,000

=   -

$24,300 $24,000

-          =

$6,000

$47,200

-          ÷

$2,400

.1025   = $460,500

=   +

$15,900   .12   = $132,500

=

$592,500

-

$200,000

=

$392,500

÷

$20,000

=

$19.625 or
19.5/sq.ft.

Default ratio =

$$\frac{47,200 + 50,000}{121,500} = .80$$

Payback ratio:

$$\frac{132,500}{15,900} = 8.33 \text{ yrs.}$$

Debt cover ratio:

$$\frac{65,500}{47,200} = 1.39$$

Lecture Pages 18-21 are missing

A. With a preliminary hypothesis as to the prospect, survey questions may be intended to provide:

    1. Key ratios necessary for segmentation of market data already broken down by trade area, demographics, employment, etc.

    2. Key indicators of anxieties or preferences or tradeoffs of the prospect.

    3. Key indicators of the anxieties or preferences of non-prospects who feel a vested interest in the impace or have a significant part in the purchase process. (For example - the members of the Public Housing Authority have a different set of needs than the ultimate user, but the product is "bought" by the Board).

B. Consider the elderly housing market chart in Exhibit 11. Notice that the ratios required for market segmentation follow a logical reduction pattern. The analyst has made several working assumptions - namely that his market is over 65 and overwhelmingly from Dane County because these assumptions are both reasonable and conform to break-out points in the raw data.

C. The ratio sought by the survey follow a precise reduction pattern:

    1. How many will consider moving?
    2. Of those, how many would consider staying in town?
    3. Of those, how many would consider an apartment?
    4. Of those remaining who would consider an apartment in town, how many would consider a specific location?
    5. Notice the recution process defines a subset of the elderly market - a micro-market.

D. Each of these ratios suggests a specific calculation or perhaps a short table of statistics. The specific title on the table of data and its sub-columns should be written before the questions are drafted and the collection of data begun. Notice the research begins with careful definition of the questions to be answered. All answers become relevant and all unnecessary questions are avoided. These types of questions depend on knowing the precise character of secondary data available to which the ratios must be applied in the systematic model devised for the problem.

    1. Confine vocabulary to basic 1000 words; avoid lingo.

    2. Structure questions to permit check-off, or branching to set up subsets. (See Exhibit 16)

    3. Always test the questionnaire on half a dozen prospects or friends to reveal misunderstandings before using on the market.

    4. Questions may take different formats. (See Exhibit 14)
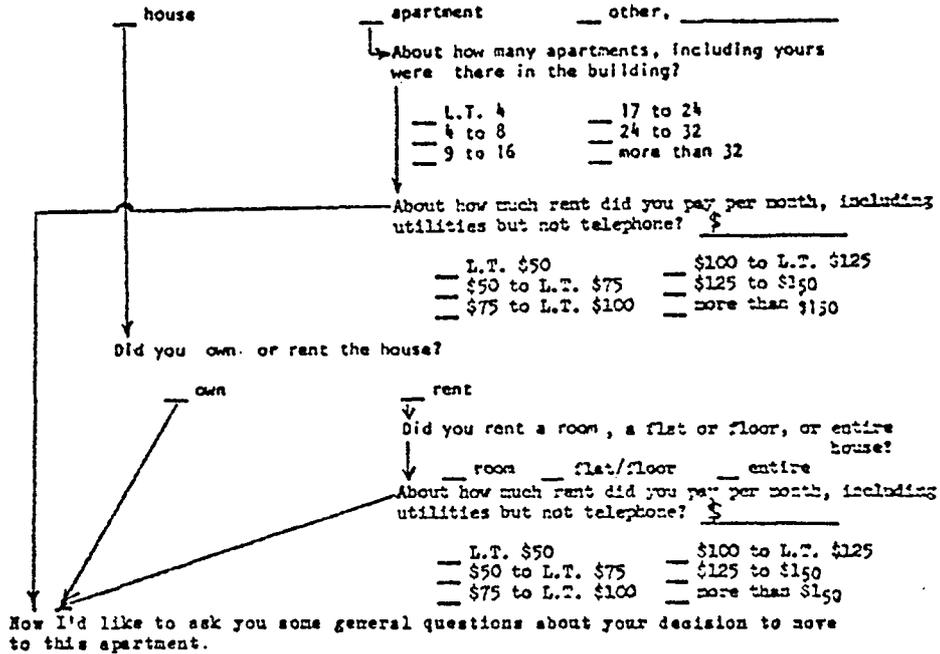
EXHIBIT 14

Simple Survey Formats
for Classification of Subsets & Measurement of Preference

I'd like to ask you a few questions about the place you lived just before you moved into this apartment.

5. About how many years did you live in your former home?

___ less than 1 year
___ 1 year - L.T. 2 years
___ 2 to L.T. 5 years
___ 5 to L.T. 10 years

___ 10 to 15 years
___ more than 15 years, _____

6. Did you live in a house or in an apartment building just before your move here?

___ house   ___ apartment   ___ other, _____

↳ About how many apartments, including yours were there in the building?

___ L.T. 4   ___ 17 to 24
___ 4 to 8   ___ 24 to 32
___ 9 to 16   ___ more than 32

About how much rent did you pay per month, including utilities but not telephone? $ _____

___ L.T. $50   ___ $100 to L.T. $125
___ $50 to L.T. $75   ___ $125 to $150
___ $75 to L.T. $100 ___ more than $150

Did you own or rent the house?

___ own   ___ rent

Did you rent a room, a flat or floor, or entire house?

___ room   ___ flat/floor   ___ entire

About how much rent did you pay per month, including utilities but not telephone? $ _____

___ L.T. $50   ___ $100 to L.T. $125
___ $50 to L.T. $75   ___ $125 to $150
___ $75 to L.T. $100 ___ more than $150

Now I'd like to ask you some general questions about your decision to move to this apartment.

7. How did you first find out about them?

___ family   ___ newspaper
___ friends   ___ radio
___ church   ___ television
___ Housing Authority ___ other, _____

26. How important are the following items to you?

	Very Important	Somewhat Important	Indifferent	Somewhat Unimportant	Not Important
Private Balconies or patios	( )	( )	( )	( )	( )
Laundry facilities in each building	( )	( )	( )	( )	( )
Washer/dryer connection in your apartment	( )	( )	( )	( )	( )
Extra storage space	( )	( )	( )	( )	( )
More than 1 bath	( )	( )	( )	( )	( )
Carpeted stairways & hallways in common areas of apt. bldg. (Areas shared by all residents)	( )	( )	( )	( )	( )
Master T.V. Antenna System	( )	( )	( )	( )	( )
Children's day care center and/or nursery school nearby	( )	( )	( )	( )	( )

EXHIBIT 14 cont'd.

14. What type of building features would you prefer in the layout of the condominium unit? (choose only one of each of the following sets of alternatives)

( ) Two bedrooms with larger living area or/
( ) Three bedrooms

( ) Three bedrooms, or/
( ) Four bedrooms, or/
( ) Large master bedroom and two 4-bed bunk rooms

( ) Two-story living room with inside balcony, or/
( ) Living room with beamed cathedral ceiling

( ) Full dining room, or
( ) Dining "L" plus family-sized kitchen

( ) Sundeck balcony for living room or/
( ) Outdoor patio at ground level

( ) Walk-in closets in each room or/
( ) Large work room plus laundry room in each unit & standard closets

( ) One car garage attached to unit or/
( ) Two car garage in group parking complex, or/
( ) Carport and lower price

( ) Central air conditioning or/
( ) Woodburning masonry fireplace or/
( ) Gas-log fireplace and window air conditioning unit

( ) Contemporary natural decor with wood and rock materials, or/
( ) Maintenance-free modern masonry and aluminum exteriors, or/
( ) Well styled colonial detailing

( ) Extensive outside landscaping, or/
( ) More floor space in each room

E.   The second type of question is generally attempting to measure
either anxieties or preferences. Both are dangerous survey
areas for amateurs as well as professionals and it is often
cheaper to subcontract these particular functions to consumer
research specialists. Nevertheless, a little common sense can
generate considerable useful information on the competitive edge.

1.   Probe for dissatisfaction with existing space or life style.
2.   Probe for anxieties about uncontrollable trends and events.
3.   Probe for desired social structure ties, real or imagined.

F.   The real estate analyst can choose between systematic telephone
interviews, direct mail questionnaires, and personal interviews
in depth.

1.   The telephone interview may be less expensive per question
and fastest but is limited in the type and amount of quesions
which can be asked. Rifled to a project known to the analyst,
it tells much about the user profile for a good comparable
without having to ask about the product which the analyst
can inspect for himself. (See Exhibit 15)

2.   A telephone survey is also useful to disaggregate census data
or to estimate market penetration of a competitor (such as
a retail store) into an area.

3.   Direct mail questionnaires may cost from 5¢ to $3 or more for
each successful question; they take at least a week to prepare
and test and perhaps three weeks before cutoff of additional
responses. The type of question is broader and can be graphic
such as alternative site maps and simple floor plans; response
depends on careful construction of the mailing list, a very
time consuming process. Consider the following types of
questions:

4.   The double barreled question occurs when two or more questions
are combined in one so that the answer is always ambiguous as
to the significance of each item but often occurs in the effort
to shorten an interview or a question.

a.   Would you be at all uneasy if people of a different
religion or race were to move in next to your home?

b.   As you see it, what are some of the good points and
the bad points of the present Governor of this State?

5.   Personal interviews in depth permit questions using photographs
with colors and styles. Expensive and time consuming, it
assumes precious qualification of the interviewee as a typical
prospect.

G.   Processing of surveys can involve simple tallies or counts, simple
subdividing of responses into subcategories, or preferably organi-
zation of the questionnaire to permit key punching or cross tabbing
or statistical analysis by computer processing. The problem of
identification requires:

EXHIBIT #15

Telephone Survey Script - Elderly Housing

PRE-SURVEY INFO.

Survey
Turnkey Elderly Housing
Triangle Project
Madison, Wis.

Code of Interviewer   █ 1   __ 2   __ 3   __ 4   __ 5

PROJECT CODE Code of Project   █ Braxton
      __ Romnes
      __ Tenney Park

Sex of Respondent   __ Male   █ Female

****

INTRO.

Hello, my name is _____. We are conducting
a survey of residents of elderly housing apartments so that
we may identify those features of apartment design and planning
that are satisfying to residents, as well as those that are
irritations.

The purpose of seeking your responses to these questions, is
to provide a base of information from you --the real experts
on housing for the elderly-- upon which we can make specific
recommendations to developers of the proposed elderly housing
project on the Triangle Urban Renewal Area, here in Madison.
This information will result in an improved living environ-
ment in the proposed housing project. Your responses are
confidential and you will not be identified as an individual.

Would you mind answering a few questions ?   Thank you.

****

PRIOR LIVING EXPERIENCE

Note:
(read options
only when arrow
is shown as in
question # 2)

1. When did you move into your present home ?

     ⬭ 1960 to 1965   ⬭ 1971 to 1972
     ⬭ 1966 to 1968   ⬭ 1973 to 1974
     █ 1969 to 1970

2. What type of home did you live in before moving to your present
home ?

     ↓ █ one family house   ↓ ⬭ 1 to 4 unit apartment bldg.
     ⬭ two family house   ⬭ 5 or more unit apt. bldg.
     ⬭ other_____   ⬭ other_____

3. How long did you live in your former home ?

     ⬭ less than 6 month   █ 2 - 5 years
     ⬭ 6 mo. to 1 year   ⬭ 5 -10 years
     ⬭ 1 - 2 years   ⬭ Over 10 years

4. Was your previous home:

⬜ owned by you (or you and your spouse)
⬜ owned by your family (or your spouses' family)
⬜ occupied without cash rent
⬛ rented by you (or you and your spouse)

L — — → How much was your rent each month ?

⬜ less than $50   ⬜ $100 to 125
⬜ $50 to 75   ⬛ $125 to 175
⬜ $75 to 100   ⬜ $175 or more

Did your rent include:

Electricity ⬜ yes   ⬛ no
Heat   ⬜   ⬜
Water   ⬛   ⬜
Gas   ⬜   ⬜   ⬛ DNA

Present Living Experience | YOUR RESPONSES TO THE FOLLOWING QUESTIONS WILL TELL US WHAT YOU FEEL IS IMPORTANT IN AN APARTMENT SPECIFICALLY DESIGNED FOR THE ELDERLY

5. Which of the rooms in the apartment should be the largest, second largest, and third largest ?

	Largest	Second Largest	Third Largest
Kitchen-Dining area	⬜	⬜	⬛
Living Room	⬛	⬛	⬜
Bedroom	⬜	⬜	⬜

6. Is your present home:

⬜ too large for your needs
⬜ too small for your needs
⬛ just right for your needs

7. How many people live with you in your apartment ?

⬛ none   ⬜ three
⬜ one   ⬜ four
⬜ two   ⬜ five or more

If you could change your present apartment by making one room larger and one room smaller;

8. Would you make your:

↓ ⬭ LR larger; BR smaller or/
⬭ BR larger; LR smaller or/
▨ leave them like they are

9. Would you make your:

↓ ⬭ LR larger; K-D area smaller or/
⬭ K-D area larger; LR smaller or/
▨ leave them like they are

If you had to select one of the following:

10. Would you prefer:

↓ ▨ A dining area <u>in</u> the kitchen or/
⬭ A dining area next to the kitchen

11. Would you prefer:

↓ ▨ A bathroom door opening to bedroom only or/
⬭ A bathroom door opening to living room area only

12. Would you prefer:

↓ ▨ A large closet area in the bedroom or/
⬭ A large closet area in the living-dining-kitchen area

13. Would you prefer:

↓ ▨ A balcony or
⬭ Slightly larger apartment size

14. Would you prefer:

↓ ▨ Larger closet space or
⬭ More open space in your apartment

15. If you had the choice, would you want:

A larger apartment and less community space or/
A smaller apartment and more community space or/
make no change

If you had to select one of the following:

16. Would you prefer:

One large room with a music area, T.V. area, conversation area, and a small library or/
Several smaller separate rooms for each of these activities, in addition to a central lounge

17. Would you prefer:

A special lounge area for children of guests or/
A larger main lounge

---

18. Should there be a separate lounge for women only (yes) and a separate lounge for men only (yes)
No
No

19. Is there a craft or hobby room in the building you live in now ?

yes
no

20. Would you like (do you like) a crafts room ?

no
yes

21. For what crafts would you (do you) use the craft room ?

Pottery
knitting and crocheting
painting
weaving
photography

woodworking
sewing
copper enamiling
other _____
other _____

22. How many times a week would you (do you) use the room ?

less than once a week
once
twice
three

More than 3 times
Never

23. Should the crafts room be:

one large room for all crafts or/
several smaller rooms for each craft

Project Mass/Scale Misc.

THE FOLLOWING QUESTIONS WILL PROVIDE US WITH INFORMATION AS TO
WHAT YOU FEEL IS ESSENTIAL IN A HIGH RISE BUILDING FOR THE ELDERLY.
WHILE WE REALIZE THAT SOME PEOPLE DO NOT LIKE HIGH RISE STRUCTURES
IT IS ESSENTIAL THAT WE FIND OUT HOW WE CAN BEST DESIGN SUCH A
BUILDING TO MINIMIZE THE IRRITATIONS AND MAXIMIZE THE BENEFITS
TO THE RESIDENTS.

If you __had__ to live in a high rise building:

24. Would you prefer:

  ☒ A six story building with 16 apartments and neighbors
  on each floor or/
  ☐ A ten story building with 10 apartments and neighbors
  on each floor

25. Would you prefer:

  ☒ A six story building with less open space outside or/
  ☐ A ten story building with more open space outdoors

26. Would you prefer:

  ☒ a large laundry room with adjacent bathrooms on one
  floor or/
  ☐ smaller laundry facilities (one washer and dryer) on
  each floor

27. Would you prefer:

  ☐ small lounges on each floor or/
  ☒ a larger main lounge

28. Would you prefer:

  ☐ An enclosed roof top sun deck or/
  ☒ a larger patio area outdoors

Additional Comments

ARE THERE ANY ADDITIONAL SUGGESTIONS YOU WOULD LIKE TO MAKE ?

more exits in case of fire

_____

_____

_____

_____

_____

THANK YOU FOR YOUR HELP.   GOODBYE.

1. Coding by colored paper, colored return envelope, stamp
   on self-addressed stamped envelope to reflect geographic
   area, building address, type of respondent, original mailing
   list source, etc. Careful organization before mailing solves
   most processing problems.

2. Beware of code numbers if you promised anonymity; give them
   the option of identifying the respondent, etc.

3. Always identify yourself as an analyst (but not the project
   or the client), providing a phone numer or an address where
   the interviewee can find you. It will generate both pre-
   sale prospect lists and some primary unexpected political
   participation by others.

CASH FLOW PRO FORMA USING PARAMETER NORMS

SENSITIVITY APT. DEMO

U. W. REAL ESTATE DEPT.

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

```
GROSS SQUARE FEET IN BUILDING:        700.
BUILDING EFFICIENCY          :       85.0 PCT
NET LEASEABLE SQUARE FOOTAGE :        595.

LAND AND CONSTRUCTION COST : S      19500.
LOAN TO COST RATIO         :         75.0 PCT
ORIGINAL LOAN AMOUNT       : S      14625.

EQUITY REQUIREMENT         : S       4875.

PERMANENT INTEREST RATE    :        9.000 PCT
TERM OF LOAN                      30. YEARS

ANNUAL DEBT SERVICE        : S       1412.
```

		ANNUAL DOLLARS
GROSS INCOME : 595. SQ FT AT S 6.00		3570.
LESS: VACANCY OF 5.00 PCT		179.

GROSS ADJUSTED INCOME		3392.
PLUS: PARKING INCOME		150.
PLUS: OTHER INCOME		24.
GROSS EFFECTIVE INCOME		3566.
LAND LEASE EXPENSE		100.
OPERATING EXPENSES: 595. SQ FT AT S 2.76		1642.

NET OPERATING INCOME		1823.
DEBT SERVICE (9.66 PCT CONSTANT)		1412.

PRO FORMA CASH FLOW		411.

```
         RETURN ON EQUITY        8.43 PERCENT

         DEBT SERVICE COVERAGE:     1.291

         DEFAULT RATIO :      83.48 PERCENT
```

LOAN DATA FOR EACH SET OF FINANCIAL CONDITIONS

AMOUNT FINANCED $ 14625.   EQUITY $ 4875.

LOAN RATIO 75.00 PCT

INTEREST	TERM	CONSTANT	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	

AMOUNT FINANCED $ 15600.   EQUITY $ 3900.

LOAN RATIO 80.00 PCT

INTEREST	TERM	CONSTANT	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	

AMOUNT FINANCED $ 16575.   EQUITY $ 2925.

LOAN RATIO 85.00 PCT

INTEREST	TERM	CONSTANT	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	

AMOUNT FINANCED $ 17550.   EQUITY $ 1950.

LOAN RATIO 90.00 PCT

INTEREST	TERM	CONSTANT	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	

AMOUNT FINANCED $ 18525.   EQUITY $ 975.

LOAN RATIO 95.00 PCT

INTEREST	TERM	CONSTANT	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	

PRO FORMA CASH FLOW TABLE

SENSITIVITY APT. DEMO

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)		
LOAN RATIO:		75.00 PCT OF $ 19500.		
LOAN	:	$ 14625.		
EQUITY	:	$ 4875.		
FINANCING	:	30. YEARS 9.000 PCT		
OTR INCOME:		$ 174. ANNUALLY	RUN	1
EXPENSES	:	$ 2.76 PER SQ FT		
LAND LEASE:		$ 100.		

ANNUAL CASH FLOWS

VACANCY ALLOWANCE

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 ALLOWANCE

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

PRO FORMA CASH FLOW TABLE

SENSITIVITY APT. DEMO

U. W. REAL ESTATE DEPT.

SITE :	2000. SQUARE FEET	DATE 2-14-1977
BUILDING :	700. SQUARE FEET	BLDG 1
EFFICIENCY:	85.00 PCT(595. SQ FT)	
LOAN RATIO:	75.00 PCT OF $ 19500.	
LOAN :	$ 14625.	
EQUITY :	$ 4875.	
FINANCING :	30. YEARS 9.000 PCT	
VACANCY :	5.00 PCT OF LEASEABLE	
OTR INCOME:	$ 174. ANNUALLY	RUN 1
LAND LEASE:	$ 100.	

ANNUAL CASH FLOWS

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

PRO FORMA CASH FLOW TABLE

SENSITIVITY APT. DEMO

U. W. REAL ESTATE DEPT.

```
SITE      :      2000. SQUARE FEET         DATE    2-14-1977
BUILDING  :       700. SQUARE FEET         BLDG          1
EFFICIENCY:     85.00 PCT(     595. SQ FT)
LOAN RATIO:     75.00 PCT OF S     19500.
LOAN      :   S     14625.
EQUITY    :   S      4875.
VACANCY   :      5.00 PCT OF LEASEABLE
OTR INCOME:   S      174. ANNUALLY         RUN           1
EXPENSES  :   S   2.76 PER SQ FT
LAND LEASE:   S   100.
```

ANNUAL CASH FLOWS

FINANCING PARAMETERS

S		30. YEARS	30. YEARS R	30. YEARS	30. YEARS	30. YEA
T		9.00 PCT	9.25 PCT C	9.50 PCT	8.50 PCT	8.00 P
		--------	--------	--------	--------	--------

RENTAL RATES
ANNUAL S/SQ FT

S	4.80	-267.	-299.	-331.	-204.	-143.
S	5.40	72.	40.	8.	135.	196.
S	6.00	411.	380.	348.	474.	536.
S	6.60	750.	719.	687.	813.	875.
S	7.20	1089.	1058.	1026.	1152.	1214.

BREAKEVEN RENTAL RATES

FINANCING PARAMETERS

S		30. YEARS	30. YEARS R	30. YEARS	30. YEARS	30. YEA
T		9.00 PCT	9.25 PCT C	9.50 PCT	8.50 PCT	8.00 P
		--------	--------	--------	--------	--------

RENTAL RATES
ANNUAL S/SQ FT

		5.27	5.33	5.39	5.16	5.05

PRO FORMA CASH FLOW TABLE

SENSITIVITY APT. DEMO

U. W. REAL ESTATE DEPT.

FIXED PARAMETERS

SITE :	2000. SQUARE FEET	DATE 2-14-1977
BUILDING :	700. SQUARE FEET	BLDG 1
LOAN RATIO:	75.00 PCT OF S 19500.	
LOAN :	S 14625.	
EQUITY :	S 4875.	
FINANCING :	30. YEARS 9.000 PCT	
VACANCY :	5.00 PCT OF LEASEABLE	
OTR INCOME:	S 174. ANNUALLY	RUN 1
EXPENSES :	S 2.76 PER SQ FT	
LAND LEASE:	S 100.	

ANNUAL CASH FLOWS

BUILDING EFFICIENCY (PCT OF GROSS)

75.00 PCT 78.00 PCT 80.00 PCT 82.00 PCT 85.00 PCT
LOAN TO COST RATIO

75.00 PCT 80.00 PCT 85.00 PCT 90.00 PCT 95.00 PCT

RENTAL RATES ANNUAL S/SQ FT					
S 4.80	-393.	-355.	-330.	-305.	-267.
S 5.40	-94.	-44.	-11.	22.	72.
S 6.00	205.	267.	308.	349.	411.
S 6.60	505.	578.	627.	677.	750.
S 7.20	804.	890.	947.	1004.	1089.

BREAKEVEN RENTAL RATES

BUILDING EFFICIENCY (PCT OF GROSS)

75.00 PCT 78.00 PCT 80.00 PCT 82.00 PCT 85.00 PCT
LOAN TO COST RATIO

75.00 PCT 80.00 PCT 85.00 PCT 90.00 PCT 95.00 PCT

RENTAL RATES ANNUAL S/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.

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

PRO FORMA CASH FLOW TABLE

SENSITIVITY APT. DEMO

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)
LOAN RATIO: 75.00 PCT OF S   19500.
LOAN   : S   14625.
EQUITY   : S   4875.
FINANCING : 30. YEARS 9.000 PCT
REVENUE   : S 6.00 PER SQ FT
OTR INCOME: S   174. ANNUALLY   RUN   1
LAND LEASE: S 100.

ANNUAL CASH FLOWS

ANNUAL EXPENSE RATES PER SQ FT

VACANCY RATES	S 2.40	S 2.64	S 2.76	S 3.00	S 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	S 2.40	S 2.64	S 2.76	S 3.00	S 3.36
3.00 PCT	4.79	5.04	5.16	5.41	5.73
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

PRO FORMA CASH FLOW TABLE

SENSITIVITY APT. DEMO

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)	
LOAN RATIO:	75.00 PCT OF S 19500.	
LOAN :	S 14625.	
EQUITY :	S 4875.	
REVENUE :	S 6.00 PER SQ FT	
OTR INCOME:	S 174. ANNUALLY	RUN 1
EXPENSES :	S 2.76 PER SQ FT	
LAND LEASE:	S 100.	

ANNUAL CASH FLOWS

FINANCING PARAMETERS

	30. YEARS	30. YEARS	30. YEARS	30. YEARS	30. YEA R
S			R		
T	9.00 PCT	9.25 PCT	9.50 PCT	8.50 PCT	8.00 P
			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

	30. YEARS	30. YEARS	30. YEARS	30. YEARS	30. YEA R
S			R		
T	9.00 PCT	9.25 PCT	9.50 PCT	8.50 PCT	8.00 P
			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.

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

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

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

EXPENSE RATES ANNUAL S/SQ FT	75.00 PCT	80.00 PCT	85.00 PCT	90.00 PCT	95.00 PCT
S 2.40	5.21	5.11	5.04	4.98	4.89
S 2.64	5.46	5.36	5.29	5.23	5.15
S 2.76	5.59	5.49	5.42	5.36	5.27
S 3.00	5.84	5.74	5.67	5.61	5.53
S 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.

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		
	75.00 PCT	80.00 PCT	85.00 PCT	90.00 PCT	95.00 PCT

FINANCING

		75.00	80.00	85.00	90.00	95.00
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		
	75.00 PCT	80.00 PCT	85.00 PCT	90.00 PCT	95.00 PCT

FINANCING

		75.00	80.00	85.00	90.00	95.00
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

PRO FORMA CASH FLOW TABLE

SENSITIVITY APT. DEMO

U. W. REAL ESTATE DEPT.

SITE :	2000. SQUARE FEET	DATE 2-14-1977
BUILDING :	700. SQUARE FEET	BLDG 1
EFFICIENCY:	85.00 PCT(595. SQ FT)	
LOAN RATIO:	75.00 PCT OF S 19500.	
LOAN :	S 14625.	
EQUITY :	S 4875.	
FINANCING :	30. YEARS 9.000 PCT	
VACANCY :	5.00 PCT OF LEASEABLE	
OTR INCOME:	S 174. ANNUALLY	RUN 1
EXPENSES :	S 2.76 PER SQ FT	

ANNUAL CASH FLOWS

LAND LEASE COST

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

BREAKEVEN RENTAL RATES

LAND LEASE COST

RENTAL RATES ANNUAL S/SQ FT	S 100.	S 150.	S 200.	S 250.	S 300.
	5.27	5.36	5.45	5.54	5.63

SENSITIVITY APT. DEMO

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)
LOAN RATIO: 75.00 PCT OF S   19500.
LOAN   :   S   14625.
EQUITY   :   S   4875.
FINANCING   :   30. YEARS 9.000 PCT
REVENUE   :   S 6.00 PER SQ FT
VACANCY   :   5.00 PCT OF LEASEABLE
OTR INCOME: S   174. ANNUALLY   RUN   1

ANNUAL CASH FLOWS

LAND LEASE COST

	S 100.	S 150.	S 200.	S 250.	S 300.

EXPENSE RATES
ANNUAL S/SQ FT

S 2.40	625.	575.	525.	475.	425.
S 2.64	483.	433.	383.	333.	283.
S 2.76	411.	361.	311.	261.	211.
S 3.00	268.	218.	168.	118.	68.
S 3.36	54.	4.	-46.	-96.	-146.

BREAKEVEN RENTAL RATES

LAND LEASE COST

	S 100.	S 150.	S 200.	S 250.	S 300.

EXPENSE RATES
ANNUAL S/SQ FT

S 2.40	4.89	4.98	5.07	5.16	5.25
S 2.64	5.15	5.23	5.32	5.41	5.50
S 2.76	5.27	5.36	5.45	5.54	5.63
S 3.00	5.53	5.61	5.70	5.79	5.88
S 3.36	5.90	5.99	6.08	6.17	6.26

SENSITIVITY TABLE

SENSITIVITY APT. DEMO

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 OF GROSS
LOAN RATIO:     75.00 PCT OF S      19500.
EQUITY      :   S      4875.
FINANCING   :   30. YEARS  9.000 PCT
REVENUE     :   S  6.00 PER SQ FT
VACANCY     :      5.00 PCT OF LEASEABLE
PARK/OTHER:     S       174. ANNUALLY        RUN         1
EXPENSES    :   S  2.76 PER SQ FT
LAND LEASE:     S       100. ANNUALLY
CONSTRUCTION AND LAND COST      19500.
```

EFFECT OF SELECTED CHANGES IN PARAMETERS

PARAMETER CHANGE	INCREASE IN CASH FLOW
INCREASE BUILDING EFFICIENCY 1 PCT	21.
INCREASE RENTAL RATE S .10 PER SQ FT	57.
DECREASE VACANCY RATE 1PCT	36.
DECREASE OPERATING RATE S .10 PER SQ FT	60.
DECREASE PERMANENT RATE .25PCT	31.
DECREASE PERMANENT LOAN TERM BY 1 YEAR	-10.
DECREASE PERMANENT LOAN TERM BY 5 YEARS	-61.
DECREASE THE LOAN RATIO BY 5 PERCENT	94.
DECREASE LAND LEASE BY 10% 100.	

EQUIVALENT EFFECT TO YIELD
A S 100. INCREASE IN ANNUAL CASH FLOW

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

Exhibit 15

SYSTEMATIC ESTIMATION OF FORECAST ANNUAL INCOME FOR AN INCOME-PRODUCTING PROPERTY

PART I. ANNUAL RETURNS TO INVESTOR

BASIC APPRAISAL A LA SRA 201

A. ESTIMATE POTENTIAL GROSS CASH INCOME: CASH INCOME FROM SPACE SALES

B. DEDUCTIONS FROM POTENTIAL GROSS
1. NORMAL VACANCY
2. SEASONAL INCOME LOSS
3. COLLECTION   LOSSES
4. FRANCHISE FEES, DEPOSITS RETURNED, ETC.

C. ADD "OTHER" INCOME FROM SERVICE SALES

D. DERIVE EFFECTIVE GROSS INCOME

E. DEDUCT OPERATING EXPENSES (ON EXPECTED CASH OUTLAY WITHOUT ACCRUAL RESERVES)
1. FIXED EXPENSES
2. VARIABLE EXPENSES
3. REPAIRS AND MAINTENANCE
4. REPLACEMENTS

F. DERIVE NET OPERATING INCOME

MORTGAGE EQUITY APPROACH

G. DEDUCT ANNUAL DEBT SERVICE
1. CONTRACT INTEREST
2. SUPPLEMENTARY VARIABLE INTEREST
3. PRINCIPAL AMORTIZATION

H. DERIVE CASH THROW--OFF

PART I OF IMV INVESTMENT VALUE APPROACH

I. ADD BACK PRINCIPAL PAYMENTS AND REPLACEMENTS

J. DEDUCT TAX DEPRECIATION ALLOWANCE

K. DERIVE TAXABLE INCOME

L. DETERMINE MARGINAL INCOME TAX ON REAL ESTATE INCOME

M. DEDUCT INCOME TAX FROM CASH-THROW OFF (H)

N. DERIVE AFTER-TAX CASH FLOW

O. ADD TAX SAVINGS ON OTHER INCOME (IF K IS NEGATIVE)

P. ADD SURPLUS FROM REFINANCING

Q. DERIVE SPENDABLE AFTER-TAX CASH

PART II. RESALE RETURNS TO INVESTOR (OVER)

J. Graaskamp

PART II. RESALE RETURNS TO INVESTOR

       A. ESTIMATED RESALE PRICE

       B. DEDUCT BROKER'S COMMISSION AND OTHER TRANSACTION COSTS

       C. DERIVE EFFECTIVE GROSS PROCEEDS FROM SALE

      .D. DEDUCT ALL CREDIT CLAIMS
          1. SHORT AND LONG TERM NOTE BALANCES DUE
          2. PREPAYMENT PENALTIES
          3. DEDUCT EQUITY SHARES TO NON-OWNER INTEREST

       E. DERIVE PRE-TAX REVERSION TO EQUITY

       F. DEDUCT TAX CLAIMS ON OWNERSHIP INTEREST
          1. DEDUCT CAPITAL GAINS TAX
          2. DEDUCT INCOME TAX ON DISALLOWED ACCELERATED
             DEPRECIATION
          3. DEDUCT SURTAX ON TAXABLE PREFERENTIAL INCOME

       G. DERIVE AFTER TAX RESALE PROCEEDS TO INVESTOR

Exhibit 16

I. Elements of After Tax Synthesis

    A. Identification of profit center trade level

    B. Specification of the time line for outlays and receipts

    C. The capital budget (source & application)
        1. Construction costs
        2. Carrying costs

    D. Operating budgets (source & application)
        1. Pattern of sales revenues
        2. Fixed management costs
        3. General sales costs and investment

    E. Financing plan
        1. Credit amounts and terms
        2. Equity amounts and terms
        3. Holding power

    F. Profits classified as to type and tax
        1. Cash from operations
        2. Cash from capital gains
        3. Cash surplus from financing
        4. Cash from tax savings on other income
        5. Cash from reduction or shift of fixed outlays
        6. Indirect non-cash benefits

    G. Selected measures of profitability
        1. Measures of spendable cash
        2. Measures of change in net worth without sale
        3. Measures of change in net worth after sale

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R E P O R T   S E C T I O N   N U M B E R   8   PAGE 1
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MORTGAGE AMORTIZATION SCHEDULE FOR PERMANENT MORTGAGE

MORTGAGE AMOUNT	1275000.	TERM		28
INTEREST RATE	0.0962	MORTGAGE FACTOR		0.10410039
PERIOD PAYMENT	132729.00	PAYMENTS PER YEAR		1
BONUS INTEREST	0.0000	TYPE 0 GREATER THAN		0.

YR	ANNUAL PAYMENT	INTEREST PAYMENT	PRINCIPAL PAYMENT	BALANCE	BONUS INT PAYMENT
1	132729.	122719.	10009.	1264991.	0.
2	132729.	121755.	10973.	1254018.	0.
3	132729.	120699.	12029.	1241989.	0.
4	132729.	119541.	13187.	1228803.	0.
5	132729.	118272.	14456.	1214347.	0.
6	132729.	116881.	15847.	1198500.	0.
7	132729.	115356.	17372.	1181128.	0.
8	132729.	113684.	19044.	1162083.	0.
9	132729.	111851.	20878.	1141206.	0.
10	132729.	109841.	22887.	1118319.	0.

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE 4 - BASIC ANALY

FOR

ORVIL P. ANDERSON

```
* GROSS RENT       $ 220893.   * RATE OF GROWTH OF GROSS RENT  0.0000
* EXPENSES         $  19457.   * RATE OF GROWTH OF EXPENSES    0.0000
* R E TAXES        $  24097.   * RATE OF GROWTH OF R E TAXES   0.0000
  INCOME TAX RATE    0.3500      PROJECT VALUE GROWTH OF        6.0000
* VACANCY RATE       0.0378      WORKING CAPITAL LOAN RATE      0.1500
  EQUITY DISCOUNT    0.1200      EXTRAORDINARY EXPENSES    $       0.
  RESALE COST        0.0600      REINVESTMENT RATE              0.0600
  WKG CAPITAL RS $      0.       CAPITAL RESER INTEREST RATE    0.0600
  INITIAL COST $  1750000.       INITIAL EQUITY REQUIRED   $  475000.

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

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE 4 - BASIC ANALY

FOR

ORVIL P. ANDERSON

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

TITLE	PCT. DEPR	BEGIN USE	USEFUL LIFE	DEPR METHOD	COST	SCH
LAND	0.00	1	0.	0	$ 332400.	0
IMPROVEMENTS	0.95	1	30.	2	$ 1417600.	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
PERMANENT MORTGAGE	0.0962	1	27	28	$ 1275000.	0.729

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE 4 - BASIC ANALY

FOR

ORVIL P. ANDERSON

CASH FLOW ANALYSIS

	==================	1976	1977	1978	1979
1	GROSS RENT	220893.	220893.	220893.	220893.
2	LESS VACANCY	8339.	8339.	8339.	8339.
3	LESS REAL ESTATE TAXES	24097.	24097.	24097.	24097.
4	LESS EXPENSES	19457.	19457.	19457.	19457.
5	NET INCOME	169000.	169000.	169000.	169000.
6	LESS DEPRECIATION	44891.	44891.	44891.	44891.
7	LESS INTEREST	122719.	121755.	120699.	119541.
8	TAXABLE INCOME	1391.	2354.	3410.	4568.
9	PLUS DEPRECIATION	44891.	44891.	44891.	44891.
10	LESS PRINCIPAL PAYMENTS	10009.	10973.	12029.	13187.
11	CASH THROW-OFF	36272.	36272.	36272.	36272.
12	LESS TAXES	487.	824.	1194.	1599.
13	LESS RESERVES AT 3000.000	3000.	3000.	3000.	3000.
14	CASH FROM OPERATIONS	32785.	32448.	32078.	31673.
15	WORKING CAPITAL LOAN(CUM B)	0.	0.	0.	0.
16	DISTRIBUTABLE CASH AFR TAX	32785.	32448.	32078.	31673.
17	TAX SAVING ON OTHER INCOME	0.	0.	0.	0.
18	SPENDABLE CASH AFTER TAXES	32785.	32448.	32078.	31673.

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE 4 - BASIC ANALY

FOR

ORVIL P. ANDERSON

===

CASH FLOW ANALYSIS
===================   1976   1977   1978   1979
MARKET VALUE
19 BY METHOD - 6 - AT 0.0150   1776250.   1802894.   1829937.   1857386.
20 LESS RESALE COST   106575.   108174.   109796.   111443.
21 LESS LOAN BALANCES   1264991.   1254018.   1241989.   1228303.
22 PLUS CUM. CASH RESERVES   3000.   6180.   9551.   13124.

23 B/4 TAX NET WORTH   407684.   446882.   487702.   530264.

24 CAPITAL GAIN (IF SOLD)   -35434.   34502.   104813.   175506.
25   CAPITAL GAINS TAX   -6201.   6038.   18342.   30713.
26   TAX PREFERENCE TAX   0.   1088.   6361.   11663.
27   INCOME TAX ON EXCESS DEP   0.   0.   0.   0.
28   TOTAL TAX ON SALE   -2170.   7125.   24703.   42376.

29 AFTER TAX NET WORTH   409855.   439757.   462999.   487888.

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE 4 - BASIC ANALY

FOR

ORVIL P. ANDERSON

YEAR OF ANALYSIS
==================   1976   1977   1978   1979

MODIFIED INTERNAL RATE OF RETURN ANALYSIS
==

RETURN ANALYSIS WITHOUT SALE
============================

		1976	1977	1978	1979
41	CUM. AFT TAX SPENDABLE CASH	32785.	67201.	103311.	141183.
44	MOD. I.R.R. ON ORIG EQUITY	-0.9310	-0.6239	-0.3986	-0.2616
45	MOD. I.R.R. ON CUM. EQUITY	-0.9310	-0.6239	-0.3986	-0.2616

RETURN ANALYSIS WITH SALE
=========================

		1976	1977	1978	1979
46	CUM. CASH LESS ORIG EQUITY	-34530.	31957.	91310.	154071.
47	CUM. CASH LESS CUM. EQUITY	-34530.	31957.	91310.	154071.
48	MOD I.R.R. ON ORIG EQUITY	-0.0727	0.0331	0.0604	0.0728
49	MOD I.R.R. ON CUM. EQUITY	-0.0727	0.0331	0.0604	0.0728

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE 4 - BASIC ANALY

FOR

ORVIL P. ANDERSON

CASH FLOW ANALYSIS
=====================

		1980	1981	1982	1983
1	GROSS RENT	220893.	220893.	220893.	220893.
2	LESS VACANCY	8339.	8339.	8339.	8339.
3	LESS REAL ESTATE TAXES	24097.	24097.	24097.	24097.
4	LESS EXPENSES	19457.	19457.	19457.	19457.
5	NET INCOME	169000.	169000.	169000.	169000.
6	LESS DEPRECIATION	44891.	44891.	44891.	44891.
7	LESS INTEREST	118272.	116881.	115356.	113684.
8	TAXABLE INCOME	5837.	7228.	8754.	10426.
9	PLUS DEPRECIATION	44891.	44891.	44891.	44891.
10	LESS PRINCIPAL PAYMENTS	14456.	15847.	17372.	19044.
11	CASH THROW-OFF	36272.	36272.	36272.	36272.
12	LESS TAXES	2043.	2530.	3064.	3649.
13	LESS RESERVES AT 3000.000	3000.	3000.	3000.	3000.
14	CASH FROM OPERATIONS	31229.	30742.	30208.	29623.
15	WORKING CAPITAL LOAN(CUM B)	0.	0.	0.	0.
16	DISTRIBUTABLE CASH AFR TAX	31229.	30742.	30208.	29623.
17	TAX SAVING ON OTHER INCOME	0.	0.	0.	0.
18	SPENDABLE CASH AFTER TAXES	31229.	30742.	30208.	29623.

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE 4 - BASIC ANALY

FOR

ORVIL P. ANDERSON

==

CASH FLOW ANALYSIS

==================	1980	1981	1982	1983
MARKET VALUE				
19 BY METHOD - 6 - AT 0.0150	1885247.	1913526.	1942229.	1971362.
20 LESS RESALE COST	113115.	114812.	116534.	118282.
21 LESS LOAN BALANCES	1214347.	1198500.	1181128.	1162083.
22 PLUS CUM. CASH RESERVES	16911.	20926.	25182.	29692.
23 B/4 TAX NET WORTH	574696.	621140.	669749.	720689.
24 CAPITAL GAIN (IF SOLD)	246586.	318058.	389929.	462205.
25 CAPITAL GAINS TAX	43152.	55660.	68238.	80886.
26 TAX PREFERENCE TAX	16994.	22354.	27745.	33165.
27 INCOME TAX ON EXCESS DEP	0.	0.	0.	0.
28 TOTAL TAX ON SALE	60146.	78015.	95982.	114051.
29 AFTER TAX NET WORTH	514550.	543126.	573766.	606638.

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE 4 - BASIC ANALY

FOR

ORVIL P. ANDERSON

YEAR OF ANALYSIS
====================   1980   1981   1982   1983

MODIFIED INTERNAL RATE OF RETURN ANALYSIS
===

RETURN ANALYSIS WITHOUT SALE
==============================

		1980	1981	1982	1983
41	CUM. AFT TAX SPENDABLE CASH	180883.	222478.	266035.	311620.
44	MOD. I.R.R. ON ORIG EQUITY	-0.1756	-0.1188	-0.0795	-0.0513
45	MOD. I.R.R. ON CUM. EQUITY	-0.1756	-0.1188	-0.0795	-0.0513

RETURN ANALYSIS WITH SALE
===========================

		1980	1981	1982	1983
46	CUM. CASH LESS ORIG EQUITY	220433.	290604.	364801.	443258.
47	CUM. CASH LESS CUM. EQUITY	220433.	290604.	364801.	443258.
48	MOD I.R.R. ON ORIG EQUITY	0.0792	0.0828	0.0848	0.0859
49	MOD I.R.R. ON CUM. EQUITY	0.0792	0.0828	0.0848	0.0859

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE 4 - BASIC ANALY

FOR

ORVIL P. ANDERSON

CASH FLOW ANALYSIS

		1984	1985	1985	1978
1	GROSS RENT	220893.	220893.	220893.	220893.
2	LESS VACANCY	8339.	8339.	8339.	8339.
3	LESS REAL ESTATE TAXES	24097.	24097.	24097.	24097.
4	LESS EXPENSES	19457.	19457.	19457.	19457.
5	NET INCOME	169000.	169000.	169000.	169000.
6	LESS DEPRECIATION	44891.	44891.	44891.	44891.
7	LESS INTEREST	111851.	109841.	109841.	120699.
8	TAXABLE INCOME	12259.	14268.	14268.	3410.
9	PLUS DEPRECIATION	44891.	44891.	44891.	44891.
10	LESS PRINCIPAL PAYMENTS	20878.	22887.	22887.	12029.
11	CASH THROW-OFF	36272.	36272.	36272.	36272.
12	LESS TAXES	4291.	4994.	4994.	1194.
13	LESS RESERVES AT 3000.000	3000.	3000.	3000.	3000.
14	CASH FROM OPERATIONS	28981.	28278.	28278.	32078.
15	WORKING CAPITAL LOAN(CUM B)	0.	0.	0.	0.
16	DISTRIBUTABLE CASH AFR TAX	28981.	28278.	28278.	32078.
17	TAX SAVING ON OTHER INCOME	0.	0.	0.	0.
18	SPENDABLE CASH AFTER TAXES	28981.	28278.	28278.	32078.

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE 4 - BASIC ANALY

FOR

ORVIL P. ANDERSON

CASH FLOW ANALYSIS
===================   1984   1985   1985   1978
MARKET VALUE
19   BY METHOD - 6 - AT 0.0150   2000932.   2030946.   2030946.   1829937.
20   LESS RESALE COST   120056.   121857.   121857.   109796.
21   LESS LOAN BALANCES   1141206.   1118319.   1118319.   1241989.
22   PLUS CUM. CASH RESERVES   34474.   39542.   39542.   9551.

23   B/4 TAX NET WORTH   774145.   830313.   830313.   487702.

24   CAPITAL GAIN (IF SOLD)   534892.   607996.   607996.   104813.
25   CAPITAL GAINS TAX   93606.   106399.   106399.   18342.
26   TAX PREFERENCE TAX   38617.   44100.   44100.   6361.
27   INCOME TAX ON EXCESS DEP   0.   0.   0.   0.
28   TOTAL TAX ON SALE   132223.   150499.   150499.   24703.

29   AFTER TAX NET WORTH   641922.   679814.   679814.   462999.

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE 4 - BASIC ANALY

FOR

ORVIL P. ANDERSON

YEAR OF ANALYSIS
=================   1984   1985   1985   1978

MODIFIED INTERNAL RATE OF RETURN ANALYSIS
===

RETURN ANALYSIS WITHOUT SALE
============================

		1984	1985	1985	1978
41	CUM. AFT TAX SPENDABLE CASH	359298.	409134.	409134.	103311.
44	MOD. I.R.R. ON ORIG EQUITY	-0.0305	-0.0148	-0.0148	-0.3986
45	MOD. I.R.R. ON CUM. EQUITY	-0.0305	-0.0148	-0.0148	-0.3986

RETURN ANALYSIS WITH SALE
=========================

		1984	1985	1985	1978
46	CUM. CASH LESS ORIG EQUITY	526220.	613949.	613949.	91310.
47	CUM. CASH LESS CUM. EQUITY	526220.	613949.	613949.	91310.
48	MOD I.R.R. ON ORIG EQUITY	0.0864	0.0865	0.0865	0.0604
49	MOD I.R.R. ON CUM. EQUITY	0.0864	0.0865	0.0865	0.0604

STOP --

Ready

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DEPRECIATION SCHEDULE FOR SHELL

INITIAL COST   644385.
DEPRECIATION METHOD   4   PERCENT DEPRECIABLE 0.900
USEFUL LIFE   30.   BEGINNING YEAR   1

	ANNUAL	CUMULATIVE	CUMULATIVE	
YR	DEP.	STR. LINE	ACCELERATED	EXCESS
1	32219.	19332.	32219.	12888.
2	30608.	38663.	62828.	24164.
3	29078.	57995.	91905.	33711.
4	27624.	77326.	119529.	42203.
5	26243.	96658.	145772.	49114.
6	24931.	115989.	170703.	54714.
7	23684.	135321.	194387.	59065.
8	22500.	154652.	216887.	62234.
9	21375.	173984.	233262.	64278.
10	20306.	193316.	258568.	65252.

DEPRECIATION SCHEDULE FOR ELECT

INITIAL COST   267992.
DEPRECIATION METHOD   4   PERCENT DEPRECIABLE 0.950
USEFUL LIFE   8.   BEGINNING YEAR   1

	ANNUAL	CUMULATIVE	CUMULATIVE	
YR	DEP.	STR. LINE	ACCELERATED	EXCESS
1	50249.	31824.	50249.	18424.
2	40827.	63648.	91075.	27427.
3	33172.	95472.	124247.	28775.
4	26952.	127296.	151199.	23903.
5	25848.	159120.	177046.	17927.
6	25848.	190944.	202896.	11952.
7	25848.	222768.	228744.	5976.
8	25848.	254592.	254592.	0.
9	0.	0.	0.	0.
10	0.	0.	0.	0.

==

DEPRECIATION SCHEDULE FOR HEAT & AIR COND.

INITIAL COST   286394.
DEPRECIATION METHOD   4   PERCENT DEPRECIABLE 0.950
USEFUL LIFE   15.   BEGINNING YEAR   1

YR	ANNUAL DEP.	CUMULATIVE STR. LINE	CUMULATIVE ACCELERATED	EXCESS
1	28639.	18138.	28639.	10501.
2	25775.	36277.	54415.	18138.
3	23198.	54415.	77613.	23198.
4	20878.	72553.	98491.	25938.
5	18790.	90691.	117281.	26590.
6	16911.	108830.	134193.	25363.
7	15320.	126968.	149513.	22545.
8	15320.	145106.	164833.	19727.
9	15320.	163245.	180153.	16909.
10	15320.	181383.	195473.	14090.

DEPRECIATION SCHEDULE FOR CEILING & FLOOR

INITIAL COST   103818.
DEPRECIATION METHOD   4   PERCENT DEPRECIABLE 0.950
USEFUL LIFE   10.   BEGINNING YEAR   1

YR	ANNUAL DEP.	CUMULATIVE STR. LINE	CUMULATIVE ACCELERATED	EXCESS
1	15573.	9863.	15573.	5710.
2	13237.	19725.	28809.	9084.
3	11251.	29588.	40061.	10473.
4	9564.	39451.	49624.	10174.
5	8167.	49314.	57791.	8478.
6	8167.	59176.	65959.	6782.
7	8167.	69039.	74126.	5087.
8	8167.	78902.	82293.	3391.
9	8167.	88764.	90460.	1696.
10	8167.	98627.	98627.	0.

DEPRECIATION SCHEDULE FOR PAVING

INITIAL COST   90000.
DEPRECIATION METHOD   4   PERCENT DEPRECIABLE 0.850
USEFUL LIFE   10.   BEGINNING YEAR   1

	ANNUAL	CUMULATIVE	CUMULATIVE	
YR	DEP.	STR. LINE	ACCELERATED	EXCESS
1	13500.	7650.	13500.	5850.
2	11475.	15300.	24975.	9675.
3	9754.	22950.	34729.	11779.
4	8291.	30600.	43019.	12419.
5	7047.	38250.	50067.	11817.
6	5990.	45900.	56057.	10157.
7	5111.	53550.	61167.	7617.
8	5111.	61200.	66278.	5078.
9	5111.	68850.	71389.	2539.
10	5111.	76500.	76500.	0.

DEPRECIATION SCHEDULE FOR ROOF

INITIAL COST   14319.
DEPRECIATION METHOD   4   PERCENT DEPRECIABLE 1.000
USEFUL LIFE   15.   BEGINNING YEAR   1

	ANNUAL	CUMULATIVE	CUMULATIVE	
YR	DEP.	STR. LINE	ACCELERATED	EXCESS
1	1432.	955.	1432.	477.
2	1289.	1909.	2721.	811.
3	1160.	2864.	3880.	1017.
4	1044.	3818.	4924.	1106.
5	939.	4773.	5864.	1091.
6	846.	5728.	6709.	982.
7	846.	6682.	7555.	873.
8	846.	7637.	8400.	764.
9	846.	8591.	9246.	654.
10	846.	9546.	10091.	545.

DEPRECIATION SCHEDULE FOR FENCE & SIGNS

INITIAL COST   14319.
DEPRECIATION METHOD   4   PERCENT DEPRECIABLE 0.900
USEFUL LIFE   15.   BEGINNING YEAR   1

	ANNUAL	CUMULATIVE	CUMULATIVE	
YR	DEP.	STR. LINE	ACCELERATED	EXCESS
1	1432.	859.	1432.	573.
2	1289.	1718.	2721.	1002.
3	1160.	2577.	3880.	1303.
4	1044.	3437.	4924.	1498.
5	939.	4296.	5864.	1568.
6	846.	5155.	6709.	1554.
7	761.	6014.	7470.	1456.
8	685.	6873.	8155.	1282.
9	676.	7732.	8831.	1099.
10	676.	8591.	9507.	916.

DEPRECIATION SCHEDULE FOR PARKING LOT LIGHTING

INITIAL COST   10740.
DEPRECIATION METHOD   4   PERCENT DEPRECIABLE 0.900
USEFUL LIFE   15.   BEGINNING YEAR   1

	ANNUAL	CUMULATIVE	CUMULATIVE	
YR	DEP.	STR. LINE	ACCELERATED	EXCESS
1	1074.	644.	1074.	430.
2	967.	1289.	2041.	752.
3	870.	1933.	2911.	977.
4	783.	2578.	3693.	1116.
5	705.	3222.	4398.	1176.
6	634.	3866.	5032.	1166.
7	571.	4511.	5603.	1092.
8	514.	5155.	6117.	962.
9	507.	5800.	6624.	824.
10	507.	6444.	7131.	687.

==

MORTGAGE AMORTIZATION SCHEDULE FOR PERMANENT MORTGAGE

MORTGAGE AMOUNT	1275000.	TERM		28
INTEREST RATE	0.0962	MORTGAGE FACTOR		0.10410039
PERIOD PAYMENT	132728.00	PAYMENTS PER YEAR		1
BONUS INTEREST	0.0000	TYPE 0 GREATER THAN		0.

YR	ANNUAL PAYMENT	INTEREST PAYMENT	PRINCIPAL PAYMENT	BALANCE	BONUS INT PAYMENT
1	132728.	122719.	10009.	1264991.	0.
2	132728.	121755.	10973.	1254018.	0.
3	132728.	120699.	12029.	1241989.	0.
4	132728.	119541.	13187.	1228803.	0.
5	132728.	118272.	14456.	1214347.	0.
6	132728.	116881.	15847.	1198500.	0.
7	132728.	115356.	17372.	1181128.	0.
8	132728.	113684.	19044.	1162083.	0.
9	132728.	111851.	20878.	1141206.	0.
10	132728.	109841.	22887.	1118319.	0.

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE STUDY 4

FOR

ORVIL P ANDERSON

```
*  GROSS RENT      $ 220893.   * RATE OF GROWTH OF GROSS RENT   0.0000
*  EXPENSES        $  19457.   * RATE OF GROWTH OF EXPENSES     0.0000
*  R E TAXES       $  24097.   * RATE OF GROWTH OF R E TAXES    0.0000
   INCOME TAX RATE    0.3500     PROJECT VALUE GROWTH OF        6.0000
*  VACANCY RATE       0.0378     WORKING CAPITAL LOAN RATE      0.1500
   EQUITY DISCOUNT    0.1200     EXTRAORDINARY EXPENSES       $     0.
   RESALE COST        0.0600     REINVESTMENT RATE              0.0600
   WKG CAPITAL RS $      0.      CAPITAL RESER INTEREST RATE    0.0600
   INITIAL COST $ 1764367.       INITIAL EQUITY REQUIRED     $ 489367.
```

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

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE STUDY 4

FOR

ORVIL P ANDERSON

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

TITLE	PCT. DEPR	BEGIN USE	USEFUL LIFE	DEPR METHOD		COST	SCH
LAND	0.00	1	0.	0	$	332400.	0
SHELL	0.90	1	30.	4	$	644385.	0
ELECT	0.95	1	8.	4	$	267992.	0
HEAT & AIR COND.	0.95	1	15.	4	$	286394.	0
CEILING & FLOOR	0.95	1	10.	4	$	103918.	0
PAVING	0.35	1	10.	4	$	90000.	0
ROOF	1.00	1	15.	4	$	14319.	0
FENCE & SIGNS	0.90	1	15.	4	$	14319.	0
PARKING LOT LIGHTING	0.90	1	15.	4	$	10740.	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
PERMANENT MORTGAGE	0.0962	1	28	28	$	1275000.	0.723

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE STUDY 4

FOR

ORVIL P ANDERSON

CASH FLOW ANALYSIS

=================	1977	1979	1983	1986
1 GROSS RENT	220893.	220893.	220893.	220893.
2. LESS VACANCY	8339.	8339.	8339.	8339.
3 LESS REAL ESTATE TAXES	24097.	24097.	24097.	24097.
4 LESS EXPENSES	19457.	19457.	19457.	19457.
5 NET INCOME	169000.	169000.	169000.	169000.
6 LESS DEPRECIATION	144118.	109642.	80308.	50933.
7 LESS INTEREST	122719.	120699.	115356.	109841.
8 TAXABLE INCOME	-97836.	-61342.	-26663.	8226.
9 PLUS DEPRECIATION	144118.	109642.	80308.	50933.
10 LESS PRINCIPAL PAYMENTS	10009.	12029.	17372.	22887.
11 CASH THROW-OFF	36272.	36272.	36272.	36272.
12 LESS TAXES	6728.	1557.	0.	2879.
13 LESS RESERVES AT 3000.000	3000.	3000.	3000.	3000.
14 CASH FROM OPERATIONS	26544.	31715.	33272.	30393.
15 WORKING CAPITAL LOAN(CUM B)	0.	0.	0.	0.
16 DISTRIBUTABLE CASH AFR TAX	26544.	31715.	33272.	30393.
17 TAX SAVING ON OTHER INCOME	34243.	21470.	9332.	0.
18 SPENDABLE CASH AFTER TAXES	60787.	53185.	42604.	30393.

P R O F O R M A

INVESTMENT ANALYSIS OF

CASE STUDY 4

FOR

ORVIL P ANDERSON

```
CASH FLOW ANALYSIS
===================           1977       1979       1983       1986
MARKET VALUE
19   BY METHOD - 6 - AT 0.0150   1790833.   1844960.   1958174.   2047620.
20   LESS RESALE COST             107450.    110698.    117470.    122857.
21   LESS LOAN BALANCES          1264991.   1241989.   1181128.   1118319.
22   PLUS CUM. CASH RESERVES        3000.      9551.     25132.     39542.

(23) B/4 TAX NET WORTH            421392.    501824.    684737.    845986.

24   CAPITAL GAIN (IF SOLD)         8280.    237690.    701169.    989395.
25      CAPITAL GAINS TAX           1449.     41576.    122705.    173144.
26      TAX PREFERENCE TAX           621.     17827.     51741.     72351.
27      INCOME TAX ON EXCESS DEP   19179.     39001.     36299.     29522.
28      TOTAL TAX ON SALE          21269.     98424.    210744.    274517.

(29) AFTER TAX NET WORTH          400123.    403400.    473993.    571470.
```

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE STUDY 4

FOR

ORVIL P ANDERSON

YEAR OF ANALYSIS
==================   1977   1979   1983   1986

BEFORE TAX RATIO ANALYSIS
=========================
30 RETURN ON NET WORTH B/4 TAX -0.0648   0.1678   0.1338   0.1174
31 CHANGE IN NET WORTH B/4 TAX -67975.   41029.   48330.   56400.
32 CASH RTN ON ORIG CASH EQUIY   0.0741   0.0741   0.0741   0.0741
33 PERCENT ORIG EQUITY PAYBACK   0.0542   0.1790   0.4503   0.6447
34 PRESENT VALUE OF PROJECT   1683629. 1719308. 1750277. 1752330.

YEAR OF ANALYSIS
===================   1977   1979   1983   1986

AFTER TAX RATIO ANALYSIS
==========================
35   RETURN ON NEW WORTH AFT TAX   -0.0582   0.1465   0.1456   0.1269
36   CHANGE IN NET WORTH AFT TAX   -88623.   13790.   31583.   43649.
37   CASH RTN ON ORIG CASH EQUIY   0.1242   0.1087   0.0871   0.0621
38   PERCENT ORIG EQUITY PAYBACK   0.1242   0.3489   0.7227   0.9340
39   PRESENT VALUE OF PROJECT   1686527. 1699479. 1726324. 1733930.

40   NET INCOME-MARKET VALUE RTO   0.0944   0.0916   0.0863   0.0825
41   LENDER BONUS INTEREST RATE   0.0000   0.0000   0.0000   0.0000
42   DEFAULT RATIO   0.7980   0.7980   0.7980   0.7980

P R O   F O R M A

INVESTMENT ANALYSIS OF

CASE STUDY 4

FOR

ORVIL P ANDERSON

YEAR   OF   ANALYSIS
===================   1977   1979   1983 ·   1986

MODIFIED INTERNAL RATE OF RETURN ANALYSIS
===

RETURN ANALYSIS WITHOUT SALE
============================

```
41   CUM. AFT TAX SPENDABLE CASH     60787.    181607.    430079.    622677.
44   MOD. I.R.R. ON ORIG EQUITY     -0.8758    -0.2814    -0.0183     0.0244
45   MOD. I.R.R. ON CUM. EQUITY     -0.8758    -0.2814    -0.0183     0.0244
```

RETURN ANALYSIS WITH SALE
=========================

```
46   CUM. CASH LESS ORIG EQUITY    -28457.     95641.    414705.    704780.
47   CUM. CASH LESS CUM. EQUITY    -28457.     95641.    414705.    704780.
48   MOD  I.R.R. ON ORIG EQUITY    -0.0582     0.0613     0.0916     0.0933
49   MOD  I.R.R. ON CUM. EQUITY    -0.0582     0.0613     0.0916     0.0933
```

STOP --

Ready

MRCAP
Input Forms

1,	Project Title		User Name		
10.	Starting Year	Data Sets	Classification	% Owned Yr. 1	Holding Period	Units/Year
20.	Back-Door	Back-Door Loans	Investment Default	B/4 Tax	Beginning Year	End Year
30.	Default Ratio	Cash-On-Cash	Year	% Change	Equity B/4 Tax	Reserve B/4 Tax
40.	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.	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.	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	23	24	25

_____ 70,	_____ Real Estate Tax	, _____ 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,	_____ Fixed Expenses	, _____ 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,	_____ Discount Rate	, _____ Income Tax Rate	, _____ Reinvestment Rate		
_____ 101,	_____ Extraordinary Exp.	, _____ Project Growth Rate	, _____ Project Growth Type		
_____ 102,	_____ Working Capital Loan	, _____ Ownership	, _____ Resale Cost Rate	, _____ Charge New Capital	
_____ 103,	_____ Reserves Witheld	, _____ Equity Reserves	, _____ Equity Reserve Rate	, _____ Reserve Maximum	

PARTNERSHIPS

110, 1, _____
Title(20 character maximum)

111, 1, _____ , _____ , _____
Income Tax   % of Spendable   % Equity Contribution

112, 1, _____ , _____ , _____ , _____
% Equity Reserve   % Tax Loss   % Tax Payment   Discount Rate

113, 1, _____ , _____ , _____
Reinvestment Rate   % Mortgage Liability   General Partner

110, 2, _____
Title

111, 2, _____ , _____ , _____
Income Tax   % of Spendable   % Equity Contribution

112, 2, _____ , _____ , _____ , _____
% Equity Reserve   % Tax Loss   % Tax Payment   Discount Rate

113, 2, _____ , _____ , _____
Reinvestment Rate   % Mortgage Liability   General Partner

110, 3, _____
Title

111, 3, _____ , _____ , _____
Income Tax   % of Spendable   % Equity Contribution

112, 3, _____ , _____ , _____ , _____
% Equity Reserve   % Tax Loss   % Tax Payment   Discount Rate

113, 3, _____ , _____ , _____
Reinvestment Rate   % Mortgage Liability   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

_____ 110, 7, _____
                Title

_____ 111, 7, _____ , _____ , _____
                Income Tax   % of Spendable   % Equity Contribution

_____ 112, 7, _____ , _____ , _____ , _____
                % Equity Reserve   % Tax Loss   % Tax Payment   Discount Rate

_____ 113, 7, _____ , _____ , _____
                Reinvestment Rate   % Mortgage Liability   General Partner

_____ 110, 8, _____
                Title

_____ 111, 8, _____ , _____ , _____
                Income Tax   % of Spendable   % Equity Contribution

_____ 112, 8, _____ , _____ , _____ , _____
                % Equity Reserve   % Tax Loss   % Tax Payment   Discount Rate

_____ 113, 8, _____ , _____ , _____
                Reinvestment Rate   % Mortgage Liability   General Partner

_____ 110, 9, _____
                Title

_____ 111, 9, _____ , _____ , _____
                Income Tax   % of Spendable   % Equity Contribution

_____ 112, 9, _____ , _____ , _____ , _____
                % Equity Reserve   % Tax Loss   % Tax Payment   Discount Rate

_____ 113, 9, _____ , _____ , _____
                Reinvestment Rate   % Mortgage Liability   General Partner

_____ 110, 10, _____
                 Title

_____ 111, 10, _____ , _____ , _____
                 Income Tax   % of Spendable   % Equity Contribution

_____ 112, 10, _____ , _____ , _____ , _____
                 % Equity Reserve   % Tax Loss   % Tax Payment   Discount Rate

_____ 113, 10, _____ , _____ , _____
                 Reinvestment Rate   % Mortgage Liability   General Partner

_____ 110, 11, _____
                 Title

_____ 111, 11, _____ , _____ , _____
                 Income Tax   % of Spendable   % Equity Contribution

_____ 112, 11, _____ , _____ , _____ , _____
                 % Equity Reserve   % Tax Loss   % Tax Payment   Discount Rate

_____ 113, 11, _____ , _____ , _____
                 Reinvestment Rate   % Mortgage Liability   General Partner

_____ 110, 12, _____
                 Title

_____ 111, 12, _____ , _____ , _____
                 Income Tax   % of Spendable   % Equity Contribution

_____ 112, 12, _____ , _____ , _____ , _____
                 % Equity Reserve   % Tax Loss   % Tax Payment   Discount Rate

_____ 113, 12, _____ , _____ , _____
                 Reinvestment Rate   % Mortgage Liability   General Partner

_____ 110, 13, _____
                  Title

_____ 111, 13, _____ , _____ , _____
                  Income Tax   % of Spendable   % Equity Contribution

_____ 112, 13, _____ , _____ , _____ , _____
                  % Equity Reserve   % Tax Loss   % Tax Payment   Discount Rate

_____ 113, 13, _____ , _____ , _____
                  Reinvestment Rate % Mortgage Liability General Partner

_____ 110, 14, _____
                  Title

_____ 111, 14, _____ , _____ , _____
                  Income Tax   % of Spendable   % Equity Contribution

_____ 112, 14, _____ , _____ , _____ , _____
                  % Equity Reserve   % Tax Loss   % Tax Payment   Discount Rate

_____ 113, 14, _____ , _____ , _____
                  Reinvestment Rate % Mortgage Liability General Partner

_____ 110, 15, _____
                  Title

_____ 111, 15, _____ , _____ , _____
                  Income Tax   % of Spendable   % Equity Contribution

_____ 112, 15, _____ , _____ , _____ , _____
                  % Equity Reserve   % Tax Loss   % Tax Payment   Discount Rate

_____ 113, 15, _____ , _____ , _____
                  Reinvestment Rate % Mortgage Liability General Partner

COMPONENT ENTRIES

_____ 200, 1, _____
          Title(20 character maximum)

_____ 201, 1, _____ , _____ , _____
          Original Cost   % Depreciable   Depreciation Method

_____ 202, 1, _____ , _____ , _____
          Starting Year   Useful Life   Switching

_____ 200, 2, _____
          Title

_____ 201, 2, _____ , _____ , _____
          Original Cost   % Depreciable   Depreciation Method

_____ 202, 2, _____ , _____ , _____
          Starting Year   Useful Life   Switching

_____ 200, 3, _____
          Title

_____ 201, 3, _____ , _____ , _____
          Original Cost   % Depreciable   Depreciation Method

_____ 202, 3, _____ , _____ , _____
          Starting Year   Useful Life   Switching

_____ 200, 4, _____
          Title

_____ 201, 4, _____ , _____ , _____
          Original Cost   % Depreciable   Depreciation Method

_____ 202, 4, _____ , _____ , _____
          Starting Year   Useful Life   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

_____ 200, 9, _____
　　　　　　　　Title

_____ 201, 9, _____ , _____ , _____
　　　　　　　　Original Cost　　　% Depreciable　　　Depreciation Method

_____ 202, 9, _____ , _____ , _____
　　　　　　　　Starting Year　　　Useful Life　　　　Switching

_____ 200, 10, _____
　　　　　　　　Title

_____ 201, 10, _____ , _____ , _____
　　　　　　　　Original Cost　　　% Depreciable　　　Depreciation Method

_____ 202, 10, _____ , _____ , _____
　　　　　　　　Starting Year　　　Useful Life　　　　Switching

_____ 200, 11, _____
　　　　　　　　Title

_____ 201, 11, _____ , _____ , _____
　　　　　　　　Original Cost　　　% Depreciable　　　Depreciation Method

_____ 202, 11, _____ , _____ , _____
　　　　　　　　Starting Year　　　Useful Life　　　　Switching

_____ 200, 12, _____
　　　　　　　　Title

_____ 201, 12, _____ , _____ , _____
　　　　　　　　Original Cost　　　% Depreciable　　　Depreciation Method

_____ 202, 12, _____ , _____ , _____
　　　　　　　　Starting Year　　　Useful Life　　　　Switching

_____ 200, 13, _____
　　　　　　　　Title

_____ 201, 13, _____ , _____ , _____
　　　　　　　　Original Cost　　　% Depreciable　　　Depreciation Method

_____ 202, 13, _____ , _____ , _____
　　　　　　　　Starting Year　　　Useful Life　　　　Switching

_____ 200, 14, _____
　　　　　　　　Title

_____ 201, 14, _____ , _____ , _____
　　　　　　　　Original Cost　　　% Depreciable　　　Depreciation Method

_____ 202, 14, _____ , _____ , _____
　　　　　　　　Starting Year　　　Useful Life　　　　Switching

_____ 200, 15, _____
　　　　　　　　Title

_____ 201, 15, _____ , _____ , _____
　　　　　　　　Original Cost　　　% Depreciable　　　Depreciation Method

_____ 202, 15, _____ , _____ , _____
　　　　　　　　Starting Year　　　Useful Life　　　　Switching

MORTGAGE ENTRIES

_____ 300, 1, _____
                  Title(20 character maximum)

_____ 301, 1, _____ , _____ , _____ , _____
                  Principal Amount   Annual Interest   Payment Period   Term

_____ 302, 1, _____ , _____ , _____ , _____
                  Payments/Year   Year Began   Year End   Refinanced by #

_____ 303, 1, _____ , _____ , _____ , _____
                  Bonus Interest   Base Amount   Base Type   Mortgage Factor

_____ 300, 2, _____
                  Title

_____ 301, 2, _____ , _____ , _____ , _____
                  Principal Amount   Annual Interest   Payment Period   Term

_____ 302, 2, _____ , _____ , _____ , _____
                  Payments/Year   Year Began   Year End   Refinanced by #

_____ 303, 2, _____ , _____ , _____ , _____
                  Bonus Interest   Base Amount   Base Type   Mortgage Factor

_____ 300, 3, _____
                  Title

_____ 301, 3, _____ , _____ , _____ , _____
                  Principal Amount   Annual Interest   Payment Period   Term

_____ 302, 3, _____ , _____ , _____ , _____
                  Payments/Year   Year Began   Year End   Refinanced by #

_____ 303, 3, _____ , _____ , _____ , _____
                  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

_____ 300, 7, _____
                  Title

_ _____ 301, 7, _____ , _____ , _____ , _____
                  Principal Amount   Annual Interest   Payment Period   Term

_____ 302, 7, _____ , _____ , _____ , _____
                  Payments/Year   Year Began   Year End   Refinanced by #

_____ 303, 7, _____ , _____ , _____ , _____
                  Bonus Interest   Base Amount   Base Type   Mortgage Factor

_____ 300, 8, _____
                  Title

_____ 301, 8, _____ , _____ , _____ , _____
                  Principal Amount   Annual Interest   Payment Period   Term

_____ 302, 8, _____ , _____ , _____ , _____
                  Payments/Year   Year Began   Year End   Refinanced by #

_____ 303, 8, _____ , _____ , _____ , _____
                  Bonus Interest   Base Amount   Base Type   Mortgage Factor

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

___ 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

* = 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 ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

___ 402 ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

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

___ 403 ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___ , ___

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

___ 405 ___ , ___ , ___ , ___ , ___

Improvements Allocation	Total	A	B	C
	1,249,988	878,849	297,236	73,903
Building Cost	~~1,360,728~~	~~886,460~~	~~299,280~~	~~74,538~~
Intangibles	81,240	58,726	18,031	4,483
Land Under Building – Area	60,242 ✱	43,050 ✱	14,560 ✱	2,632 ✱
" " " – Value *1.30	78,315	55,965	18,928	3,422
Parking Land – Area	180,000 ✱ ~~110,000~~	113,238 ✱	48,438 ✱ ~~89,600~~	18,324 ✱ ~~4,200~~
– Value *1.30	234,000	147,209	62,969 ~~38,480~~	23,821 ~~14,560~~
Open Space – Area	15,456 ✱ ~~25,456~~	9,723 ✱	4,159 ✱ ~~20,006~~	1,573 ~~8,692~~
– Value *1.30	20,093	12,640	5,407 ~~29,895~~	2,045 ~~4,307~~
Parking Surface * .50	98,000 ~~110,000~~	56,619	24,219 ~~14,800~~	9,162 ~~5,600~~
Parking Lighting	10,240	6,256	2,890	1,093
Total	1,764,323	1,216,764	429,680	117,929
	.7226	~~.65~~		
Mortgage Amount	1,225,000	829,278	310,502	85,220
Income Allocation				
Gross Income	220,893	133,365	74,368	13,160
Vacancy	8,339	3,054	5,114 .2475	171 .0668
R.E. Taxes	24,097	16,619	5,868	1,610
Opr Expenses	19,457	13,419	4,738	1,300
Net Income	169,000	100,273	58,648	10,029
Reserve Contributions	3,000	2,070	730	200

Parking

Size of Parking Stall
$$\frac{180,000}{275} = 654 \, \#$$

	GLA	$ / Sq Ft	Average Sales	High Sales
Grocery	16,650	193.65 / 131.49	2,189,308	3,224,222
Hardware	10,200	75.86 / 57.74	588,948	773,772
Drugs	6,000	90.01 / 54.87	329,220	540,060
Furniture	4,800	60.80 / 35.35	169,680	290,840
Clothing	4,200	108.32 / 65.08	273,336	454,944
Misc	1,200	67.05	80,460	80,460
Financial	2,688	—	—	—
Liquor	1,344	186.49 / 79.50	106,840	25064.
Cleaners	1,000	67.45 / 30.28	30,280	67,450
Beauty Shop	1,000	90.19 / 52.01	52,010	90,190
Barber	670	67.57 / 40.30	27,001	45,272
Misc.	7,858	67.05	526,879	526,879
Restaurant	2,632	78.28 / 49.93	131,416	206,633
			4,505,378	~~63,262,~~
				6,326,236

Value of a Parking Stall

I = annual income
A = average unit sale (in dollars)
C = customers per car
M = minimum daily turnover per space
P = percent of customers arriving by car
N = number of shopping days per year
$\#$ = number of parking stalls

$$I = A * C * M * P * N * \#$$

$C = 1.5$ $I_{Avg} = 4,505,378$

$M = 3.0$

$P = .90$ $I_{High} = 6,326,236$

$N = 325$

$\# = 275$

$$A = \frac{I}{(C * M * P * N * \#)}$$

$$A = \frac{I}{(C * M * P * N * \#)}$$

$A_{Avg} = 12.45, \quad A_{High} = 17.48$

Land Form "C"

        2,632   = Under Building
       18,324   = Parking
        1,573   = Open Space
       22,529   = Total Incro To "A" + "B" parking

Building Cost
        A   =   878,849
        B   =   297,236   1,176,085
Intangibles
        A   =   58,726
        B   =   18,031   76,757
Land Under Building
        A   =   43,050
        B   =   14,560   57,610 * 1.30   74,893 .
Open Space
        A   =   9,723
        B   =   4,159   13,882 * 1.30   18,047 .
Parking Lot Lighting   10,740
Land For Parking
        Orig   =   180,000
Under "C" =   2,632
Open Spa "C" =   1,573   184,205 * 1.3   239,466 .
        Parking Surface
            184,205   * .5   92,102

$$\frac{220,893}{C * M * P * N * \#} = A_{Income}$$

$$\frac{220,893}{361,969} = .6102$$

Total Cost.

$$
\begin{array}{r}
1,176,085 \\
76,757 \\
74,893 \\
18,047 \\
10,740 \\
239,466 \\
\underline{92,102} \\
1,688,090
\end{array}
$$

Redesign of Parking to allocate 550 Sq ft / parking stall

$$
\frac{184,205}{550} = 335 \text{ parking stalls}
$$

Determine Gross Income

$$
I = .6102 * 1.5 * 3.0 * .90 * 325 * 335
$$

$$
I = 269,064
$$

Basic Assumptions

Site: 5.875 A.
     = 255,698

Improvements

    A.   43,050 | Parking: 275 cars
    B.   14,560 |
    C.   2,632 |

Appraised Value

    Land   =   332,400
Improv   = 1,367,600
        Total = 1,700,000

Corrections

5.875 = 255,915
255,698 = 5.8700 A.

One Truck loading dock / 10,000
sq ft of building area

Parking: Recommended
standard of 5.5 spaces /
1000 sq ft of GLA
= Ratio of 2.2 to 1.
1 stall = 400 sq ft

Employee Parking

Parking Formula
A = Average unit sale ($)
C = Customers per Car
M = Minimum daily turnover
     per space
P = % customers arriving by car
N = number of shopping days
     per year.

A * C * M = value per day

Value per day * N = value of one parking stall per annum
in retail value

2.14 * 1.09352   4.66   = 3.25
1.38 *   "   3.83   = 1.94
1.16   2.42   = 1.57
1.53   3.33   = 2.06
 .96   2.83   = 1.24
1.08   1.42   = 1.23
1.73   1.33   = 1.95
2.11   1.25   = 1.93
                 1.25   =

		% Adj	
1.	3.25	.50	1.625
2.	1.94	.90	1.746
3.	1.57	1.20	1.884
4.	2.06	.85	1.751
5.	1.24	1.35	1.674
6.	1.23	1.00	1.23
7.	1.95	1.00	1.95
8.	1.93	.85	1.64

$1.69 \pm .217$

[1.47 ← 1.69 → 1.90]

Land Value

Income

Grocery Store

16,650 K / 2.50 / 41,625

1.25% / 2,378,520

Taxes = Lessor & Base

Lessee = Increase

Renewal Option

One 5yr w/ increase tied to C.P.I.

Mtg

Amt = 1,275,000   75%

Term = 25

Amo = 27

I.R. = $9\frac{5}{8}$ = .09625

Points = $\frac{1}{8}$ & 1%

Pmt = 132,728

Constant = .1041

Debt Serva Coverage = 1.25

Breakpoint = 81%

1,275,000 @ .09625 ($9\frac{5}{8}$)

w/ Pmt = 132,728 Per Annum

Constant = .10410039

Term = 28

Retail Depreciation

Item	% a total	Life
Shell	25-35-45	30
Elect, Wiring, Plumb	10-20	8
Heat & Air Cond.	15-25	15
Ceiling & Floor	7-12	10
Paving	5-15	10
Roof	1-2	15
Fence & Signs	1-2	15
Parking lot Lighting	.5-1	15

Retail Depreciation

			% s. Dep
Shell	=	615,408	.44999
Elect, Wiring, Plumb	=	251,912	.1842
Heat & Air Cond.	=	273,520	.20
Ceiling & Floor	=	99,151	.0725
Paving	=	90,000	.0658
Roof	=	13,676	.01
Fence & Signs	=	13,676	.01
Parking lot Lighting	=	10,257	.0075
		1,367,600	
Land	=	332,400	
Total		1,700,000	

Item	% of Total	Amount
Land	~~332,400~~	332,400
Shell	.45	644,385
Elect, Wiring, Plumb	.1872	267,992
Heat + Air Cond.	.20	286,394
Ceiling + Floor	.0725	103,818
Paving	.06285	90,000
Roof	.01	14,319
Fence + Signs	.01	14,319
Parking lot lighting	.0075	10,740
	1,764,368	1,764,368

Net Income / MKT Vol.

1	10
.0962	.0841
166000	166000
1225500	1972919
	189794
169000	− 166000
1750833	23794
	169000
	2,087,620
.0944	.0825
	(1932,85)
	− 169,000
	24,285

Notes On Run #2

increase Gross Income y.6 by 24,295 to
245,188. This will stabilize to Net Income/
Market Value ratio of .0944 same in
years 1 and 10

I. R. R.	Bldg C	Basic
1 = -.0462	1. -.0811	1. .0547
10 = .0934	10. .0730	10. .0806

Default
All = .7980   .8746

Payback
1 = ~~.0542~~ .1542   1. .0739
10 = 1.0538   10. .5478

Begin Individual Building Preferences

Land	Intangibles	10,640
Shell		50,600
Elect.		20,000
Heat + Air Cond		81,240
Ceiling + Floor		
Paving		
Roof		
Fence + Signs		
Parking lot		

Improvements

$$43,050 = A \quad .7146$$
$$14,560 = B \quad .2417$$
$$2,632 = C \quad .0437$$
$$60,242$$

Cond

$$60,242 * 1.30 = 78,314$$
Land Cost under Building

$$332,400 - 78,314$$
$$254,085$$

Land Allocation

332,400	*	.7146	.2417	.0437
		~~237,533~~		
		55,963	18,928	3,422

Parking Analysis

Site Area   255,698
Building Area $-60,242$
            195,456

$$\frac{180,000}{275} = 654$$

275 × 400 = $\underline{-110,000}$
          85,456   Open Space

Parking Allocation
Yua Yua Tree   = 28   :   .1018
Bldg B   = 74   :   .2691
Bldg A   : $\underline{173}$:   .6291
             275

~~28 × 400~~
254,085
     *   .1018   .2691   .6291
       25,865   68374   159,845

Income Difference

269,064 · New A+B estimate
-207,733 · Old A+B estimate
61,331 - count as variable income

Income Statement   Optimistic

Gross Income · 269,064
       Vac   - 8,168
R.E. Tax   - 22,487
    Exp   - 18,157
                 220,252
   Dbt   - 131,797   = 1.67 Dbt Cov. Rito
                  88,454

                 207,733
                 - 8,168
                 - 22,487
                 - 18,157
                 158,921
                - 131,797
                  27,124

CASE 4 Testing Format

1. Basic Analysis
   Cash Solvency Analysis
   Appraised Value and Stated Mortgage
   Check Net Income / Market Value Ratio
   Default
   Payback

2. Investor Position
   Use Costs as indicated
   Component Depreciation
   Default
   Payback

213.048 ÷ 57610 = 3.70

2.50	× 1.0255	= 2.56	42688.
2.80		2.87	29289
4.05		4.15	24921
3.75		3.85	18460
3.90		4.00	16798
3.75		3.85	4615
5.50		5.64	15161
6.25		6.41	8615
4.05		4.15	4153
5.00		5.13	5128
6.25		6.41	4294
5.00		5.13	40293

214,416

.0928
195 9091 *

181804
22 882 + 207 733 = 230615

Run Results

	C	B	4
Default			
1.	.8959	.5777	.9122
Payback			
1.	.0579	.1803	.0507
10.	.4442	1.6625	.3967
I.R.R.			
1.	−.0946	.0264	−.1040
10.	+.0718	.1353	.0644