JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS

V. INDUSTRY SEMINARS AND SPEECHES - SHORT TERM

A. Appraisal Organizations

18. Dates and/or Groups Unknown

d. "One Day Feasibility Seminar Program Outline"

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ONE DAY FEASIBILITY SEMINAR PROGRAM OUTLINE

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2:30-3:00 FEASIBILITY AND MEHTODS OF FINANCIAL ANALYSIS

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EXAMINATION OF A CASE STUDY
FOLLOWING COFFEE BREAK

SUGGESTED INSTRUCTORS OUTLINE

Feasibility Analysis Seminar for Society of Real Estate Appraisers

To be used with:

1. Packet of mimeographed illustrations to be furnished each student in class.

2. A Guide to Feasibility Analysis, a booklet to be included in student kit.

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SUGGESTIONS TO INSTRUCTOR

1. The style of the author of the Guide Book and these lecture notes is to make a point of a principle and then to illustrate with a brief example with local color or a "war story". Real Estate people have long seemed to learn better from concrete examples than from extended "theory" courses. It is also recognized that lecturers selected to conduct a feasibility seminar have better examples from their personal experiences than the author and so these notes are designed to provide a framework for your illustrations.

2. Experience has shown that distribution of the Guide Book and study kit of reprints at the outset of the seminar distracts the participant from the speaker. Therefore, the study kit should be withheld until late in the afternoon when you may wish to use the two case examples in Appendix A and B. For classroom use a packet of illustrations for distribution to each student has been provided including a brief outline of the topics in this instructor's outline. While it is more expensive to "insti-print" these handouts, we have found them to be far superior to use of an overhead projector for the large groups which attend such a seminar. You may wish to augment these handouts with several pages of material appropriate for your case study example in the afternoon.

3. As you familiarize yourself with the outline and the Guide Book, it is suggested that you cut up a copy of the Guide Book and paste the examples you wish to use on the facing page of the notes to which it relates. Perhaps circle it with a color pencil and extend the loop to the specific outline item to which the clipping relates. In addition, paste in reminder notes for your own examples in the same way as your explanations should be more spontaneous and personal than would be true of dependence on the text materials.

4. Experience with this seminar has also indicated that the last hour or more might best be devoted to analysis of a specific case to indicate how its final form was determined significantly by the context for each of the components of feasibility or its failure could be traced because it failed to identify a significant constraint in its particular situation.

5. The first offering of the seminar spent a little time on several minor elements such as techniques for graphic displays, report printing, pricing, and other production questions. However, the majority of students seem to feel this was unnecessary as they could find plenty of local help to guide them on those matters. Therefore, the time allocated to each of the subjects treated in the outline is indicative of the strength of interest shown in each of these areas by test audiences. In one day you can only hit the mountain peaks which will permit appraisers to gain a new conceptual approach to real estate analysis.

SUGGESTED INSTRUCTORS OUTLINE

Feasibility Analysis Seminar for Society of Real Estate Appraisers

MILWAUKEE JOURNAL *Sunday, November 8, 1970*

8:45-9:30 A.M. WHAT IS FEASIBILITY ANALYSIS?

A. Introduction

1. Each real estate project is a creative solution to a problem, a concept, and an art form.

2. Judging an artistic endeavor requires definition of the context in terms of given constraints, of alternative forms for variables in the solution, and of the fit or suitability of the ensemble matching form and context. (See page 2 & 3 of the Guide)

3. Real estate involves attributes from such a variety of technical specialties that analysis of form and context often requires a team approach by professionals from related disciplines of disciplines of architecture, engineering, law, and planning.

B. Definition of the Elusive Quality "Feasible" (Refer class to Illustration #1)

1. 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.

2. Specific and limited resources are those of a specific viewpoint rather than a hypothetical prudent investor presumed by appraisal. Thus the viewpoint, assumptions, and implicit premises of traditional appraisal theory may not be appropriate.

3. Satisfaction of a specific viewpoint may be financially oblique, may be political or social, or may be subjective so that the test of feasibility is seldom the simple comparison of present value of financial returns to capital outlays required.

C. The basic nature of feasibility analysis is confused by the many report titles and types used in trade talk today. There is no such thing as an "economic study" but a variety of current report attributes are defined by Illustration #4.

1. Current terminology implies but confuses

   a. Viewpoint assumed
   b. Level of abstraction (See Illustration #5)
   c. Methodology of decision making

2. Classical economic motivation and appraisal of hypothetical or proposed projects should not be confused with feasibility. Feasibility works with a specific decision maker and his irrational as well as financial motivations.

D. Components of a Total Feasibility Analysis (See Illustration #2)

1. Objectives of the parties at interest and for whom the feasibility study is done.

   a. Strategic objectives and priorities
   b. Acceptable tactical alternatives

2. Market trends and opportunity areas

   a. Aggregate data on local population, employment, income, etc.
   b. National economic and political policies affecting incentive, timing, risk, etc.
   c. Industry trends relevant to the client
   d. Significant popular attitudes and trends

3. Alternative merchandising targets or market segments

   a. Special micro-markets with space needs
   b. Product and price specifications
   c. Effective demand for the product at a price
   d. Preferred merchandising methods

4. Legal-political constraints and alternatives

   a. Regulatory constraints on the parties at interest
   b. Regulatory controls on site and spece development
   c. Exogenous political structure influencing alternatives available

5. Esthetic-ethical constraints and alternatives

   a. Project relationship to immediate community
   b. Project obligations to space users
   c. Prime contractor-subcontractor relationships
   d. Client obligations to his preferred personal commitment pattern.

6. Physical-technical constraints and alternatives

   a. Space user requirements as to location and improvements
   b. Site attributes satisfying elements of item #1
   c. All other space product engineering considerations

7. Financial constraints and alternatives

   a. Time line or assumed calendar of events for financial assumptions
   b. Capital budget required and sources
   c. Operating budgets and revenue sources
   d. Direct cash profit expectations
   3. Indirect benefits and returns
   f. Measurement of risks and yields

E. Proper Titles for Feasibility Reports (See Illustration #3)

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. Compatibility 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.

F. Feasibility Analysis Requires Skillful Oversimplification

1. Real estate is so complex, analysis of concept is often mistakenly replaced by catalogs of detail.

2. Real estate development is emotional and leads to self deception.

3. Real estate research is expensive so that research dollars must focus on only critical issues.

4. Real estate information is so extensive, legitimate means must be found to exclude most of it from any report.

5. Therefore we need models for the decision process.

9:30-10:15 A.M. WHAT ARE THE ELEMENTS OF A DECISION PROCESS?

A. The Decision Machine Model (Refer class to Illustration #6 & 12)

1. Before analyzing specific problems or choosing an alternative course of action, it is useful to review how people think about problems, the nature of the decision process, and techniques for encouraging a fresh idea or a new way of seeing an old problem.

2. Collection of facts and analysis to identify possible alternative courses of action.

3. Consultation with client to determine his value system and objectives.

4. Development of criteria which reflect the client values and standard for screening alternatives for probability, profitability, and potential adversity.

B. Use Illustration #7 or Illustration #8 (pages 20-21 of Guide) to demonstrate derivation of decision machinery applied to real estate problems.

1. Instructor may wish to illustrate use of criteria for qualitative factors through weighting with points, minimum requirements, specifications or financial ratios.

2. Criteria selected determines information required, method of organization, and format of conclusions (decisions).

C. At the outset of his final written report and early in his analysis procedure, the analyst needs to specify in simple graphic form or a short statement (similar to the page of "salient facts" which often introduces an appraisal) the following limiting conditions:

1. The viewpoint and its values which he represents.

2. The strategic and tactical objectives of the viewpoint represented.

3. The components (ala Illustration #3) of the feasibility process provided by others and those assumed by the permission of the viewpoint represented.

4. The components (ala Illustration #2) of the feasibility analysis to be researched by the analyst.

5. Description of the decision model criteria by which all elements can be synthesized into selection of a course of action or statement of a conclusion.

D. Perhaps the most significant role of the analyst is to understand the values and objectives of the viewpoint chosen well enough that he can invent methods of assembling data to identify alternative outcomes and decision criteria that fit both the information available and the purposes of the decision.

1. An appraiser assumes the analytical models prescribed by professional appraisal practice; a feasibility analyst must develop a decision process for each study.

2. Teaching feasibility analysis is a problem of teaching creative modeling techniques that can be adapted to the great variety of real estate projects that one may be called on to analyze.

3. Models provide a method of stating the client's problems and objectives or simplifying the constraints of data collection procedures. Model building can operate through:

   a. A process of enrichment, i.e., elaboration of very simple models.
   b. Analogy and association with previously developed models.
   c. Alternating attention to partial aspects of the total solution.

E. Profit making is too generalized a statement of objectives and profit maximization is always greatly modified by a variety of management preferences and philosophies, particularly in regard to style of operations, business risk, and personnel management.

1. The essence of a business may be much different than it appears:

   a. A restaurant may be regarded as an entertainment business.
   b. Airport terminal a valve for regulating the flow of people, baggage and vehicles.
   c. A retail store as a theater in the round for the dramatic display of merchandise.

2. A source of objectives and constraints on acceptable alternatives may be found in the preferred business patterns of a real estate investor and the analyst should discover:

   a. Preferred methods of reaching and "locking in" its customers.
   b. Preferred method of maintaining supply sources and cost levels.
   c. Preferred scale of operations.
   d. Preferred time line or length of business horizon for investment cycle.
   e. Preferred methods of personnel recruitment control of motivation.
   f. Preferred static risk management methods.
   g. Personality attributes of investor management.

   (Instructor may refer to page 24-26 in Guide)

COFFEE BREAK

10:40-12:00 NOON - MARKET DATA VERSUS MERCHANDISING ANALYSIS

A. Market data analysis is concerned with aggregate data, time series, and geographic combinations of material on population, employment, income, or construction.

B. The demand-supply analysis which is implicit in any study with some quantitative analysis has varying degrees of dependency on aggregate-secondary data and specific-primary data with the balance swinging around the viewpoint of the decision maker as follows:

Levels of Demand Analysis

(1) Social needs in the abstract
(2) Demands of sub-class of market.
(3) Individual consumer motivation.

Decision Maker's Viewpoint

Levels of Supply Analysis

(4) Individual investor motivation.
(5) Sub-Class of investor - decision format.
(6) Planners compromise.
(7) Economic investment in the abstract.

C. Catalogs of aggregate data series are generally overdone by the analyst and represent too much emphasis on secondary data in the typical report. Its limited applications include:

1. Identification of growth factors in a general community or region.

2. Direction and momentum of real estate activity in a given locale.

3. Favorable timing and scale for development opportunities.

4. Vulnerable economic assumptions for community growth.

5. Supply and demandfor space units.

D. The key to effective use of aggregate data is the choice of an appropriate model with which to focus general data on a specific problem or reveal relationships between available information and projections or estimates of necessary inputs. (See Illustration #9)

E. Population, employment, and income figures are seldom useful unless refined and focused on the problem at hand: the submarket relevant to the site, the merchandising target, or client objectives.

1. For example, population growth to be accurately measured may need to be stripped of gain through annexation, university enrollments, or net increases in age groups not in the housing market such as 0-9 class.

2. For an excellent demonstration of reducing aggregate census, employment, and family income data to submarkets, a feasibility analyst ought to consider purchase of Projectron, a 10-year

housing market analysis for each SMSA prepared by W. R. Smolkin & Assoc., Inc., of New Orleans, Louisiana. It is available from the Builders Service Department of Barrett Division of Allied Chemical Corporation.

3. For an excellent presentation on selecting market data that is relevant, see Chapters 4,5,8, and 9 of An Introduction to Appraising Real Property, Prof. William Kinnard, Society of Real Estate Appraisers, 1969. (See Illustration #10)

F. When aggregate data are used, relationships should be carefully stated at the beginning of the report in the form of a model. The analyst becomes primarily concerned with devices for excluding or reducing aggregate data to that relevant to a praticular piece of property.

1. For example, definition of a primary trade area excludes the majority of community population and family income data; the data remaining within the trade area perimeter are further reduced by several factors to measure family purchases, purchases within the trade area, purchases at a particular site, and then for a particular line of goods.

2. Supermarket chains, filling stations, hamburger stands, and many other modern businesses have developed through experience ratios which can be applied to aggregate data to reduce it to more focused, more specific data relevant to a particular site or enterprise.

3. See Illustration #11 for Singer Housing Market Model.

G. Another characteristic of aggregate demand and supply data is that it generally represents variables that are beyond the control of the real estate entrepreneur. He can have little influence on general levels of demand and supply although he must understand their origin and create in his own plans capacity to meet the surprise potential in these uncontrollable factors as well as to insulate him from general market trends to some degree.

1. Therefore, traditional format of analysis begins with the big picture--aggregate analysis. Generally this is a mistake. One should begin with a particular product, price, or competitive opportunity and work back to general market data only to the degree that it may be relevant.

2. The art of free enterprise is creating a monopoly to some degree which requires careful recognition of very small submarkets, learning much a bout a few users with particular behavior and preference pattern.

3. Monopoly tends to insulate the enterprise from aggregate supply and demand and magnify dependency on a special submarket. For example, one developer of luxury apartment projects insists on paying a high price for the last open area in an exclusive residential neighborhood and then could care less about the apartment market in general. The supermarket chain that buys all three potential sites in a neighborhood, using the best for its own store and developing the others for some other use, is well protected against supply and

demand for groceries in the general community.

H. Merchandising analysis is the crucial set of assumptions in feasibility analysis, whether pushing a particular site or searching for a site for particular users.

1. Real estate, like any other business, is a cash cycle--cash-to-inventory to sales-to-accounts-receivable-to-cash. Before committing a dollar to inventory, one needs a clear idea of how that dollar will return in the form of sales.

2. First name the typical revenue unit, perhaps the method of measuring profit per sales unit.

3. For example, in land development you buy land by the acre so in testing alternative development plans, measure revenue per acre over time, not profit per lot as you may find it possible to sell your land faster and with a higher margin with 2-acre lots than with 1/4-acre lots.

4. For example, a public auditorium receives its income by the event rather than per seat, and feasibility depends on a distribution by audience size of different events which could be supplied the community.

5. A lumber company wishing to raise its income per acre of forest may find it more useful to merchandise extensive space for hiking or horseback riding than to sell 20 acres for cottage development. A camp site on five acres of ground renting for $50 for the summer net increases its income per acre by 5 or 10 times which is far more significant for a 100,000-acre resource than selling 20 lots for condominium for a net of $5,000 each.

I. Correct identification of the rental unit may also achieve correct identification of the customer. Real estate submarkets are so small it is generally possible to identify past or future potential customers for a real estate product by name. A little imaginative thought can suggest how to build a mailing list or meet the customer face-to-face for an interview. Until you name the prospect, it is often difficult to say much about his preferences.

1. The telephone book is a great customer list--particularly the yellow section and a reverse directory. For a medical office building it is possible to identify all doctors in town and eliminate those who are in new buildings, or hospitals, or universities or who are in the middle of their particular specialty market and have no reason to move. By matter of elimination, those who are left may be prime candidates and one should talk to them. The trick is knowing how to reduce aggregate data by certain criteria to relevant phones and numbers that are plausible if not precise.

2. If you wish to sell expensive homes to renters or rent expensive apartments to home owners, identify high income neighborhoods, and with a reverse directory for the current year and for some specific year in the past you can identify those whose leases may expire or who may be tired of maintaining the big home.

3. Use office building rosters of new buildings for names and last year's phone book to see where the new tenants came from; perhaps there are more where they came from. At least it will provide a suggestion of the characteristics of those actively seeking new space. Of particular interest will be those tenants at the older location who did not move and why they chose not to move as these are the customers potentially still in the market.

4. Customer spotting can be done by using accounts receivable, license plate spotting, magazine mailing lists, and club membership lists. Prospect identification is the key to real estate feasibility just as it is in the merchandising of cars, life insurance, or machine tools.

BREAK FOR LUNCH

1:00-2:00 P.M. PRIMARY DATA - METHODS OF BUILDING A CONSUMER PROFILE

A. Consumer research is the key to "monopoly" pricing and absorption rates.

1. The ultimate strategic objective of the firm within a free enterprise system is to create a monopoly to some degree either in fact or in the mind of the consumer. Nobody wants to compete as equals on price at the cost of reducing net after taxes.

2. Since it is easier to corner the local market for canary seed than to corner the national market in grain, as a general observation development of a monopoly requires careful delineation of many small submarkets, learning much about a few users with particular eocnomic, behavior, and preference patterns.

3. Dependency on a special submarket tends to insulate the enterprise from general supply and demand trends but nagnifies the importance of researching a consumer profile and critical characteristics of the submarket..

4. Stanley Edge has well recognized these implications in his manual on apartment house research called The Waiting List. He distinguishes between the necessity of attributes a project must have in a given rental class to be competitive, and identification of several features which could establish a competitive differential.

5. The key to the cash cycle and the hidden assumption of all feasibility analysis is the ability to merchandise a product. Cash flow begins with a sale and successful sales ultimately depends on the crucial fit of product, price, and merchandising appeal to the needs of a particular customer group and all these factors are subject to some control by the decision maker.

6. On the other hand, market data in terms of population, income, and employment are generally beyond the control of the decision maker except in the largest projects.

B. The merchandising of real estate space can generally be tied to retailing methods, particularly analogies to trade areas and percentage of market penetration. The creative analyst should generally be able to convert store location procedures to feasibility tests for virtually any kind of real estate establishment.

C. In this light the importance of naming the prospect, as suggested before lunch, becomes the critical part of a proper feasibility study. Identification of the prospect makes it possible to survey a selected sample of prospects to learn something about their behavior patterns, their preferences, their means to pay, their decision criteria. A profile on a customer is like a book on players of the opposing team - it reduces the uncertainty and increases your ability to control the game and that is the essence of monopoly attributes.

1. Some surveys of special real estate groups have been done by universities, state development agencies, or private firms for local planning agencies.

2. Outstanding work on apartment tenants, townhouse dwellers, and single-family home buyers has been done recently by Owens-Corning Fiberglas (See bibliography in Guide). Such a study may be all that is necessary to define product and competitive techniques for your particular residential real estate problem.

3. Various trade organizations and franchise firms have completed profiles of prospects or have computed ratios for reducing aggregate data to gross sales and net income for a variety of land uses (See bibliography in Guide).

4. Failing to find a useable profile, the analyst can do his own survey research, research in which sensitive listening to the consumer is more important than textbook statistics.

D. If the analyst has done a good job in definition, spotting, and naming the potential customer it should be possible to contact that group by mail or interview. The secret to a strong and therefore economical response is focusing the survey on those most likely to be interested in the subject matter.

1. The census tracts identify groups as to geographic areas in town and the reverse telephone directory will give you the names of those who live in selected areas within street number perameters.

2. Rather than survey everybody, sample the total number of names assuming a 25-30% response. (1,000 names would generate 250 replies)

3. Or screen the list with one or more additional tests such as those in a given income group who have lived there 5 years or more as indicated by matching a 5-year old reverse directory with the present

one, or by eliminating those in new buildings such as doctors already located in clinics or those in owner occupied comparable structures.

4. The yellow section of a telephone book is often the best method of naming a prospect. For example if a downtown office building could be expected to rent to attorneys, accountants, and investment people, the great majority of prospective tenants can be found in the yellow section. The total can be reduced by those in new buildings or in their own buildings or in the suburbs near special markets.

5. Potential competitive structures or comparable buildings and projects to that under study provide tenant rosters or addresses and a primary source of data from satisfied or dissatisfied tenants as well as the reasons for the recent moves.

E. Some brief guidelines in the construction of a survey questionnaire by mail would include:

1. Keep it short, focused on one or two questions as to preference. Some of the best surveys are done with a printed post card.

2. Use some questions for closed-end answers where the respondent need only check one or more preprinted answers.

3. However, always provide one or more open-end questions to give the respondent opportunity to say virtually anything as these comments may be revealing in terms of his motivation, preferences, disappointments, or advice he is giving his friends who may be in your market next year.

4. Have questionnaire printed on good bond using some neutral color such as buff with dark brown ink or yellow with black ink. If respondent is likely to be feminine use light pink or light green return envelopes; if male perhaps a tan or blue envelope. To code replies as to area or building sites use different types of 6¢ stamps on return envelopes. Allow at least 3 weeks for response.

5. For a good primer on how to do survey research on buyer behavior and preferences, obtain the paperback edition of Survey Research by Charles Backstrom and Gerald Hursh (Evanston, Ill.: Northwestern University Press, 1963).

F. Comparison shopping of competitive or comparable projects or unsuccessful projects should provide a definition of the competitive market standard.

1. Listen to other shoppers, present tense or those returning to their cars for consumer response.

2. Use appraisal techniques to catalog type, size, and quality of the competitive standards. (See Illustration #13)

3. Look for gaps in the price, geographic location, or amenity alternatives to buyers (at this point the instructor may wish to use examples on opposite page or from his own experience).

G. The competitive defferential may be found in almost any aspect of real estate but should not be confused with novelty or gimmicks. It may lie in location, price, space offered, features such as a fireplace or the curb appeal and privacy created by landscaping. (Again the best method of making the point is to use examples)

2:00-2:30 ETHICAL-ESTHETICS CONSTRAINTS ON FEASIBILITY

A. Real estate is the most regulated private industry in America, and therefore what is feasible is often that which is permissible within the law or obtainable within the realm of politics. Since both of these subject areas are sensitive to the spirit or ethic with which their ground rules are observed, much of what is feasible hinges on what is considered ethical by the client.

1. At the outset of the study the analyst should either receive permission to identify in his report the appropriate legal-political-ethical constraints or specify the absence of such analysis in a statement of critical limiting conditions and assumptions.

2. Too often feasibility is inappropriately restricted to measuring the dollar profits under a specific set of technical constraints without proper examination of the relationship of the project to larger questions of community, ecological, or esthetic considerations. The real estate professional is obligated to identify such possible constraints on conclusions as to feasibility or to require explicit release from examination of these broader issues.

3. If the analyst does not have authority to define these constraints as he sees them, then it would be preferable to have the client sign a specification as to the assumptions which would prevail in the analysis of feasibility.

4. Instructions from the client in feasibility analysis in writing are far more important than those that normally accompany appraisal assignments since feasibility is so specific to the client rather than the general market place or appraisal mythology.

B. Ethical questions for the feasibility analyst can involve four broad areas of concern:

1. The relationship of the project to the community and the environment as the community sees its own interest (with community defined more broadly than a few of its administrative officials).

2. The relationship of the project to the self-interest of the many subcontractors who will participate over and above the normal risks of an entrepreneur. There is an obligation upon the investor-developer to lead his subcontractor only within his capacity to conceive and carry through the project.

3. The relationship of the project to the self-interest of those who will occupy the project as tenants or as employees.

4. The relationship of the project to self-obligations of the client relative to his own self-image, his trusteeship responsibility to others, and the level of personal commitment that he is able or willing to make for the time-lime of the project.

C. The analyst should be concerned not only with existing zoning and possibilities of changing to a more favorable classification but also with the potential for an adverse change in zoning.

1. For example, a river front development site may be sought by regional planners as a conservancy district and opposition to or vompromise with the planners may alienate significant community elements.

2. Therefore, it is difficult to distinguish between what is legally feasible and what is politically and ethically advisable.

2:30;3:00 FEASIBILITY AND METHODS OF FINANCIAL ANALYSIS

A. While the cash cycle of real estate begins with effective merchandising, its impetus and momentum depend on attitudes and motivations of the investor.

1. The level of satisfaction and likelihood of achieving satisfaction is a function of the profit centers available to the investor.

2. Profit centers may include a variety of indirect benefits other than income, tax cover and capital gain including a captured market, change in public image, personnel recruitment, opportunity for product research and development, or a primary generator of activity for some other business.

3. Motivations and strategies of those supplying capital and technique must be known before there is a method to measure risk and yield.

B. Overall capitalization rates and net income multipliers mean very little in regard to feasibility analysis in depth. Appraisal justification of investment are suspect when the decision maker is simply presumed solvent and satisfied without demonstration as to where his satisfaction may be found.

1. Productive real estate is space at work over time and its capital equivalent is money at work over time. The common denominator is time or less abstractly, scheduling.

2. Schedule outlays and receipts from all sources during the dynamic process which is real estate.

C. Appraisal assumes instant development and rental and such a viewpoint may be appropriate for establishing the permanent loan ratio for the auditors but it is useless for analysis of financial feasibility of the plan. A plan can be a good idea but details as to its execution make possible a rational judgment on the likelihood of its success. Calendar of events should include at least:

1. Planning time until ground is to be broken.

2. Construction time of first stage.

3. Rent-up time of first stage.

4. Starting dates for successive stages.

5. The time line of physical events becomes the basic reference for financial planning and analysis of money over time.

D. A capital budget and operating budget must be estimated in order to measure and schedule financial outlays.

1. Capital budget allowances and estimating methods must be appropriate to the level of planning available.

2. Some capital budget items may also be profit centers as in federal programs where indirect cost allowances may be higher than those generally experienced by competent developers or may represent market values of land rather than acquisition costs, leading to "up-front profits" and feasibility for the developer but not a subsequent investor.

3. A source and application analysis of capital funds will also be revealing as to the nature and degree of risk incurred by each investment interest.

4. Capital costs of a project may also include or conceal carrying charges on staff, land, or equipment which would be incurred to some degree with or without a project so that these may be indirect profit centers to the developer during periods of relative idleness.

E. A forecast of cash receipts must also be related to the calendar of events, the time line of the real estate productivity cycle. Aside from the profit centers inherent on the capital budgeting side, there are four basic sources of cash from operational real estate.

1. The cash throwoff from operations which is subject to the federal income tax.

2. The equity cash which is the net result after debt retirement of taxes from a sale which may be subject to the more favorable capital gains tax more than to the income tax.

3. The cash surplus created by refinancing of the project in an amount greater than the debt balances to be retired and the cost of refinancing. Such a surplus is not taxable at all, with certain minor exceptions.

4. Cash resources conserved by the postponement of income taxes on earned income which would have been taxable were it not for title to the real estate.

5. Each of the above returns must be tentatively scheduled over the time line of the investor, generally on an after tax basis to permit aggregation for risk and yield analysis.

F. When doing a feasibility analysis for mortgage lending purposes analysis of the above is directly on a point of the loan analysis - capacity and motivation to repay the loan. It permits application of the pleasure, pain, and bail out theory in mortgage finance.

1. Review of capital budget and operating projections suggests the capacity to repay and the magnitude of pleasureable profits available to maintain the interest of the developer.

2. Analysis of the borrowers motivations will reveal the best methods of inflicting financial pain where some short term incentive to restore attentive management or provide additional funds is required. Profits in the long run are useless where there is no incentive to endure short term deficits.

3. Where profits or financial prods seem inadequate or merchandising analysis rests on implicit assumptions of market needs, a feasible or successful loan requires identification of an escape route for recovery of capital. Such a bail-out may involve reuse of the property for some other purpose following voluntary transfer or foreclosure or a workable method of executing a "disenchantment clause", i.e. a financial divorce or dissolution.

G. Financial satisfaction is a subjective quality which can only be suggested by a variety of financial ratios generated from the financial plans made explicit for the time line. Risk to reputation or credibility or self-image is often more significant in the decision process than the financial ratios but these elements are reflected in strategic and tactical objectives previously selected for the viewpoint to be analyzed.

1. Risk to the lender and the equity holder is first measured by the number of dollars exposed to loss.

2. The length of the exposure for the lender is measured by the term alone or by the time required for payments to equal the original advance.

3. The length of exposure for the equity holder is measured by the payback ratio, i.e. the point in the future where all cash returns to equity equal the original cash-type investment to equity. The shorter the period of time the sooner the developer-investor is protected from unknown unforeseen upsets to his critical assumptions. When viewed in this light tht lender is in a riskier position than the equity investor.

4. Variance in revenue-outlay forecast becomes a key measure of cushion for the lender and is suggested by determination of the default point, the ratio of all expected outlays including debt service to gross revenue per period.

5. Yield calculations in real estate are 10 years behind those in the science of capital budgeting for industry as a whole which leads to much confusion for investment valuation and forecasting.

a. Retrospective discounting
b. Prospective annual yield rates
c. Internal rate of return measures
d. Cost of capital discounting of outlays and receipts

F. As a working rule it is probably safe to say that risk criteria are contained in financial ratios and that yield rates are simply for comparative analysis of alternative plans for the same project or of entirely distinct investment alternatives. The comparison is on the order of magnitude differences rather than precise decimals and is a final decision point after the project has been made to fit all the other critical elements of context in each of the non-financial components of the project.

At this point experience with these seminars has shown that it it best to take the students through a specific case of the instructors choosing to show how each element in the context and the form of the project was woven into the report. The parking ramp case in the Guide simply demonstrates contest and grading of alternative solutions. After reviewing the parking ramp case it may be interesting to note that the worst solution was chosen as the decision could be made solely by the director of the Madison Parking Utility who was impatient to start and did not wish to delay a year in further property acquisition. The personality of the decision maker is a constraint which should appear in the value-objective statement of strategy.

SOCIETY OF REAL ESTATE APPRAISERS

ONE DAY SEMINAR ON FEASIBILITY ANALYSIS

Packet of Illustrations
for
Student Use in Classroom

Prepared by
Prof. James A. Graaskamp
School of Business
University of Wisconsin - Madison

FEASIBILITY STUDIES IN A NUTSHELL

1. Specific Definition of "Feasibility"

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 contest of specific constraints and limited resources.

2. Components of Feasibility Study

1. Objectives of the parties at interest and for whom the feasibility study is done.

    a. Strategic objectives and priorities.
    b. Acceptable tactical alternatives.

2. Market trends and opportunity areas.

    a. Aggregate data on local population, employment, income, etc.
    b. National economic and political policies affecting incentive, timing, risk, etc.
    c. Industry trends relevant to the client.
    d. Significant popular attitudes and trends.

3. Alternative merchandising targets or market segments.

    a. Special micro-markets with space needs.
    b. Product and price specifications.
    c. Effective demand for the product at a price.
    d. Preferred merchandising methods.

4. Legal-political constraints and alternatives.

    a. Regulatory constraints on the parties at interest.
    b. Regulatory controls on site and spece development.
    c. Exogenous political structure influencing alternatives available.

5. Esthetic-ethical constraints and alternatives.

    a. Project relationship to immediate community.
    b. Project obligations to space users.
    c. Prime contractor-subcontractor relationships.
    d. Client obligations to his preferred personal commitment pattern.

6. Physical-technical constraints and alternatives.

    a. Space user requirements as to location and improvements.
    b. Site attributes satisfying elements of item #1.
    c. All other space product engineering considerations.

7. Financial constraints and alternatives.

   a. Time line or assumed calendar of events for financial assumptions.
   b. Capital budget required and sources.
   c. Operating budgets and revenue sources.
   d. Direct cash profit expectations.
   e. Indirect benefits and returns.
   f. Measurement of risks and yields.

3. Feasibility Report Titles.

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. Compatibility 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.

Illustration #4

CLASSIFICATION OF REAL ESTATE STUDIES BY VIEWPOINT AND PREMISES

	Nature of Viewpoint Assumed (1)	Level of Demand Supply Analysis (2)	Use of Pre-existing Development Concept	Focus on Specific Parcel of Property	Decision Maker Values, Objectives, & Criteria	Estimation of Value	Calculation of Rate of Return on Equity Investment	Considers Non-financial Factors	Programmatic Content and Recommendation	Calculation of Absorption Rate	Economic Premise of Highest and Best Use
Feasibility Study	Specific Client	3-4	Yes	Yes	Client determined	NR (3)	Yes	Yes	Yes	Yes	NR
Appraisal	Class of Investor	2-5	Yes	Yes	Presumed	Yes	NR	NR	No	NR	Yes
Reuse Appraisal	Class of Developer	2-5	Yes	Yes	Presumed	Yes	No	No	Yes	Yes	Yes
Highest & Best Use Study	Class of Investor	2-5	No	Yes	Presumed	NR	Yes	No	NR	No	Yes
Land Utilization or Strategy Study	Specific Client	3-5	NR	NR	Client determined	No	No	No	NR	No	No
Land Use Study	Community as a Whole	1-6	No	No	Previously Specified	No	No	Yes	No	NR	NA
Market Study	Class of Investor	2-5	No	No	Presumed	No	No	No	No	No	NA
Marketability Study	Specific Client	2-3	Yes	Yes	Client determined	No	No	Yes	Yes	Yes	NR
Cost-Benefit Study	Community Segments	1-6-7	Yes	NR	Previously Specified	Yes	No	Yes	No	Yes	NR
Compatibility Study	Community Segments	NA(4)	Yes	Yes	Observer Standards	No	No	Yes	Yes	NR	NR
Economic Base Study	Community	6-7	NA	No	NA	No	NA	Yes	No	No	NA

NOTES TO ILLUSTRATION #4

(1) A class of investor is a hidden premise of market value which presumes multiple buyers and multiple sellers, each having relatively equal alternatives.

(2) The demand-supply analysis which is implicit in any study with some quantitative analysis has varying degrees of dependency on aggregate-secondary data and specific-primary data with the balance swinging around the viewpoint of the decision maker as follows:

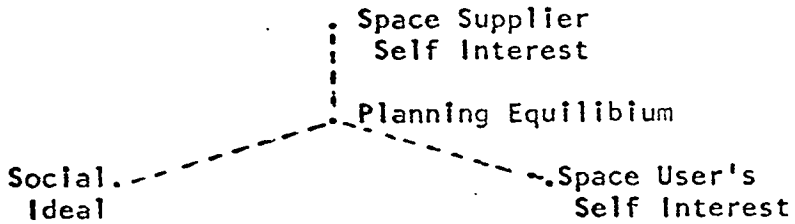
Levels of Demand Analysis

(1) Social needs in the abstract.
(2) Demands of sub-class of market
(3) Individual consumer motivation.

Decision Maker's Viewpoint

Levels of Supply Analysis

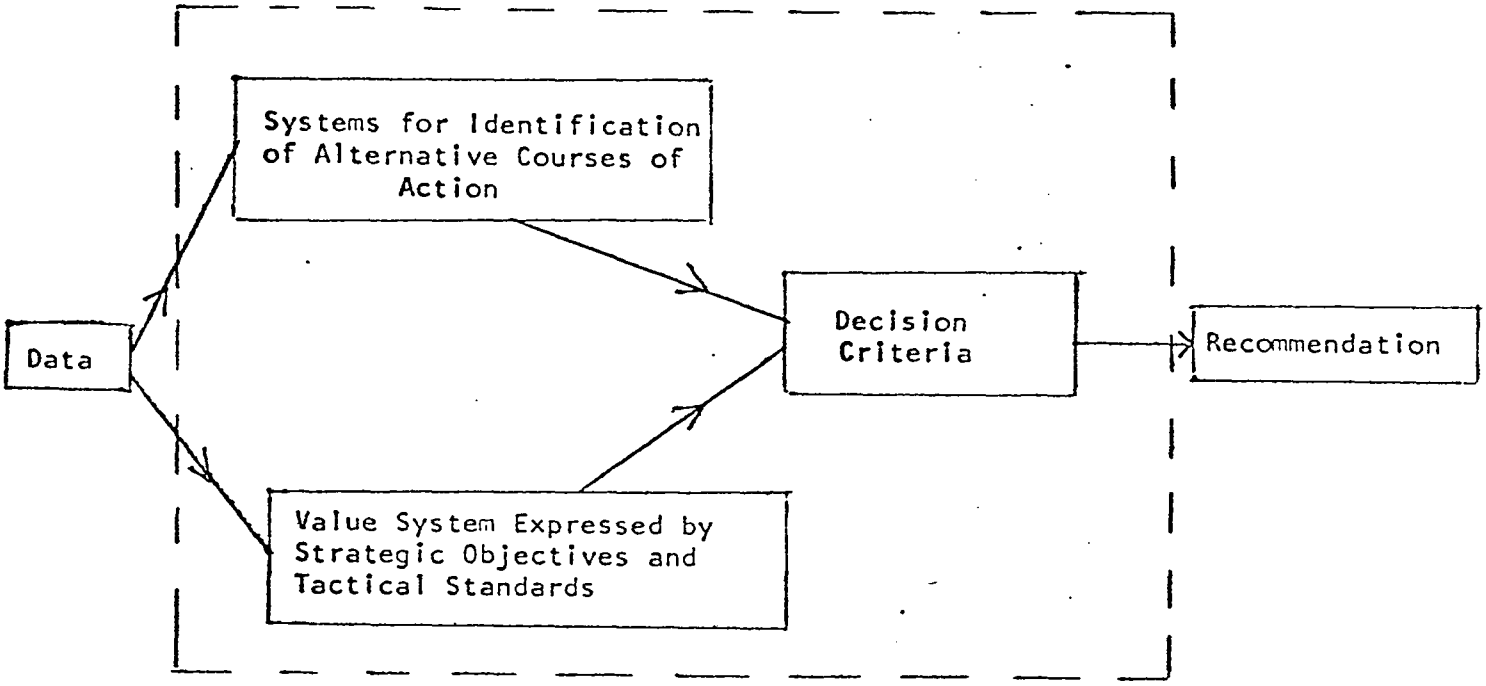
(4) Individual investor motivation.
(5) Sub-class of investor - decision format.
(6) Planners compromise.
(7) Economic investment in the abstract.



(3) NR stands for not generally required or characteristic with certain exceptions.

(4) NA stands for not applicable.

Illustration #6



7

ILLUSTRATION #7

LAND USE PLANNING OBJECTIVES, PRINCIPLES, AND CRITERIA

OBJECTIVE NO. 1

A balanced allocation of space to the various land use categories which meets the social, physical, and economic needs of the regional population.

PRINCIPLE

The planned supply of land set aside for any given use should approximate the known and anticipated demand for that use.

CRITERIA

1. For each additional 1,000 persons to be accommodated within the Region at each density, the following minimum amounts of land should be set aside:

Residential Land	Net Area	Gross Area
Low density	250 acres/1,000 persons	312 acres/1,000 persons
Medium density	70 acres/1,000 persons	98 acres/1,000 persons
High density	25 acres/1,000 persons	38 acres/1,000 persons

Governmental and Institutional Land	Gross Area
Regional	3 acres/1,000 persons
Local[e]	6 acres/1,000 persons

Park and Recreation Land	Gross Area
Regional	4 acres/1,000 persons
Local[i]	10 acres/1,000 persons

2. For each additional 100 commercial and industrial employees to be accommodated within the Region, the following minimum amounts of land should be set aside.

	Gross Area
Commercial land	5 acres/100 employees
Industrial land	7 acres/100 employees

7

OBJECTIVE NO. 2

A spatial distribution of the various land uses which will result in the protection, wise use, and development of the natural resources of the Region.

PRINCIPLE

The proper allocation of uses to land can assist in maintaining an ecological balance between the activities of man and the natural environment which supports him.

A. Soils

Principle

The proper relation of urban and rural land use development to soils can serve to avoid many environmental problems, aid in the establishment of better regional settlement patterns, and promote the wise use of an irreplaceable resource.

CRITERIA

1. Urban development, particularly for residential use, shall be located only in those areas which do not contain significant concentrations of soils rated in the regional detailed operational soil survey as poor, questionable, or very poor for such development. Significant concentrations are defined as follows:

   a. In areas to be developed for low-density residential use, no more than 2.5 percent of the gross area should be covered by soils rated in the regional soil survey as poor, questionable, or very poor for such development.

   b. In areas to be developed for medium-density residential use, no more than 3.5 percent of the gross area should be covered by soils rated in the regional soil survey as poor, questionable, or very poor for such development.

   c. In areas to be developed for high-density residential use, no more than 5.0 percent of the gross area should be covered by soils rated in the regional soil survey as poor, questionable, or very poor for such development.

2. Rural development, principally agricultural land uses, shall be allocated primarily to those areas covered by soils rated in the regional soil survey as very good, good, or fair for such areas.

3. Land developed or proposed to be developed without public sanitary sewer service should be located only on areas covered by soils rated in the regional soil survey as very good, good, or fair for such development.

Illustration #8

THE SCREENING MATRIX

Criteria / Industry 4-Digit SIC	High Growth, 1960-1975	Wages: Very High	Wages: High	Labor Intensive	Linkages: Most in Region	Linkages: Partially in Region	Linkages: Most Links Elsewhere	Labor: Professional	Labor: Skilled	Labor: Semiskilled	Port Orientations	Materials: Generally in Region	Materials: Partially Found in Region	Markets: Regional	Markets: National	Total
Weight:	10	10	5	5	8	5	2	2	4	6	2	6	3	3	5	
2611 Pulp mills	X		X		X				X		X	X		X		38
2732 Book printing	X		X	X		X				X		X			X	42
2911 Petroleum refining	X	X				X		X	X		X			X		36
3541 Machine tools	X		X	X			X	X	X						X	33
3673 Electron tubes	X		X	X			X		X						X	31
3831 Optical lenses	X		X				X	X	X						X	28

Source: Urban Land, "The Systematic Approach to Industrial Development Research and Calculating the Profitability of Industrial Land Developments," Vol. 29, No. 6, June 1970, p. 6.

Illustration #9

(9)

This tree of logic based on availability of data on number of Sunday "sightseer" automobiles in each Wisconsin county and the premise that attendance at similar Historic Society projects in three different counties would provide a ratio of attendance to Sunday sightseers. Historic Society did not expect to recapture capital but wished to generate an annual surplus equal to average interest on its endowment funds.

Source: unpublished MS degree paper by Robert W. Richardson, University of Wisconsin School of Business, 1969.

FLOW DIAGRAM
OF HISTORICAL SITE FEASIBILITY

Profile of Customer Location Decision Process

(Taken from: An Introduction to Appraising Real Property
By William N. Kinnard, Jr. & Byrl N. Boyce)

C. Location Decisions.

1. All location decisions involve judgments at three levels: the region or metropolitan area; the local community abd neighborhood; and the specific site itself.

2. The decision to locate in a specific region or metropolitan area is most basic, even though it is frequently taken as a given.

3. The choice of community and neighborhood is often more likely to be a conscious decision.

4. The selection of a specific site is generally given higher priority in the recollections of home buyers and business decision-makers, because it is at this level that the choice is actually made.

5. Location decisions are influenced by three sets of factors which motivate decision-makers.

   a. Cost-reducing factors: for example, reducing the friction costs of space involves reducing transportation costs (both money and time).

   b. Demand-creating (Income-generating) factors: these are almost exclusively considerations of commercial and industrial location decisions.

   c. Personal factors: these are sometimes regarded as non-economic factors, but they are usually subject to some market measurement.

6. Each location tends to be occupied by the use ond the establishment (type of improvement) for which it is best suited.

   a. Every location choice involves a balancing of desires, advantages, disadvantages and costs.

   b. Every location choice requires some compromise with the ideal. It is improtant to ascertain which desires are critical and necessary and which are simply "nice to have."

   c. In evaluating access, it is important to specify "access to what."

   d. Ratcliff: "Urban activities tend to gravitate to locations which promise the maximum economy of movement to and from related activities and places."

(11)

Illustration #11

A Systematic Approach to Housing Market Analysis
By Bruce Singer
Appraisal Journal, October 1967

To suggest the thrust of his essay consider his basic model for forecasting the demand for additional housing units of some particular type:

> If for a given area, the warranted number of housing units at any point in time may be expressed as:
>
> $$D = H + V_n$$
>
> Where: D = Warranted number of dwelling units
> H = Number of households in the market area
> V_n = Allowance for a normal vacancy level.

It follows, therefore, that the warranted increase in dwelling units from some base year, b, to some forecast year, y, may be represented by the following equation:

$$D = (H_y + V_{ny}) - (H_b + V_n)$$

To reflect conditions of surplus vacancy, demolition activity, and units under construction at the time of the analysis D, the equation may be adj sted as follows:

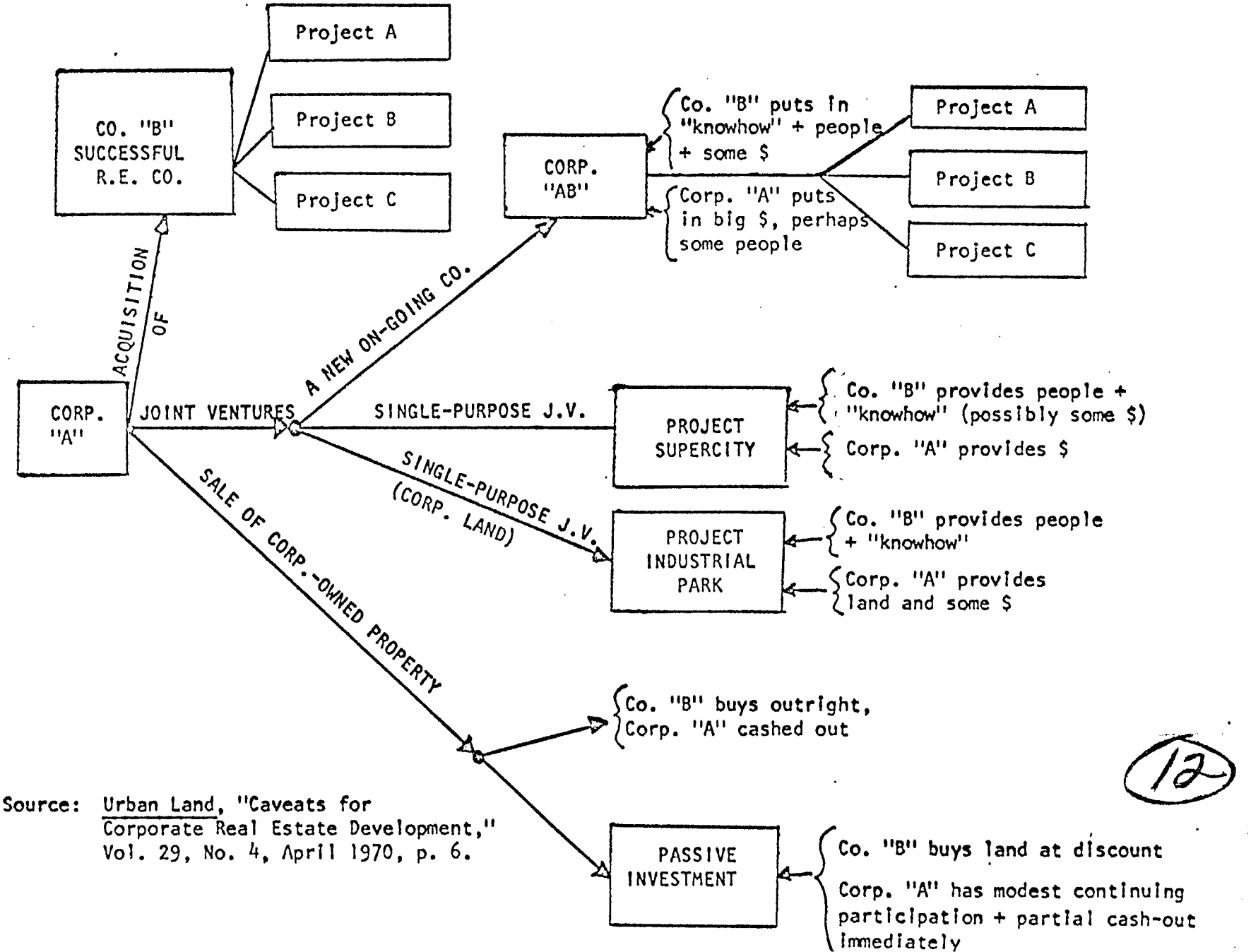
$$D = (H_y + V_{ny}) - (H_b + V_{nb}) - (V_s + C) + R_{b-y}$$

Where: V = Surplus vacant units
C = Units currently under construction
R_{b-y} = Anticipated demolitions during the forecast period.

The formula expresses, in literal terms, the warranted increment to the supply of dwelling units over a selected forecast period. Because the increment is calculated in terms of the growth in households, the warranted increase in housing space is identical to the additional demand.

Illustration #12

DECISION PATH FOR CORPORATE ENTRY INTO REAL ESTATE DEVELOPMENT



Source: Urban Land, "Caveats for Corporate Real Estate Development," Vol. 29, No. 4, April 1970, p. 6.

12

Source: The Waiting List, Stanley Edge, Owens/Corning Fiberglas

Illustration #13

CHECK LIST ANALYSIS
FOR
DEVELOPING A MARKET STANDARD

CHECK LIST	PROJECT #1 (photo)	PROJECT #2 (photo)	PROJECT #3 (photo)	PROJECT #4 (photo)	PROJECT #5 (photo)	MARKET STANDARD	COMMENTS
LOCATION ANALYSIS Direction & distance from town center	n ne, 10 mi	n, 12 mi	n ne, 15 mi	e, 20 mi	e, 10 mi	ne quadrant 10-20 mi from center	primary method direction of growth
Proximity to major shopping centers	2 mi	1 mi	less 1 mi	4 mi	2 mi	radius 3 mi	important
Proximity to public transportation	adjacent	adjacent	2 blocks	1 block	adjacent	adjacent	important
Relation to important employment centers	5 mi	8 mi	6 mi	10 mi	15 mi	15 mi radius	not too important inside 15 mi radius
STRUCTURE Architectural style	contemporary	contemporary	traditional	contemporary	contemporary	modern-contem	very important
Type of structure	garden	garden	garden	garden	garden	garden	no high rise acceptance yet
Size & color	2-story dark brick	2-story brick	3-story blue brick	2-story red brick	2-story wood red brick	2-story colored brick	2-story unusual colors imp.
Special materials	lots of glass	glass					
Entrance & name	brick wall large logo	small "watch tower"	none	"wishing well" well done	contemporary sign lots of color	imaginative entrances	must relate to architecture
AMENITIES Security	spot lights	lights	lights & patrol	lights	lights	lights	patrol not too important
Services	"7-11" shop	central TV outlet	none	bus to downtown	none	small shop	investigate
Parking	100% covered	80% covered	80% covered	50% covered	75% covered	75-100% covered	important