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## Australian lecture series. 1984

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**ateway  
travel service**

2203 International Lane  
Madison, Wisconsin 53704  
Phone (608) 241-3878

DAY TO DAY ITINERARY

**1984**

February 10      Leave Madison      7:10AM      Northwest 151  
(Friday)      Arr. Minneap.      7:57AM

Lv. Minneapolis 11:00AM      Northwest 7  
Arr. Tokyo      4:40PM  
(February 11)

February 11      Lv. Tokyo      6:00PM      Northwest 17  
(Saturday)      Arr. Hongkong      9:55PM

HOTEL:      Shangri La  
                 64 Mody Road  
                 Kowloon, Hong Kong      Phone: 3-7212111

February 17      Lv. Hongkong      4:00PM      Singapore 7  
(Friday)      Arr. Singapore      7:30PM

HOTEL:      Shangri La Singapore  
                 Orange Grove Road  
                 Singapore 1025      Phone: 7373644

February 21      Lv. Singapore      10:15PM      Qantas 6  
(Tuesday)      Arr. Melbourne      8:30AM  
(February 22)

February 22      HOTEL: Windsor Hotel  
(Wednesday)      103 Spring Street  
                 Melbourne, Victoria      Phone: (03) 63 0261

February 29      Lv. Melbourne      8:00AM      Ansett 8  
(Wednesday)      Arr. Sydney      9:10AM

HOTEL:      Hilton International      Phone:  
                 259 Pitt Street  
                 Sydney, New Australia 2000

March 4      Lv. Sydney by car, driving to Canberra  
(Sunday)

HOTEL:      Travel Lodge Parkroyal      Phone: (062) 49 1411  
                 102 Northbourne Avenue  
                 Canberra 2601      (Arrive by 6PM or call ahead)

March 6           Lv. Canberra       9:35AM       Ansett 354  
(Tuesday)       Arr. Sydney       10:10AM  
                  Lv. Sydney       11:50AM       Ansett 14  
                  Arr. Brisbane     1:05PM

HOTEL:     Parkroyal Motor Inn  
              Alice & Albert Streets  
              Brisbane 4000           Phone: (0772)21.3411

March 9           Lv. Brisbane       5:35PM       Ansett 54  
(Friday)        Arr. Cairns       8:20PM

HOTEL:     (Not arranged by Gateway Travel)  
              Cairns Holiday Inn  
              Sheridan & Thomas Streets     Phone: (070) 514611  
              Cairns 4870

March 12          Lv. Cairns        5:00PM       Ansett 1039  
(Monday)        Arr. Brisbane     7:35PM

HOTEL:     Parkroyal Motor Inn  
              (same as March 6-9 above)

March 13          Lv. Brisbane       8:00AM       Air New Zealand 142  
(Tuesday)        Arr. Auckland     1:05PM

HOTEL:     No hotel requested in Auckland

(Traveling from Auckland to Wellington by surface)

March 18          Lv. Wellington    4:45PM       Qantas 65  
(Sunday)        Arr. Sydney       6:00PM  
                  Lv. Sydney       6:50PM       Ansett 254  
                  Arr. Adelaide     8:15PM

HOTEL:     Travel Lodge Park View  
              208-223 S. Terrace           Phone: 2234355  
              (facing parklands)

March 20          Lv. Adelaide       10:45AM       Ansett 250  
(Tuesday)        Arr. Perth       12:20PM

HOTEL:     No hotel requested in Perth

March 23      Lv. Perth            12:00Noon      Ansett 245  
(Friday)      Arr. Sydney        5:55PM  
                 Lv. Sydney            8:30PM        Qantas 11  
                 Arr. Papeete        7:35AM  
                 (Arrival is still on March 23)

HOTEL:      Tahiti Beachcomber  
                 P. O. Box 6014                      Phone: 25110  
                 Faaa Papeete

March 26      Lv. Papeete            3:30PM        S. Pac. Isl. 810  
(Monday)      Arr. Honolulu        8:45PM

HOTEL:      Hilton Hawaiian Village  
                 2005 Kalia Road  
                 Honolulu, Oahu, Hawaii 96815

March 27      Lv. Honolulu            4:50PM        Northwest 22  
(Tuesday)      Arr. Minneapolis    5:52AM  
                 (March 28)

March 28      Lv. Minneapolis        10:35AM      Ozark 621  
(Wednesday)      Arr. Madison        11:20AM

Remember to check in Minneapolis to see if  
Republic has changed equipment on their  
earlier flight to Madison.



January 6, 1983

Mr. James A. Graaskamp, Chairman  
Real Estate & Urban Land Economics  
University of Wisconsin School  
of Business  
1155 Observatory Drive  
Madison, Wisconsin 53706

Dear Jim:

Just a note to let you know that I have rejoined First Chicago to establish a real estate lending capability for the bank in Asia. Joanna and I will be moving to Singapore as a base of operations and from there I will attempt to tackle such diverse markets as Australia, Indonesia, Hong Kong, the Philippines and China.

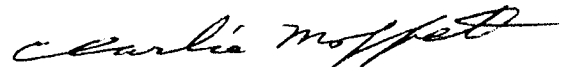
My former days of travel in this country will look like short commuter hops, I suspect, and I will undoubtedly be cured of ever wanting to get on a plane again.

We look forward to a challenging professional and cultural opportunity in the Pacific Basin, although we will miss the regular contact with friends in this country.

I hope that you will plan to visit us any time you find yourself in the Orient. After February 1, 1983, our address will be:

The First National Bank of Chicago  
150 Cecil Street  
Singapore 1, Republic of Singapore  
Telephone: (direct dial from the U.S.)  
011 65 2239933

Best personal regards,



Charles B. Moffett  
Vice President

CBM:gws



# Massey University

DEPARTMENT OF AGRICULTURAL ECONOMICS AND FARM MANAGEMENT

PALMERSTON NORTH, NEW ZEALAND

TELEPHONES 69-099, 69-089

In reply please quote:

14 February 1983

Professor James Graaskamp,  
School of Business,  
University of Wisconsin,  
Madison,  
Wisconsin 537061,  
U.S.A.

Dear Professor Graaskamp,

I was delighted to see your letter of January 15th to Bob Reichert and read of your plans to visit New Zealand in February - March 1984. The day I spent with you in Madison three years ago was one of the highlights of my trip to the U.S. and a source of inspiration for my subsequent teaching and research.

Bob Reichert will be writing to you shortly with some ideas about your visit to Massey University and Palmerston North. You will gather that we are both very enthusiastic and I am sure there will be a lot of interest here in a seminar series. Bob will also be able to explain how we can take care of your travel and accommodation needs in this area.

Kind regards,

Yours sincerely,

*Bob Hargreaves*  
R.V. Hargreaves  
Snr. Lecturer in Valuation



# Massey University: BUSINESS STUDIES DEPARTMENT

PALMERSTON NORTH, NEW ZEALAND

TELEPHONES, 69-099, 69-089.

In reply please quote: RJR:PR

14 March 1983

Professor J A Graaskamp  
School of Business  
University of Wisconsin  
1155 Observatory Drive  
Madison  
Wisconsin 53706  
UNITED STATES OF AMERICA

Dear Professor Graaskamp

Thank you for your letter dated 15 January 1983. Your schedule seems to work in well with our seminar period. Particularly during the second half of February. I think that Bob H and I can set something up at Massey University (and with the Institute of Valuers) to take advantage of your stay in New Zealand.

We could provide accomodation(?) and transportation during your stay in Palmerston North. In the past, we have had Paul Wendt, Mike Crean (University of Denver) and various other well known educators in real estate appraisal visit us. My home is always open to fellow appraisers, lecturers and students. At present we have a student from Arizona State staying a few days plus two graduates from the University of Denver.

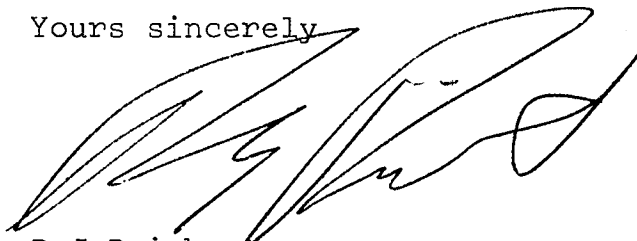
You mentioned Fraser, Squirrell and Milne. They have not been here yet but the Head of the Accountancy Department of RMIT stayed with us a few months ago. This is a small world (Australasia) at least in population so everyone tends to know everyone else in the real estate area. I know that you will have an impact on the academic scene. You will also enjoy New Zealand.

Can you give us a package price for two days of seminar assuming that we will take care of the expenses such as food, accomodations, and transportation. We are currently in a budget "crunch". I feel that we can raise \$1000 to \$1200 thru the industry. With one seminar here in Palmerston North and the main one in Wellington (where we could invite the valuers as well as the members of the Property Management Institute). Our school year at Massey University will not start until March so there would be no teaching during February.

I'm glad Janet Tandy suggested that you contact me. You and I met about ten years ago in Minnesota, when I was the president of that AIREA chapter. We have since had correspondence on your proposed EDUCARE course in Hawaii (which fell through) and now we are looking forward to your visit. Can you give us a firm committment for the 22<sup>nd</sup> and 23<sup>rd</sup> of March 1984?

Bob H and myself will make sure that you and Jean Davis feel right at home here in Palmerston North. In the meantime I propose to be in Minnesota on 1 August 1983. If you are available I will drive to Madison to discuss your impending visit.

Yours sincerely

A handwritten signature in black ink, appearing to be 'R J Reichert', written in a cursive style.

R J Reichert  
Senior Lecturer in Property Management



South Asia Area Headquarters  
150 Cecil Street  
Singapore 0106  
Republic of Singapore  
Tel: 2239933/2245770  
Telex: RS 24530 CGOBANK  
Cable: FSTCHICAGO

**CHARLES B. MOFFETT**  
Vice President

July 26, 1983

Mr. James A. Graaskamp  
University of Wisconsin  
1155 Observatory Drive  
Madison  
Wisconsin 53706  
U.S.A.

Dear Jim

Many thanks for your note of July 7 and I will certainly look forward to seeing you and your colleagues when you are in Singapore next March. Hotel rooms will be no problem as there are a number of good quality hotels in Singapore that are suffering from low occupancy due to a combination of overbuilding and a recent downturn in tourist traffic. My recommendation would be the Shangri-La Hotel, a brochure of which I am arranging to send to you, or else the Hyatt, Intercontinental Pavilion, or Mandarin.

My secretary, Sylvia Koh, has confirmed that each of them is wheelchair accessible and we will make a tentative reservation for you at the Shangri-La. My recommendation, however, would be that you plan to stay at whatever hotel the conference or lectures are to be given at.

I note that you will be here over that weekend, so please plan to be our guest or lunch or dinner or whichever day fits best into your schedule as the time gets nearer.

In any case, if it is of help, our telex number is RS24530 CGOBANK and Sylvia will be happy to pass on messages to any of your contacts here that you might need to contact from time to time.

I will be in Miami October 26 to 29 for the ULI sessions and will look forward to visiting with you then if you are also planning to attend.

Best Personal Regards

Charles B. Moffett

PS: If you have not already read about it, the Hong Kong Bank building might be of interest to you, in that their cost per square foot (not including land) appears to be coming in at around US\$900 per square foot.

20/53 Pelham Street  
Carlton, VIC, 3053  
AUSTRALIA

27 July 1983

Dear Jim and Jean,

Greetings from cold and wet Melbourne--July is the first month in 15 that the rainfall has been above normal--of course, I moved here. Perhaps I should sell myself as a rainmaker. Getting out of that cesspool at Hawkesbury improved my mental condition considerably--unfortunately, coming down for only a five-months contract at the Royal Melbourne Institute of Technology probably has made it much worse--not the people but the damn politics of academia. Plus I spent nearly \$2,000 that I do not have on the move and associated expenses. So the decision to leave Australia before 10 December 1983 has become virtually final--under the taxation treaty I will collect all income tax paid in Australia and then pay about 55 percent of that in U.S. Income taxation. I am to present a paper at the Second South East Asia Survey Congress (Hong Kong group of Royal Institution of Chartered Surveyors) during the week of 5 - 9 December and then to San Francisco for the AREUEA annual meeting. After that, who knows??? I would not mind going back to New Zealand to the University of Auckland but the agreement on the new degree course there was NO additional faculty. You will find Ken Christiansen a most delightful person (so too his wife Betty). He is of Danish extraction, educated in France and went to university in England--he was the founding president of the Property Management Institute in New Zealand. Palmerston North is an excellent example of "Kiwi Town"--I will let Bob Reichert explain just what that means but Massey is in a lovely setting and you will be there in the equivalent of August so you will not freeze! No, I don't use paragraphs--it just flows and flows and flows. In Sydney, arrangements are being handled by Dr. R. T. M. Whipple of the Sydney University Land Economy Society--so much better than any association with Hawkesbury!. Tom you will think is English but fair dinkum he is an Australian but of interesting roots--the Whipples were from Boston, one signed the Declaration of Independence and there is some association with John Paul Jones and the U.S. Navy. Although the natives will not admit it, Australia and New Zealand are Third World countries where one can drink the water, the natives speak English (sorta) and the scenery is unbelievable. In both places my salary expressed in U.S. dollars suffered a 20 percent or more devaluation so I ain't too impressed with the economic policies and gross mismanagement of the governments in either country. I am enclosing two brochures about accommodations in Melbourne--both are well-done restorations of 1880's structures and far more charming than the Regent or Hilton. Cathleen and I had a most delightful Sunday dinner (noon) in the Grand Dining Room--you must have a meal there, I know you will enjoy your trip and not to worry!!! I hope to see you in San Francisco.

Best regards,

*Janet*



# JURONG TOWN CORPORATION

Jurong Town Hall ● Singapore 2260 ● Republic of Singapore

Telephone 5600056 ● Cables: "Jutown" ● Telex: RS 35733

Our Ref: October 21, 1983

Your Ref:

Professor James A. Graaskamp  
Chairman, Real Estate & Urban Land Economics  
Graduate School of Business  
University of Wisconsin  
1155 Observatory Drive  
Madison, Wisconsin 53706  
USA.

Dear Professor Graaskamp

I last wrote to you in February this year, offering to show you our industrial parks in Singapore and subsequently realised, from your letter to me dated February 25th, that your intended visit to Singapore is scheduled for the early part of next year. Well, I have not forgotten about this, and now that 1984 is drawing near, I thought it might be timely for me to write to you again to extend the same invitation to visit us should you be coming to Singapore. In other words, my offer to meet you and show you around Singapore, as stated in my letter of February 8th, still stands.

I would suggest that a good time to come to Singapore would be sometime in January. The University examinations begin around the last week of February, lasting through the second week of March, after which the students have a 3-month vacation while the staff will be busy marking the exam papers. It may be a good idea to contact the following people to inform them of your intended visit so that some kind of program may be drawn up for you:

\* Professor Micheal Greaves,  
Head, Department of Building & Estate Management  
National University of Singapore,  
Kent Ridge  
Singapore 0511.

f \* Mr Lim Lan Yuan  
President, Singapore Institute of Surveyors & Valuers,  
Singapore Professional Centre  
Block 23, Outram Park #03-129  
Singapore 0316.

I'm sure we will all look forward to your visit.

I met Professor William Shenkel when he came to Singapore in July this year and told him of my interest in pursuing a Masters degree in real estate in the USA. He encouraged me to apply to the University of Georgia and also mentioned that the University of Wisconsin, Madison, would also be a good place to consider.

My GRE scores are 730, 550 and 500 for the Quantitative, Verbal and Analytical tests, respectively. My GMAT score is 520. I shall be taking the TOEFL test in November. I hope to be admitted to university in September (Fall Semester) 1984. I would be more interested in pursuing the MA or M.Sc in Real Estate/Urban Land Economics. It is likely that the Jurong Town Corporation will sponsor me. My research interest is industrial development and the management of industrial parks. I would also be interested in advanced appraisal techniques and real estate finance. I would be most grateful if you could send me the brochures and application forms for the MA or M.Sc (Real Estate) course. If my GMAT score of 520 would permit me to be considered for the MBA program, I would also appreciate your sending me the application materials.

Please feel free to contact me regarding any arrangements you wish to make for your visit to Singapore. I shall look forward to hearing from you.

With warmest regards,



HAROLD TAN  
Lands Officer (Valuation)  
Lands Department,  
JURONG TOWN CORPORATION.





## SYDNEY UNIVERSITY LAND ECONOMY SOCIETY

C/O DEPARTMENT OF TOWN AND COUNTRY PLANNING,  
UNIVERSITY OF SYDNEY, N.S.W., 2006  
TELEPHONE 692 2702 TELEX AA20056

2nd November, 1983.

Dr. James A. Graaskamp,  
Professor of Real Estate & Urban Land Economics,  
University of Wisconsin,  
202A Breese Terrace,  
Madison,  
Wisconsin, 53705,  
U.S.A.

Dear Dr. Graaskamp,

I guess you've heard from Mr. Maurice Squirrell that I'm your contact man for the Sydney leg of your lecture tour of the Antipodes. Your Sydney presentations are being sponsored equally by the NSW Division of the Australian Institute of Valuers, the NSW Division of the Building Owners' and Managers' Association and by this Society.

My purpose in writing is to extend to you a warm welcome, to establish communication between us and to seek your confirmation of certain matters so detailed planning can proceed. Let me itemize the matters which I think should be cleared between us and the information we require.

1. Dates. We have a tentative booking at the Hilton Hotel in the Sydney CBD for March 1st and 2nd, 1984. Would you please confirm these dates as soon as possible so we, in turn, can finalize arrangements with the Hilton? It is a modern international-standard hotel with adequate capacity to hold the anticipated number of delegates seated "class-room" style - i.e., groups at desks. If numbers exceed expectation, we can expand into the ball room. The hotel has basement car parking with elevator access from the car park to the lecture floor. Please let me know what you will need in the line of audio-visual facilities.
2. Financial aspects. We are to meet your costs set at US\$1,000 per lecture day together with costs associated with:
  - . local advertising and promotion
  - . provision of xerox copies of seminar materials to participants (see 3b below)
  - . catering.
3. Given you have only two days in Sydney and can therefore present only four modules, we have to make a choice out of the set of seven. So we can make a more informed decision and firm up our budget, would you please forward me:

- a. some information on the scope and content of each and
  - b. the number of pages of materials associated with each module which are to be distributed to delegates. We need to estimate this fairly accurately as we are seeking a sponsor who will handle the xeroxing for us.
4. This could be an opportune occasion to sell copies of
- a. The Appraisal of 25 N. Pinckney
  - b. Ratcliff Readings on Appraisal.

If you could ship out 50 of each, what would be the total cost (purchase plus surface mail) ? I'll get back to you on this just as soon as I hear from you so there will be adequate time if the idea is feasible.

If there are any matters from your end relating to your stay in Sydney, please don't hesitate to write. I work at home a lot so it's best to use the following address:

24 Melaleuca Drive,  
St. Ives,  
Sydney, NSW, 2075,  
Australia.

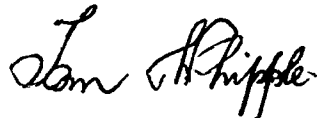
My telephone number at home is (02) 449 4129.

I would like you to know how much we are all looking forward to your visit: our only regret is that it is too short. If there is anything I can do on the personal level to make your stay comfortable and enjoyable, you must not hesitate to let me know.

Enclosed are some "touristy" 'photos of Sydney which will give you an idea of what you're heading to.

With kindest regards,

Yours sincerely,



(Dr) R.T.M. Whipple,  
President.



Massey University

DEPARTMENT OF AGRICULTURAL ECONOMICS AND FARM MANAGEMENT

PALMERSTON NORTH, NEW ZEALAND

TELEPHONES 69-099, 69-089

In reply please quote: RVH:ROM

17 November 1983

Professor J.A. Graaskamp,  
School of Business,  
1155 Observatory Drive,  
Madison,  
Wisconsin 53706,  
UNITED STATES OF AMERICA.

Dear Professor Graaskamp,

It is good to hear that your plans for a journey to the Antipodes next year are well under way. We will be very pleased to see you at Massey next year. Bob Reichert is working on this part of the schedule.

I am leaving New Zealand in about a week for a period in the U.S. Our family will be based in Oakland, California through January 21st. While in the U.S. I plan to fly to Chicago. I would also very much like to visit with you at Madison. At this stage I plan to be in the Chicago area in the first week of January. I will contact you again when in the U.S. to arrange a convenient time for a visit to Madison.

My contact address in Oakland is as follows:

C/- E.H. Harris  
5919 Pinewood Road  
Oakland  
California 94611      phone (415)547-2115

Kind regards,

*R.V. Hargreaves*  
R.V. Hargreaves,  
Senior Lecturer in Valuation.



# THE SOUTH AUSTRALIAN INSTITUTE OF TECHNOLOGY

NORTH TERRACE, ADELAIDE, S.A. 5000. TELEPHONE (08) ~~223 3066~~ TELEX 82565  
2280352

25th November, 1983

Professor J.A. Graaskamp,  
Chairman,  
Department of Real Estate  
and Urban Economics,  
School of Business,  
University of Wisconsin,  
MADISON, Wisconsin, 53706,  
U.S.A.

Dear Professor Graaskamp,

Thank you for your phone call it was very much appreciated. Unfortunately there is only one flight time from Adelaide to Perth on Tuesday 20th March and it is at 10.50 a.m., which doesn't allow time for a third module. We can discuss how you would like to spend the Tuesday morning when you arrive in Australia.

While in Adelaide we would like you to present module 4 Feasibility Analysis and Real Estate Consulting and Module 5 Real Estate Investment Analysis.

I am enclosing Maurice Daly's 'Sydney Boom Sydney Bust' which, although relates to Sydney, has parallels in other Australian cities over the same period. Also enclosed is Leonie Sandercock's 'Cities for Sale', which gives a general background to our major cities.

Rost and Collins is included in the package, but please don't be too critical of Australian education following your reading of the book as it was developed from a correspondence course.

A copy of the Jones Lang Wootton Australian Property Review, National Mutual Life Office and the A.M.P. our largest life office, annual reports may be of some assistance in gaining a background to the property market in Australia.

Our course accreditation document is enclosed, as it may be helpful to have some knowledge of real estate and valuation courses. The levels of the courses range from Associate Diplomas at Departments of Further Education to Degrees at Colleges of Advanced Education.

...2

3. Paper on Tax:

Bob Webster, one of my lecturers has put together the notes on the Australian Tax System. Dr. Wipple has been given a copy and may make some further observations. (Bob is the lecturer expecting to do your inter-session course next year). Paper is attachment 5.

4. Seminar Topics:

You will see from the draft advertisement for Australian Property News (attachment 3) that the topics in each location are almost settled, as follows:

<u>Melbourne</u>	<u>Sydney</u>	<u>Brisbane</u>	<u>Adelaide</u>	<u>Perth</u>
1 through 7 (plus 1 for students only)	3, 4, 5, 6. (tentative)	1, 2, 4, 7.	4, 5.	1, 4.

Masters of your outlines for reproduction here are due 'by the first of the year'. You can simply send them all to me for distribution, or separately to each location.

5. R & R - Let's get down to the critical activities

Have you given any thought as to how you would like to spend your R & R. Some arrangements may need to be made by us and naturally I would only want to conform to your wishes. A few ideas with comments:

- a) Visit to Squirrell ranch. Whilst mandatory for Jean at some stage, we would be delighted to entertain you on either the Saturday or Sunday afternoon. Our place is ideally suited to an outdoor B.B.Q. (beer and steak) and could include just your party, or valuation lecturers and families, a larger grouping of lecturers, or a group of students.
- b) We also invite you to speak at a function (dinner) to launch our first graduate course in real estate. Bob Milne is handling this course. A grouping of the first set of students, industry leaders and the press with a 15 minute "Trends in Real Estate Education in the U.S.A." or something similar from you would be appropriate, timely, and an honour for us. Course brochure is attachment 4.
- c) Other activities might include all, some or none of the following:
  - lunch with staff of our Department (about 24 members, 5 valuers)
  - lunch with staff of Faculty of Business (up to 70 members though not all would attend)
  - meeting with RMIT management who are responsible for providing facilities for the handicapped. I have W1 Alumnus articles on McBurney Resource Centre and could ascertain interest in people here meeting with you.

(2)

I don't know whether you have made any accommodation arrangements in Adelaide, but if not, I would suggest the Adelaide International Hilton, which has only recently been completed and has the full facilities that you would require.

If I can be of any further assistance, please let me know.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Graeme J. Martin'. The signature is fluid and cursive, with a prominent flourish at the end.

GRAEME J. MARTIN,  
Head of Valuation.

30th November, 1983.

Dr. James A. Graaskamp,  
Landmark Research Inc.,  
4610 University Avenue,  
Suite 105,  
Madison, Wisconsin,  
U.S.A. 53705.

Dear Jim,

Good to hear your voice and enthusiasm last week. No snags at this end with good initial response. A number of items for review or interest:

1. Schedule:

- a) Latest Australian leg schedule attached. - attachment 1.
- b) Travel from Brisbane to Cairns on Friday, 9th March, 1984. John McAuliff, the Queensland contact is happy for you to take the last flight that evening to Cairns. It may mean starting the day at 8.00 a.m. and/or you talking more quickly than usual, however, have your agent do the booking on this basis.

2. Travel by Car:

- a) Toyota 4 W.D. Land Cruiser.

I agree that it will maximize flexibility to hire this vehicle in all or most cities for the whole stay. However, in addition, we have made enquiries about the use of multi-purpose taxis in each city which may prove more efficient on seminar days to move you from hotel to venue. In some cases these are subsidized by government, at least to normal taxi fare, and in the case of Sydney, the Government have indicated that they will offer you the service at their cost as a gesture to international goodwill. (after Grenada....?)

The only form you have to feed the bureaucracy with is in Victoria and is attached. (attachment 2). Could you have it filled in and returned to me please.

- Meeting with Victorian Valuer-General (responsible for Government valuations, including taxation valuations and leader in computer assisted mass valuations in Australia) to discuss MKTCOMP.
- visit to Australian Wildlife Sanctuary.
- visit to some vineyards and goldfield country a la Mothu Lode Country CA.
- whatever has caught your eye in brochures.

I will discuss this with you when next I call.

In other States there is not quite the same urgency for arrangements except where people need to be invited. Are there any groupings you care to meet that I should suggest be organized? I understand a breakfast is being arranged in Adelaide for Tuesday, 20th March.

6. Other enclosures.

I also enclose some other materials of interest.

Regards,

*M. D. Squirrel.*

M. D. SQUIRRELL,  
Senior Lecturer in Valuations.





## SYDNEY UNIVERSITY LAND ECONOMY SOCIETY

C/O DEPARTMENT OF TOWN AND COUNTRY PLANNING,  
UNIVERSITY OF SYDNEY, N.S.W., 2006  
TELEPHONE 692 2702 TELEX AA20056

6th January, 1984.

Dr. James A. Graaskamp,  
Professor of Real Estate & Urban Land Economics,  
University of Wisconsin,  
202A Breese Terrace,  
Madison,  
Wisconsin, 53705,  
U.S.A.

Dear Dr. Graaskamp,

Thank you for telephoning me on 21st December last. I am glad that the details set out in my letter to you of 2nd November are correct.

I should be grateful if you could kindly arrange to have sent to me at the above address 50 copies of each of the Ratcliff Readings and The Appraisal of 25 N. Pinckney provided the landed cost here does not exceed \$15.00 per volume. We are offering them for sale at a small profit to help defray the costs of the seminars. This Society will retain any unsold copies. Should demand exceed supply, I shall send you a cable.

Everything is progressing well at this end. We are all looking forward to meeting you and trust your trip is a smooth one.

Yours sincerely,

(Dr) R.T.M. Whipple,  
President.

Your letter of Dec 20th  
has just arrived. Many thanks,  
J.

Out along the homeward trail

Dallas, Tx

January 11, 1984

Professor James A. Graaskamp

School of Business

University of Wisconsin-Madison

Dear Jim,

Sorry if I appeared to be completely clueless at our meeting in Florida, but I have not, to date, received any request from South Oz to pass on any details to you and I can only rely on the information rather vaguely mentioned in the last letter received by me. This indicated that the modules which they would like you to present in Adelaide are.

Module 4. 'Feasibility Analysis and Real Estate Consulting'

Module 5. 'Real Estate Investment Analysis'

Graeme Martin also mentioned that there would be some transport limitations affecting a two day stop-over as the only plane from Adelaide to Perth on tuesdays departs at 10.50 am : he suggested that we

might have an informal early morning session on education.

I hope this information doesn't add to the confusion!

While at the Singer Hilton I was told that you are a keen fisherman. I guess you might already be aware that there are a few fairly notorious sporting fish in various parts of Australia and you might be able to bend your trip to include them - probably the most famous would be marlin in the vicinity of Cairns (Queensland) and Barramundi in Northern Queensland & Northern Territory, the latter fish being a delicacy in restaurants all over Australia.

We'll see if we can introduce you to King George Whiting in Adelaide.... it's generally acknowledged to be one of the best eating fish in the country.

I am looking forward to your Australian visit and thank you once more for your help to me here

Sincerely

John M Cooper.

# Jones Lang Wootton Realty Advisors

499 Park Avenue New York, New York 10022

Telephone: (212) 688-8181

John A. Weisz  
President

February 2, 1984

Dr. James A. Graaskamp  
President  
Landmark Research, Inc.  
4610 University Avenue  
Suite 105  
Madison, Wisconsin 53705

Dear Jim:

I have received your letter with accompanying Far East itinerary and have telexed my Singapore office concerning your arrival and departure dates. I suggest that when you arrive in Singapore, or beforehand if you prefer, you contact our local managing partner, Chris Boyd, directly to arrange a meeting time. His telephone number, telex number and address are as follows:

Telephone: 65-912244

Telex: 23108

Address: 39-03/08 O.C.B.C. Centre  
65 Chulia Street  
Singapore 0104

With respect to your visits to Hong Kong and Melbourne, I would be pleased to arrange similar introductions. Please let me know if you would like our assistance.

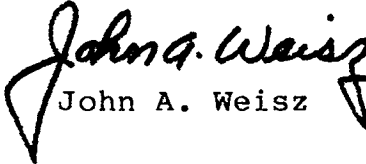
With respect to SIMCO, I had a pleasant telephone conversation with Charlie Rowe, who suggested that I spend some time with him on my next visit to Chicago. I will certainly take him up on that invitation. As per your request, enclosed please find a copy of the announcement which I mentioned to you in last week's P&I relative to SIMCO, Graaskamp and Aldrich, Eastman.

Dr. James A. Graaskamp  
President  
Landmark Research, Inc.  
Page 2  
February 2, 1984

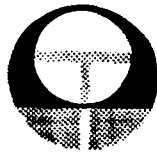
I certainly hope that we can get together in the near future to discuss the scope of JLWRA's pension investment program. In the interim, I thought you might like to review our services brochure which I have enclosed.

Have a pleasant trip!

Sincerely,

  
John A. Weisz

Enclosures 2



# THE SOUTH AUSTRALIAN INSTITUTE OF TECHNOLOGY

NORTH TERRACE, ADELAIDE, S.A. 5000. TELEPHONE (08) 223 3866 TELEX 82565  
228 0352

17th May, 1984

Professor J. Graaskamp,  
4610 University Avenue, Suite 105,  
Madison,  
WISCONSIN 53705  
U.S.A.

Dear Jim and Jean,

Thank you again for visiting Adelaide during your Australian lecture tour. I hope you may be able to arrange a return visit in the next year or so, or a series of lectures via satellite. You will be pleased to know, that a study group has been formed in Sydney, to discuss the application of your teachings to the Sydney real estate market.

With regard to the publication of an article on education, I would suggest that "The Valuer" would be the appropriate avenue for publication in Australia. Such an article as is suggested in your letter, would be very beneficial in the development of courses with a broader base emerging in Australia, and in particular feasibility studies, being taught from a real estate/valuation base rather than by architects and builders. The address of the editor of "The Valuer" is:

Mr. H.O. Thomas,  
Hon. Editor,  
"The Valuer",  
G.P.O. Box 4159,  
SYDNEY, N.S.W. 2001.

I have asked the General Registrar to place you on a free mailing list for "The Valuer".

The sale of textbooks has not been as successful as was first envisaged, 14 Ratcliff and 12 Larson books have been sold - as we discussed \$20 for the Ratcliff and \$15 for the Larson. I have arranged for a bank draft in \$U.S. for these amounts, to be sent to Landmark Research i.e. 12 @ \$15 = \$180 and 14 @ \$20 = \$280, total \$460. Maurie has been a better salesman and has asked to buy the copies that haven't sold, so I will send them to him and he will make payment direct to you.

Judi and I have been to Perth for ten days to attend the Institute of Valuers General Council meeting. The Western Australians had very positive comments about your seminar in Perth. We were able to spend some time with Bob and Glenys Fraser. Bob is currently in Papua New Guinea for a fortnight advising on computer application at the Department of Lands.

We also took the children to Sydney for the Easter/Anzac break with another family and hired a bus over there and had a most enjoyable time driving about the city.

My sincere apologies for the delay in writing.

With kind regards,

*pa. Jack (Secretary)*  
*G*  
GRAEME J. MARTIN,  
Head of Property Resource  
Management.

PHONE 714-8322

P.O. BOX 60.  
WHITTLESEA.  
VICTORIA. 3757

23rd May, 1984.

Dear Jim & Jean,

Thank you for a wonderful experience. It seems that the lectures went very well over-all. I have had a very pleasant letter from G. Martin expressing thanks at having you stop in Adelaide and have spoken to a very pleased Bob Fraser. Also comment in Melbourne is good and we have a small financial surplus which keeps everyone happy.

One of the highlights for me started when the plane took off for Sydney. Now I could listen to the lectures without distraction and enjoy the company that you and the boys so easily shared. After seeing you off at Cairns I spent the next four days travelling south with a one-day stop-over for another look at the Barrier Reef. This time it was in the premier location for the reef which is in the Whitsunday Group off Proserpine. Flying boat to Hardy Reef and then two hours spent walking on the reef at low tide and snorkeling beside it. According to the pilot the weather for the day was the best for four months and the reef was the fairyland of the brochures, quite different to the Cairns cay. I suspect it was similar to the area Gerry saw when scuba diving except I just floated along in the warm, calm, boyant water.

The Graduate Diploma seems to be going well. Bob Milne usually is exhausted when he leaves them after two hours of finance and I take over for an hour on valuations. I've



tried to combine the best features of the WI approach to a review subject by answering the questions: what valuations are, and, what clients can expect from a valuer. It is liberally sprinkled with contemporary material, which the non-valuers struggle and squirm with. This quote from John Higginbotham's first test is relevent, 'As a practising valuer I often feel compromised by the need to adhere to Spencer type concepts, when I was a Real Estate Agent, I know in my heart that a range of values will always exist ....'

I have enclosed a number of items and refer as follows:

1. Photos, a mixed bunch, but some very good of you both, and copies of all I took are enclosed. The boys get their own copies. Some photos double up because of the price/marketing war raging here on colour prints.
2. Map of Great Barrier Reef is to answer some of Jean's questions.
3. Tom Wolfe thoroughly enjoyed, thank you.
4. Gamma Distribution. This seems to be real enough however as a mathematical moron I need the intuitive approach before the symbolic form. I rely on you Jean to interpret to me on my next visit to WI.
5. Accounting Standards from Webster. Note, not his fault that it comes so late.
6. Newspapers, another Property News, but this time with photos. Also Melbourne Herald --- have you seen this before --- must have been shamed into this as it appeared four weeks after

you left Melbourne. I think it's a great photo and captures so well the joy of presentation. I also fall off the back of chair laughing because the real estate editor of the Herald called on the day of the Graduate Diploma dinner and asked if he could bring his girl friend. Joan told him where to go and it was not to the zoo and he didn't.

7. The Cassette. I thought we should send you a copy and regret that we did not shoot more while you were here. It seemed a waste not to fill it up with some family material plus the 'forgotten' story which is one of my favourites. My aim was to show the children around the farm and playing at sport plus kangaroos and a kookaburra as they are prominent here. For two weeks I have waited in vain for the animals and yesterday I got the tape copied and decided to enclose a booklet on the animals. This morning Jane and I lay in our bed and watched a kookaburra feeding on worms from our lawn and eight large kangaroos hop across the paddock. We decided to send the tape anyway and perhaps take our time over a new one. Attached is a list of some of our other Madison friends who might like to view the tape but please treat it as yours.

The Alumni Bulletin contained no news. It is still difficult for me to comment usefully because the tenure system, the politics, the rigid academic requirements and the mobility of Americans makes the play much different. Our problems and goals are similar but solving for achievement is different. Cricket and baseball are both bat and ball games played in summer between two teams but the ground and the rules are different.

PHONE 714-8322

P.O. BOX 60.  
WHITTLESEA.  
VICTORIA. 3757

My experience is as follows.

After two years as a lecturer, the control of the valuations course passed to me in 1970 and I resolved at that time to be a faculty and department man. I cultivated friendship with key people in the central administration both senior and junior, and with the leaders in the professional institutes. I always let demand for the course outstrip my demands for resources. I concentrated all my energies on the course and then my personal academic development. I did no outside work but happily convened/chaired this and that group when asked, acted as Head of Department (lots of \$) and was lucky to get three of my better students back as staff. Some of my other course leader colleagues may pay the supreme penalty for not being so diligent and careful. A high-powered committee of the Institute has just slashed through the majority of courses leaving only accountancy, transport and property untouched in our Faculty. For us this is great news about our reputation and I can now do some outside work knowing I have a secure base.

But how can this help you, particularly as the leaving of your Dean produces a vacuum until another is settled in. Well you are young enough to give it at least five years before it may be too late to leave, and, using my first principles, try and appoint young people who will want to still grow, who have energy and who are a little hungry. I cannot see any sense in appointing a competitor to you.

If you follow Ratcliff and move north-west, now or later, 'the program' will go with you for none of the staff I knew,

appeared to have the qualities that are required to gain a high reputation. The current reputation seems to come from two sources; 1. Ratcliff and Graaskamp and, 2. Uni of WI-Madison (see page 435, Appraisal Journal, July, 1982). Such a move may do some harm to your reputation for you would lose the historical base afforded by WI and you know who will be blamed for breaking up 'the program' at WI. The facts will be irrelevant.

Given the praise in the letters that are attached to the bulletin and which seek graduates, the whole thing seems incomprehensible to me. In my ignorance, I suggest;

- a. Try and move yourself closer to the Alumni executive and industry leaders.
- b. Stay and fight perhaps by shaming those with the resources into giving the Department a better deal.
- c. Don't move when your house and personal life is going through significant change.
- d. If it works stay, if it doesn't look for a new set of linkages.

Well enough from me. Sorry to hear about the bad moments in New Zealand though something to laugh about in old age. I guess the new Davis generation has or is about to arrive and I hope all goes well. Also the house extension should be well advanced or finished, and with the warm weather arriving for you not all is doom and gloom. In fact I trust that your relationship continues to flourish as it did here.

Much love and regards,

Dean & Jim,

a late note.

Last week John Wallace was elected Chairman of our Course Advisory Committee. He spoke in glowing terms about your visit to Melbourne for some minutes. He took some clients along to some sessions and apparently they came away all fired up and are delighted to use the new perspectives that you gave them.

It was very high praise from a person whom I have a great deal of respect for -- that's why his Chairman -- and from someone who will play a major role in education here.

a late note

M.

Money from Sale of books in Melbourne should follow this within a week.

M.

ALTERNATIVE SEMINAR TOPIC MODULES  
FOR 1984 AUSTRALIAN LECTURE SERIES

BASIC ORGANIZATION OF MODULES

1/2 day = four, 50-minute sessions.

Each 50 minute session will have five, 10-minute modules.

Each 50-minute session will have three to ten pages of xeroxed outlines and case material.

Will bring masters for each module with us and manufacture copies in Australia to fit attendance at each seminar.

FIRST MODULE  
THE NEW URBAN LAND ECONOMICS

- I. BASIC DEFINITIONS AND CONCEPTS
  - A. Real Estate Defined
  - B. Real Estate Project Defined
  - C. Real Estate Enterprise Defined
  - D. Basic Real Estate Process
  - E. Collective Decision Making
  
- II. REAL ESTATE MARKETING REDEFINED
  - A. User Market Segmentation
  - B. Collective User Political Aggregation
  - C. Future User Anticipation
  - D. Real Estate as a Subsystem Within a Larger System
  - E. Monopolistic Sequestering of Product
  - F. Marketing Motivation and Methods
  
- III. REAL ESTATE PRODUCT AND PUBLIC INFRASTRUCTURE
  - A. Consumer as a Continuum Over Time from Project to Public Services
  - B. Fiscal Impact Analysis of Alternative Land Use Plans
  - C. Efforts at Measuring Cost Benefits
  - D. Controlling Political Risk by Means of Public/Private Consortiums
  - E. Public Infrastructure Purchase of Future Income

IV. LAND AND IMPROVEMENTS

- A. Physical Attributes
- B. Legal/Political Attributes
- C. Linkage Attributes
- D. Dynamic Attributes
- E. Environmental Attributes

V. BASIC FINANCIAL CONCEPTS

- A. Time Line
- B. Revenues and Expenses
- C. Capital Sources and Applications
- D. Concepts of Risk Management
- E. Concepts of Measuring Yield



## SECOND MODULE

### CONTEMPORARY APPRAISAL CONCEPTS

#### I. PURPOSE OF THE APPRAISAL

- A. Defining the Decision Requiring Appraisal as a Benchmark
- B. Defining the Interests to be Appraised
- C. Selecting the Definition of Value to be Applied
- D. Identifying the Procedural Problems
- E. Specification of Key Assumptions in Value Concept and Client Instruction

#### II. SELECTION OF APPRAISAL METHODS

- A. Comparison of Traditional and Contemporary Appraisal Processes
- B. Three Methods of Contemporary Appraisal
- C. Selection of Preferred Method
- D. The Appraisal/Social Statistics Interface
- E. Methods Compatible with Courtroom Presentation

#### III. THE MARKET COMPARISON OR INFERENCE APPROACH

- A. Definition of Physical Comparability
- B. Definition of Buyer Comparability
- C. Selecting a Unit of Comparison
- D. Selecting a Measure of Difference
- E. Integration of Sales Data into Subject Pricing Formula

IV. COMPARISON USING PRICE/POINT/UNIT

- A. Inference from Single Unit of Correlation
- B. Point Scores to Explain Residual Error
- C. Determination of Raw Point Scores
- D. Determination of Relative Weights Assigned Each Score
- E. Establishing the Most Probable Price and Range

V. SELECTION OF MARKET COMPS USING EUCLIDIAN DISTANCE

- A. Regression and Euclidian Distance Compared
- B. Selection Variables for a Data Management System
- C. Adjustment Variables
- D. Ex-Post Selection of Comparables
- E. Defensibility and Credibility

## THIRD MODULE

### CONTEMPORARY APPRAISAL AND THE INCOME APPROACH

- I. INCREASING RELIANCE ON DISCOUNTED CASH FLOW
  - A. Demise of Market and Income Approaches
  - B. Accounting/Appraisal Interface
  - C. Cataloguing Leases
  - D. Documentation of Expenses and Allocations for Pass-Throughs
  - E. Converting Net Income to Value
  
- II. DEVELOPMENT OF THE REVENUE STREAM
  - A. American and British Income Methods Compared
  - B. Projecting and Adjusting Base Rents
  - C. Projecting and Adjusting Base Expenses
    - 1. Utilities
    - 2. Real Estate Taxes
    - 3. Common Area Maintenance
    - 4. General Operations
  - D. Analysis of Leases to Identify Revenues Contributable to Tenant Improvements, Franchises, Sales Taxes, and Other Collections
  - E. Timing of Revenue Receipts

### III. PROJECTION OF EXPENSES

- A. Analysis of General Accounts to Rebuild Income Statement to Make Compatible with Best Use Scenario
- B. Project Expenses into the Future
- C. Relationship of Expenses to Program for Renovation
- D. Lagged Receipts of Reimbursements
- E. Consolidation of Expense Factors

### IV. ROLE OF FINANCING

- A. Basic Ratios to Structure Financing
- B. Treatment of Variable Rate Mortgages
- C. Treatment of Participatory Mortgages
- D. Cash Equivalency or Investment Value
- E. Strategic Concepts of Debt for the Borrower
  - 1. Value in Use
  - 2. Hedging
  - 3. Investment Value

### V. CONVERTING INCOME TO VALUE

- A. Diversion by Means of Financial Ratios
- B. Discounted Cash Flow Methods
- C. Profiling Most Probable Buyer Criteria
- D. Testing Values for Compatibility with Investor Objectives
- E. Establishing a Range of Values with Sensitivity Analysis

## FOURTH MODULE

### FEASIBILITY ANALYSIS AND REAL ESTATE CONSULTING

- I. BASIC CONCEPTS
  - A. Definition of the Enterprise and Risk Management
  - B. Classification of Three Classic Problems
  - C. Moving from the Problem Perceived to the Problem Understood
  - D. Literature of Creative Thinking
  - E. Defining and Contracting for the Assignment
  
- II. MODELING THE ANALYTICAL APPROACH
  - A. Basic Elements of Analytical Modeling
  - B. Graphic Representations of the Process
  - C. Tabular Systems of Data Organization
  - D. Mathematical Algorithm of Relationship
  - E. Analytical Models and Communication Models Compared
  
- III. MARKET RESEARCH ASSIGNMENTS
  - A. Aggregate Data Sources and Editing Models
  - B. Disaggregation Models
  - C. Scaling Project Size and Pace
  - D. Estimating Absorption Rates
  - E. Identification and Positioning of Opportunity Areas

IV. MERCHANDISING RESEARCH

- A. Segmentation for Monopoly
- B. Competitive Standard Definition
- C. Consumer Survey Research
  - 1. Telephone
  - 2. Mail Survey
  - 3. Consumer Plan
- D. Literature of Consumer
- E. Elements of Final Merchandising Report

V. SUMMARY OUTLINE OF THREE ASSIGNMENT FORMATS

- A. Site in Search of a Use
- B. Use in Search of a Site
- C. Money in Search of a Real Estate Investment
- D. Mistaken Identification of Problem with Real Estate
- E. Pricing Consultant Services - Professional Time or Value Added

## FIFTH MODULE

### REAL ESTATE INVESTMENT ANALYSIS

#### I. STRATEGIC PARAMETERS ON INVESTMENT SELECTION

- A. Level of Political Exposure
- B. Degree of Control of Market
- C. Degree of Acceptable Management Intensiveness
- D. Financial Parameters and Scale
- E. Tax Strategies
- F. Individual or Corporate Mortality

#### II. FINANCIAL PARAMETERS AND ANALYSIS

- A. Front Door - Back Door Pro Forma Analysis
- B. Projecting Pro Forma Income Statements Over Time
- C. Critical Financial Ratios
- D. Sensitivity Analysis
- E. Project Efficiency Analysis

#### III. TAX STRATEGIES

- A. Desire to Postpone Income Taxes
- B. Desire to Reduce Progressive Rate
- C. Desire to Convert Income Potential to Capital Gain
- D. Desire to Avoid Taxes
- E. Desire to Reduce Estate Taxes or Tax on Corporate Liquidation

IV. STRUCTURING THE OWNERSHIP ENTITY

- A. Issues of Control, Risk Sharing, and Benefits Sought
- B. Alternative Single Entity Ownership Forms
- C. Alternative Double Entity Ownership Forms
- D. Finite Ownership Strategies
- E. Long Term Multi-Generation Strategies

V. RISK MANAGEMENT STRATEGIES

- A. Systematic and Non-Systematic Risks
- B. Shifting Risk by Contract
- C. Controlling Variance by Incentive
- D. Limiting Loss per Investment
- E. Hedging with Puts and Calls



## SIXTH MODULE

### REAL ESTATE INVESTMENT PORTFOLIO ANALYSIS

- I. DEFINING OBJECTIVES OF A REAL ESTATE PORTFOLIO
  - A. Objectives of Portfolio Managers
  - B. Objectives of Unit Investors
  - C. Objectives of Public Regulators
  - D. Objectives of Investment Bankers
  
- II. ELEMENTS OF A REAL ESTATE PORTFOLIO AND INVESTMENT POLICY
  - A. Selection Guidelines
  - B. The Core Portfolio
  - C. The Appraisal/Accounting Interface
  - D. Strategic versus Tactical Responsibilities
  - E. Conflicts of Interest
  
- III. ENGAGEMENT OF PROFESSIONAL SERVICES
  - A. Marketing of Investment Fund Units
  - B. Engagement of Appraisal Services
  - C. Selection of Property Management Services
  - D. Fiduciary Exposure to Oversight
  - E. Relationship with Accounting Services

IV. PROBLEMS IN MEASURING AND COMPARING PERFORMANCE

A. Definition of Unit Value

B. Definition of Unit Share of Return

C. Element of Indices for Benchmark Comparison

**REGISTRATION**

Please complete and return:

**Seminar Co-Ordinator**



Seminar Co-ordinator  
Academic Associates Pte Ltd  
17B Mayo Street  
Singapore 0820  
Tel: 2939622  
Telex: RS 34032 ACADEM

Please register me for (tick where appropriate)

Module 1  Module 2

NAME \_\_\_\_\_

DESIGNATION: \_\_\_\_\_

NAME & ADDRESS OF COMPANY

\_\_\_\_\_  
\_\_\_\_\_

TEL: \_\_\_\_\_ TELEX: \_\_\_\_\_

DATE: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_

Enclosed cheque/bankdraft for the amount of  
S\$ \_\_\_\_\_ for the above  
seminar/s, made payable to ACADEMIC ASSOCIATES  
PTE. LTD.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**REGISTRATION INFORMATION**

**SEMINAR DATES**

Module 1 : 20 February 1984  
Module 2 : 21 February 1984

**VENUE**

Garden Hotel  
Balmoral Road  
Singapore 1025  
Telephone : 2353344  
Telex No : RS 30999 A/B GARTEL

**SCHEDULE**

Registration : From 8.30 am  
Seminar Starts : 9.00 am  
Coffee Break : 10.30 am  
Lunch Break : 12.45 pm  
Seminar Ends : 2.00 pm

**FEE**

The fee for each half-day seminar is S\$225.00 per participant which includes seminar documentation, lunch and refreshments.

For the combined 2 seminars, the fee is S\$425.00 per participant which includes seminar documentation, lunch and refreshments.

**CANCELLATIONS**

The organiser will allow registered participants to nominate alternatives if they are unable to attend the seminar. However, notification of such change must be made at least one week before the seminar. For those who are unable to nominate an alternative, full refund will be made if cancellations are received in writing or telex before 6 February 1984. Cancellations made between 6 to 12 February 1984 will be allowed a 50% refund. Refunds will not be entertained after the dateline.

**REAL ESTATE INVESTMENT  
PORTFOLIO ANALYSIS**

20 February 1984

**REAL ESTATE INVESTMENT  
ANALYSIS**

21 February 1984

Speaker : Prof James A Graaskamp

Venue : Garden Hotel Singapore

**ACADEMIC ASSOCIATES PTE LTD**

MODULE 1  
REAL ESTATE INVESTMENT PORTFOLIO  
ANALYSIS

20 FEBRUARY 1984

FEE: S\$225.00

**HIGHLIGHTS**

**I. DEFINING OBJECTIVES OF A REAL ESTATE PORTFOLIO**

- Objectives of Portfolio Managers
- Objectives of Unit Investors
- Objectives of Public Regulators
- Objectives of Investment Bankers

**II. ELEMENTS OF A REAL ESTATE PORTFOLIO AND INVESTMENT POLICY**

- Selection Guidelines
- The Core Portfolio
- The Appraisal/Accounting Interface
- Strategic versus Tactical Responsibilities
- Conflicts of Interest

**III. ENGAGEMENT OF PROFESSIONAL SERVICES**

- Marketing of Investment Fund Units
- Engagement of Appraisal Services
- Selection of Property Management Services
- Fiduciary Exposure to Oversight
- Relationship with Accounting Services

**IV. PROBLEMS IN MEASURING AND COMPARING PERFORMANCE**

- Definition of Unit Value
- Definition of Unit Share of Return
- Element of Indices for Benchmark Comparison

MODULE 2  
REAL ESTATE INVESTMENT ANALYSIS

21 FEBRUARY 1984

FEE: S\$225.00

**HIGHLIGHTS**

**I. STRATEGIC PARAMETERS ON INVESTMENT SELECTION**

- Level of Political Exposure
- Degree of Control of Market
- Degree of Acceptable Management Intensiveness
- Financial Parameters and Scales
- Tax Strategies
- Individual or Corporate Mortality

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- Sensitivity Analysis
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- Issues of Control, Risk Sharing and Benefits Sought
- Alternative Single Entity Ownership Forms
- Alternative Double Entity Ownership Forms
- Finite Ownership Strategies
- Long Term Multi-Generation Strategies

**V. RISK MANAGEMENT STRATEGIES**

- Systematic and Non-Systematic Risks
- Shifting Risk by Contract
- Controlling Variance by Incentive
- Limiting Loss Per Investment
- Hedging with Puts and Calls

**VI. FOREIGN INVESTMENT IN US REAL ESTATE – OPPORTUNITIES & RESTRICTIONS**

**SPEAKER**

**Professor James A. Graaskamp**, aptly described as a “teacher and master of real estate’s bottom line” and “one of the most brilliant academics” is Chairman of the Real Estate and Urban Land Economic Department of the University of Wisconsin – Madison School of Business.

Prof Graaskamp, who holds a MBA degree from the Marquette University and a Ph.D degree from the University of Wisconsin, is also President and co-owner of a real estate consulting firm, Landmark Research, Inc; a trustee of the Urban Land Institute and member of the Board of First Asset Realty Advisors, a subsidiary of First Minneapolis Bank.

A “dynamo” with extensive business expertise, Prof Graaskamp helped to create CREF, a US\$10 million common-unit equity real estate fund which allows for investments in smaller units. He is acknowledged and openly admired as a leader in the real estate industry.

From his wheelchair, Prof Graaskamp, a quadriplegic has run home building, farm investment and real estate consulting firms. Currently, his work includes substantial and varied consulting and valuation assignments, investment counseling to insurance companies and banks, court testimony as expert witness and market/financial analysis of various projects, for private and corporate industries and municipalities.

*DRAFT ONLY*

1984 AUSTRALIA LECTURE SERIES

IN

REAL ESTATE VALUATION AND

INVESTMENT ANALYSIS

*February 23 - 28, 1984*

Presented by:

Dr. James A. Graaskamp, Ph.D., SREA, CRE  
University of Wisconsin - Madison

(PHOTO)

Melbourne Seminars Sponsored by:

Australian Institute of Valuers (Inc.)  
Real Estate and Stock Institute of Victoria  
Robert A. Milne and Associates  
Royal Melbourne Institute of Technology, Ltd.  
Technisearch Limited.

The Sponsors of this program are pleased to provide the opportunity for those in the real estate industry to attend a stimulating lecture series personally conducted by a renowned leader in the property field.

The lecture series has particular relevance to practitioners concerned with professionalism in real estate and their personal professional development.

### WHO SHOULD ATTEND?

The series covers a wide range of topical real estate issues, providing an opportunity to upgrade and gain insights into modern methods and techniques of real estate valuation and investment analysis. Participants will come from a variety of backgrounds in the real estate valuations, consultancy, marketing, financing and investment sectors.

### SEMINAR LEADER

Dr. Graaskamp is Chairman, Department of Real Estate and Urban Land Economics School of Business, University of Wisconsin. His professional designations include Senior Real Estate Analyst, Society of Real Estate Appraisers, and Counsellor of Real Estate, American Society of Real Estate Councillors.

Dr. Graaskamp is acknowledged for his expertise in leading courses that are amongst the most creative and practical academic programmes of any university in the U.S.A.

As an educational consultant, he has few peers and in the USA his seminar presentations are in constant demand coast to coast. Under the sponsorship of the American Institute of Real Estate Appraisers, Society of Real Estate Appraisers and American Society of Real Estate Councillors, Dr. Graaskamp developed the EDUCARE programme of computer applications for real estate appraisers and investment analysts.

Dr. Graaskamp is also active in private practice. He is President and founder of Landmark Research Inc., which was established in 1968 as a consulting business and now has seven full-time employees. The firm undertakes substantial and varied consulting and valuation assignments.

Dr. Graaskamp is a trustee of the Urban Land Institute, and a member of the board of First Asset Realty Advisors, a subsidiary of First Minneapolis Bank.

Dr. Graaskamp's reputation is built not only on his technical expertise but on very high professional standards. This is well illustrated by his use of a consulting editor in his lectures for students and for his own writings, even though his undergraduate major was in English.

### SEMINAR TOPICS

Seven different lectures are offered in half day modules. Each module consists of 4 x 50 minute sessions and each session is covered in three to ten pages of outlines and case material.

NO. 1/84 The New Urban Land Economics

This lecture defines real estate and its attributes in its context of physical, social, economic and legal environments, and the major influences that affect its marketing, use and measurements.

This introductory session will set the context of real estate for the remaining lectures, and is highly recommended to all participants.

NO. 2/84 Contemporary Appraisal Concepts

This lecture commences by reviewing the traditional principles and practice of valuation and then moves to a more pragmatic approach of inferring value from sales. In addition, the continuing evolution of theory and practice is explored.

This lecture will stimulate all practising valuers and will cover material first expounded by the late Richard U. Ratcliff and refined and put into practice by Dr. Graaskamp.

NO. 3/84 Contemporary Appraisal and the Income Approaches

This lecture examines the shift towards Discounted Cash Flow techniques and measures, and will consider the components of income and expenditure and financing aspects.

This lecture will be of particular interest to practitioners concerned with investment properties and their value analysis.

NO. 4/84 Feasibility Analysis and Real Estate Consulting

In this lecture, the major determinants of the feasibility of a real estate investment are considered. Given client criteria for selection and the solution sought, a model of feasibility analysis is presented.

This lecture will be ideal for practitioners providing clients with advice regarding the use of a particular site or finding a site for a particular use, for finding both a site and a use for an investor.

NO. 5/84 Real Estate Investment Analysis

This lecture focuses on the important elements that need to be addressed before making any substantial real estate investment.

This lecture will be of interest to those concerned with investing in real estate or providing advice to investors.

NO. 6/84 Real Estate Investment Portfolio Analysis

This topical lecture deals with the control and management decisions associated with real estate investment portfolios.

This lecture will be relevant to managers responsible for real estate investment portfolios and to those private consultants advising investors.

NO. 7/84 Current Mini Computer Applications in Real Estate

This lecture covers the spectrum of real estate computer applications ranging from lease rolls to sophisticated D.C.F. and portfolio analysis potential.

This lecture will deal with the state of the art in computer uses and potential for all valuers, agents and consultants concerned with the real estate and property field.

TIMES & DATES - MELBOURNE PRESENTATIONS

- |            |      |  |
|------------|------|--|
| Course no. | 1/84 | The New Urban Land Economics<br>1.30 pm - 5.30 pm Thursday 23rd February, 1984.                    |
| Course no. | 2/84 | Contemporary Appraisal Concepts<br>8.30 am - 12.30 pm Friday 24th February, 1984.                  |
| Course no. | 3/84 | Contemporary Appraisal and the Income Approaches<br>1.30 pm - 5.30 pm Friday 24th February, 1984.  |
| Course no. | 4/84 | Feasibility Analysis and Real Estate Consultancy<br>8.30 am - 12.30 pm Monday 27th February, 1984. |
| Course no. | 5/84 | Real Estate Investment Analysis<br>1.30 pm - 5.30 pm Monday 27th February, 1984.                   |
| Course no. | 6/84 | Real Estate Portfolio Analysis<br>8.30 am - 12.30 pm Tuesday 28th February, 1984.                  |
| Course no. | 7/84 | Current Minicomputer Applications in Real Estate<br>1.30 pm - 5.30 pm Tuesday 28th February, 1984. |



SEMINAR FEE    \$140

This fee entitles each participant to attend four (4) half day modules of their choice. This fee includes provision of morning and afternoon refreshments, light lunch and printed course outlines and case studies.

EXTRA MODULE/S FEE    \$30 per Module

This fee applies only to participants who wish to attend more than four modules.

VENUE

Royal Melbourne Institute of Technology, 124 La Trobe Street, Melbourne, 3000.

REGISTRATION INFORMATION

Application for admission is to be made on the form attached to this notice. The course fee is to accompany the application.

Notification of acceptance will be made in writing or by telephone as soon as sufficient enrolments are received.

The company reserves the right to cancel any course which does not have the required enrolment. It also reserves the right to amend commencement date or session times if necessary.

CANCELLATIONS

Cancellations may be accepted up to ten days before each course. After this a cancellation fee of 50% of the course fee will be charged. No refunds will be made after Seminar commencement.

In the event of failure to attend the Seminar without prior notice the full course fee will be charged.

ENQUIRIES

Please contact:

- \* For technical information about Seminar content

Mr. Geoff Lambe - Australian Institute of Valuers(Inc.)  
Telephone 560-0355

Mr. John Higginbottom - Real Estate & Stock Institute of  
Victoria, Telephone 379-3333

Mr. Maurice Squirrell-Department of Applied Economics,  
RMIT. Telephone 341-2432 or 341-2735

- \* For general information about Seminars and additional registration forms:

Sue McGibbony or Glenda Hannan,  
Continuing Education Unit,  
Technisearch Ltd.,  
RMIT.

Telephone: 341-2532 or 341-2533

M. D. Squitell ③

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AUSTRALIAN PROPERTY NEWS

Booked for December 1983 issue - Account - Technisearch

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ANNOUNCING  
 THE 1984 AUSTRALIA LECTURES SERIES  
 IN  
 REAL ESTATE VALUATION AND INVESTMENT ANALYSIS

presented by

Dr. James A. Graaskamp, Ph.D., SREA, CRE,  
 Chairman

~~Department of Real Estate and Urban Economics~~  
 School of Business

*Madison* University of Wisconsin - Madison  
 President, Landmark Research, Inc.

Members of the real estate industry in Australia will have <sup>a unique</sup> the opportunity in February/March 1984 to attend seminars conducted by a renowned <sup>educator/practitioner</sup> leader in the property field. <sup>complet</sup> This series covers a wide range of <sup>contemporary</sup> real estate topics, giving the attendees insights into modern methods of real estate valuation and investment analysis.

The seminar topics will be offered in half day modules and cover:

1. The New Urban Land Economics
2. Contemporary Appraisal Concepts
3. Contemporary Appraisal and the Income Approach
4. Feasibility Analysis and Real Estate Consulting
5. Real Estate Investment Analysis
6. Real Estate Investment Portfolio Analysis
7. Current Minicomputer Applications in Real Estate

<u>PLACE</u>	<u>DATE(S)</u>	<u>ENQUIRIES</u>	<u>SEMINARS</u>
Melbourne	23, 24	Mr. <del>E. W. White</del> <sup>See Mr. Gibbons</sup>	1 through 7
	27, 28	Techisearch, Ltd.	
	February	Royal Melbourne Institute of Technology (03) 341	
Sydney	1, 2	Dr. R. T. M. Whipple	3, 4, 5, 6
	March	Department of Town & Country Planning University of Sydney (02) 692-2702	(tentative)
Brisbane	8, 9	Mr. K. V. Campbell	?
	March	Australian Institute of Valuers (Qld. Div.) (07) 221 1405	<del>3, 4, 5, 6, 7</del> 1, 2, 4, 7.

Adelaide	19 March	R. J. Taylor Techsearch, Inc. South Australian Institute of Technology (05) 228 0257 or 228 0258	4 and 5
Perth	21 March	Ms. Robyn Scott Centre for Business Research & Development Western Australia Institute of Technology (09) 350 7717	1 and 4

# RMIT

MEMO TO: Students involved in Associate Diploma in Valuations and Certificate of Business in Real Estate.

SEMINAR SERIES BY DR. JAMES A. GRAASKAMP

23rd - 28th February, 1984.

Special arrangements for RMIT students.

Dr. James A. Graaskamp will be visiting Melbourne during February, 1984, presenting seven seminars (based on half day modules - see main brochure for details). Special enrolment and fee arrangements have been made for undergraduate valuation and real estate students.

1. Seminar "The New Urban Land Economics"

Fee: \$10 (inc. morning tea)

Place: Glasshouse Theatre, Level two, RMIT Union Building,  
360 Swanston Street,  
Melbourne, 3000.

Time: 8.30 am - 12.30 pm, Thursday, 23rd February, 1984.

a) This session is for RMIT students only.

b) All valuation diploma students are required to attend this session.

c) Real estate certificate students are invited to attend this session.

2. Seminars 2 - 7

Students are invited to attend the remaining six sessions. Final year valuation diploma students are strongly advised to attend these sessions and should note that much of the material to be covered - particularly in sessions 2 and 3 - - will be studied, applied in assignments and examined during the year.

Fee: (a) \$55 (inc. morning and afternoon teas) or  
(b) \$80 (inc. lunch plus teas on 24, 27 and 28 Feb.)

Place: Glasshouse Theatre, Level two, RMIT Union Building,  
360 Swanston Street,  
Melbourne, 3000.

Times: Course No. 2/84 Contemporary Appraisal Concepts  
8.30 am - 12.30 pm Friday 24th February, 1984.

Course No. 3/84 Contemporary Appraisal and the Income Approaches  
1.30 pm - 5.30 pm Friday 24th February, 1984.

Course No. 4/84 Feasibility Analysis and Real Estate Consultancy  
8.30 am - 12.30 pm Monday 27th February, 1984.

- Course No. 5/84 Real Estate Investment Analysis  
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- Course No. 6/84 Real Estate Portfolio Analysis  
8.30 am - 12.30 pm Tuesday 28th February, 1984.
- Course No. 7/84 Current Minicomputer Applications in Real Estate  
1.30 pm - 5.30 pm Tuesday 28th February, 1984.

# Technisearch LIMITED

## RMIT STUDENT ENROLMENT FORM

Seminar Series Presented by Dr. J.A. Graaskamp  
February, 1984.

### Personal Details

SURNAME: \_\_\_\_\_ Other  
Name(s) \_\_\_\_\_

ADDRESS  
FOR MAIL: \_\_\_\_\_  
\_\_\_\_\_ Post Code: \_\_\_\_\_

TELEPHONE NOS: Business: \_\_\_\_\_ Home: \_\_\_\_\_

COURSE NAME: \_\_\_\_\_ RMIT COLLEGE AC/TC

STATUS: FT/PT, STAGE (1984) \_\_\_\_\_ STUDENT NO. \_\_\_\_\_

Fee Structure: 1) New Urban Land Economics Seminar (Students only) = \$10.00  
2) Seminars 2 - 7 a) without lunch = \$55.00  
b) with lunch on 24, 27, & 28 Feb. = \$80.00

### Enrolment Details

(Place (✓) in appropriate box)

1. Student session "The New Urban Land Economics"  
(8.30 am - 12.30 pm 23rd February, 1984.)
2. Sessions 2 - 7 a) with morning/afternoon teas only

OR

b) with lunches on 24, 27 and 28 Feb

TOTAL FEE:

	\$10
	\$55
	\$80

I enclose a cheque covering enrolment fee of \$ \_\_\_\_\_

Please make out cheques to "TECHNISEARCH LIMITED" and cross "A/C Payee only".

Return to: Mr. E.W. White,  
Technisearch Limited,  
RMIT, Building 5,  
124 La Trobe Street,  
MELBOURNE, 3000.



## FORMATION VENUE

Seminars are held at the Seminar House Theatre, Level Two, RMIT Union Building, 360 Swanston Street Melbourne, 3000. There is limited parking in the area around the RMIT, we recommend the use of public transport, particularly the Underground Railway. The Museum Station entrance is conveniently located approximately 100 yards from the Seminar Venue.

## REGISTRATION

Application for admission is to be made on the form attached to this notice. The course fee is to accompany the application.

Confirmation of acceptance will be made in writing or by telephone as soon as sufficient enrolments are received. As seminar accommodation is limited, enrolment acceptance will be made in order of receipt.

The company reserves the right to cancel any course which does not have the required enrolment. It reserves the right to amend commencement date or session times if necessary.

## SEMINAR FEE \$140

The fee entitles each participant to attend **four (4) half day** modules of their choice. This fee includes provision of morning and afternoon refreshments, light lunch and printed course outlines and case studies.

## EXTRA MODULE /S FEE \$30 per Module

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## ENQUIRIES

For contact:

- For technical information about Seminar content  
Mr. Geoff Lambe — Australian Institute of Valuers (inc.) Telephone 560 0355  
Mr. John Higginbotham — Real Estate & Stock Institute of Victoria Telephone: 379 3333  
Mr. Maurice Squirrell — Dept. of Applied Economics, RMIT Telephone 341 2432 or 341 2735.
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Continuing Education Unit,  
Technisearch Ltd.,  
RMIT.  
Telephone: 341 2532 or 341 2533

# 1984 AUSTRALIA LECTURE SERIES IN REAL ESTATE VALUATION AND INVESTMENT ANALYSIS

Presented by:

**Dr. James A. Graaskamp, Ph.D., SREA, CRE**  
**University of Wisconsin — Madison**



**February 23 — 28, 1984**

**Melbourne Seminars Sponsored by:**

Australian Institute of Valuers (Inc.)  
Real Estate and Stock Institute of Victoria  
Robert A. Milne and Associates  
Royal Melbourne Institute of Technology, Ltd.  
Technisearch Limited

The Sponsors of this program are pleased to provide the opportunity for those in the real estate industry to attend a stimulating lecture series personally conducted by a renowned leader in the property field.

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Participants will come from a variety of backgrounds in the real estate valuations, consultancy, marketing, financing and investment sectors.

## SEMINAR TOPICS

Seven different lectures are offered in half day modules. Each module consists of 4 x 50 minute sessions and each session is covered in three to ten pages of outlines and case material.

- NO. 1 /84      The New Urban Land Economics**  
1.30 p.m. — 5.30 p.m. Thursday 23rd February, 1984.  
This lecture defines real estate and its attributes in its context of physical, social and legal environments, and the major influences that affect its marketing, use and measurements.  
This introductory session will set the context of real estate for the remaining lectures and is highly recommended to all participants.
- NO. 2 /84      Contemporary Appraisal Concepts**  
8.30 a.m. — 12.30 p.m. Friday 24th February, 1984.  
Commences by reviewing the traditional principles and practice of valuation and then moves to a more pragmatic approach of inferring value from sales. In addition, the continuing evolution of theory and practice is explored.  
This lecture will stimulate all practising valuers and will cover material first expounded by the late Richard U. Ratcliff and refined and put into practice by Dr. Graaskamp.
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1.30 p.m. — 5.30 p.m. Friday 24th February, 1984.  
Examines the shift towards Discounted Cash Flow techniques and measures, and will consider the components of income and expenditure and financing aspects.  
This lecture will be of particular interest to practitioners concerned with investment properties and their value analysis.
- NO. 4 /84      Feasibility Analysis and Real Estate Consultancy**  
8.30 a.m. — 12.30 p.m. Monday 27th February, 1984.  
In this lecture, the major determinants of the feasibility of a real estate investment are considered. Given client criteria for selection and the solution sought, a model of feasibility analysis is presented.  
This lecture will be ideal for practitioners providing clients with advice regarding the use of a particular site or finding a site for a particular use, or finding both a site and a use for an investor.
- NO. 5 /84      Real Estate Investment Analysis**  
1.30 p.m. — 5.30 p.m. Monday 27th February, 1984.  
Focuses on the important elements that need to be addressed before making any substantial real estate investment.

This lecture will be of interest to those concerned with investing in real estate or providing advice to investors.

- NO. 6 /84      Real Estate Portfolio Analysis.**  
8.30 a.m. — 12.30 p.m. Tuesday 28th February, 1984.  
This topical lecture deals with the control and management decisions associated with real estate investment portfolios.  
This lecture will be relevant to managers responsible for real estate investment portfolios and to those private consultants advising investors.
- NO. 7 /84      Current Minicomputer Applications in Real Estate.**  
1.30 p.m. — 5.30 p.m. Tuesday 28th February, 1984  
This lecture covers the spectrum of real estate computer applications ranging from lease rolls to sophisticated D.C.F. and portfolio analysis potential.  
This lecture will deal with the state of the art in computer uses and potential for all valuers, agents and consultants concerned with the real estate and property field.

## SEMINAR LEADER

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Dr. Graaskamp is also active in private practice. He is President and founder of Landmark Research Inc., which was established in 1968 as a consulting business and now has seven full-time employees. Assisting Dr. Graaskamp will be his associate in Landmark Research Inc., Jean B. Davies.

Perth - 20 March 1984  
Western Australia Institute of Technology

PARTICIPANTS - PROF J A GRAASKAMP'S SEMINAR

ADENAN	Willy	Student
ANGUS	John	J H Angus & Co
ARCHIBALD	Ian	R & I Bank of WA
BATTERSBY	Steve	Student - Woolley & Associates
BECK	Richard	Colliers International
BERRY	Paul	Student
BOMBARA	Hugo	Student
BRACEWELL	Bob	R J Bracewell & Co
BURBAGE	Roger	L J Hooker (WA) Ltd
CALDERWOOD	Steve	Selwest Real Estate P/L
CAMERON	Ross	Stan Perron Pty Ltd
CHRISTIE	Mark	Brendon Hubble P/L
COCKLE	Derek	Hodd Wilkins Pty Ltd
COLLINS	Keith	Student
CONTI	Paul	Conti Sheffield Real Estate Agencies
CRANNEY	C	Student
CROUDACE	Michael	Parry & Rosenthal Pty Ltd
DAVIES	Gwyn	Justin Seward Pty Ltd
DAVIES	Mary-Louise	Dept of Administrative Services
DAVIS	Jean	Landmark Research
DAVIS	Steve	Dept of Administrative Services
DEMPSEY	Mal	Student
EDWARDS	Phil	Hillier Parker May & Rowden
FAIR	Lyn	Parry & Rosenthal Pty Ltd
FAIRCLOUGH	Geoff	Geoff Fairclough Real Estate
FIELD	Carolyn	St Martins Properties (Aust) P/L
FINI	Adrian	Fini Homes
FRASER	Bob	Lecturer, School of Economics & Finance
FREARSON	Don	Head, School of Economics & Finance
GAUNTLETT	Gerry	Justin Seward Pty Ltd
GRIFFIN	Paul	Patalon Pty Ltd
HALL	Ross	Student
HALL	Ken	Associate Director, Business & Administration, WAIT
HAND	Basil	University of WA (Estates Office)
HUNT	David	Baillieu Milner Real Estate P/L
HUTCHINSON	Bruce	John Garland & Co
JACKSON	Norm	Dept of Administrative Services
JONES	Brett	Colliers International Property Consultants
JONES	Allan	Justin Seward & Co
KENNEDY	Graham	Jones Lang Wootton
KEOWN	Rod	Baillieu Milner Real Estate P/L
KING	Chris	Watson & Capararo
KRANTZ	David	Krantz & Sheldon Arnot Silbert & West
LENNON	Tony	Tony Lennon & Associates
LESTER	Richard	Growth Equities Mutual Ltd
LESTER	Adrian	Student
LEWIS	J	Student
LOFTHOUSE	Jeff	National Mutual Life Association
MAJOR	Gerald	P C Kerr & Associates
MARTIN	John	Justin Seward Pty Ltd

MC EWAN	Ross	Student
MC NAMARA	John	Baillieu Milner Real Estate P/L
MERCER	John	Growth Equities Mutual Ltd
MEYER	Klaus	
MILLER	Glen	Student
MOFFAT	Brad	AMP Society
MOLONY	Damian	Kevin Sullivan & Associates
MOPPETT	Ivan	John Garland & Co
MORCOMBE	Alan	Justin Seward Pty Ltd
MORRIS	Geoff	Student
MOYLAN	Joe	J J Moylan & Co
NEELY	Warick	Selwest Real Estate P/L
NOONAN	Barbara	Dept of Administrative Services
OLDERSHAW	Phillip	St Martins Properties (Aust) P/L
PALMER	Ian	Ian Palmer & Co
PARKER	Charles	Student
PEACOCK	Ivan	University of WA (Estates Office)
PINKUS	Geoff	Colliers International Property Consultants
PRICE	Stuart	Australasian Shopping Centres P/L
RANKIN	Iann	St Martins Properties (Aust) P/L
REESON	Martin	Richards & Co
RICHARDS	Eric	Richards & Co
RICHMOND	Bob	Kevin Sullivan & Associates
ROUSSET	Maurice	Colliers International Property Consultants
RYAN	Gary	Richard Ellis
SANDERSON	Ian	P C Kerr & Associates
SANDS	Tony	John Garland & Co
SCARFUNE	Ross	Richards & Co
SECRETT	John	Dept of Administrative Services
SENEQUE	Steve	Student
SEWARD	Stephen	Justin Seward & Co
SIMPSON	Phil	Jones Lang Wootton
SMITH	Geoff	John Garland & Co
SOLOMON	Grant	Jones Lang Wootton
STANNARD	Philip	Student
STAWELL	Julian	Keith Mitchell & Associates P/L
STOCKTON	Barry	Armstrong Jones Property Group
TAYLOR	Terry	Tony Lennon & Associates
TOWNSEND	Ross	Armstrong Jones Property Group
WALTER	Mike	John Garland & Co
WATSON	Ian	Justin Seward Pty Ltd
WATTS	Don	Director, WAIT
WHITLEY	Graham	Parry & Rosenthal Pty Ltd
WILKINSON	Eric	BOMA
WILSON	Jenny	J J Wilson & Assoc
WILSON	Keith	P C Kerr & Associates
WORTHINGTON	John	Senior Lecturer, School of Economics & Finance
WRIGHT	Warren	Dept of Administrative Services
WULFF	Kevin	Student
ZEKAS	Louie	Lant Pty Ltd

FIRST MODULE

THE NEW URBAN LAND ECONOMICS

Presented By

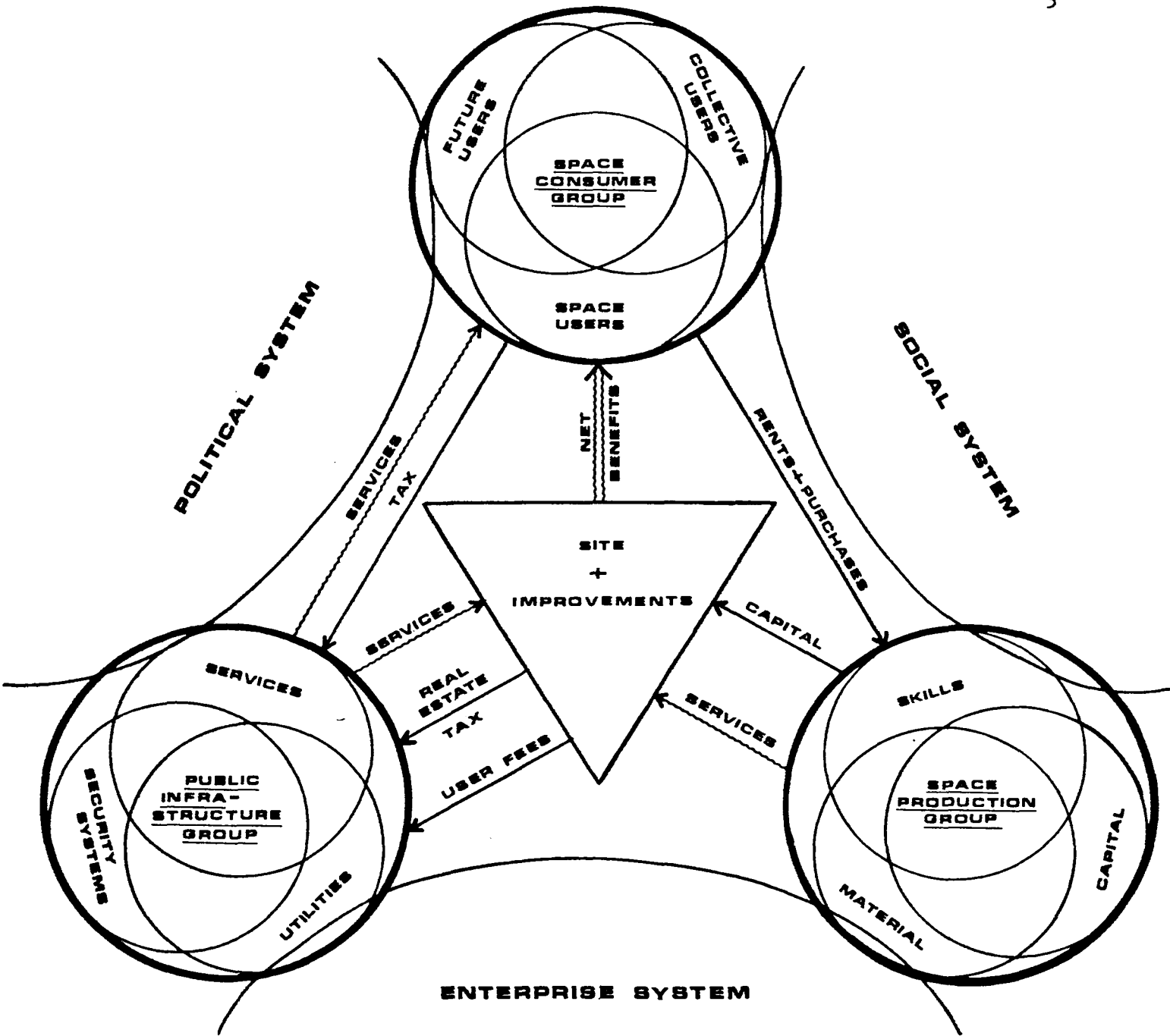
Professor James A. Graaskamp, Ph.D., CRE, SREA  
University of Wisconsin School of Business

FIRST HOUR

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 and contribute some form of activity. Contribution is efficiency, security, comfort, or well-being.
  3. Improvements from survey market to city layouts to structures define space.
  4. Legal contracts and precedents define time.
  5. Rights of use are defined by public values, court opinions.
  6. Private rights to use are those which remain after the public has exercised its rights to control, to tax, or to condemn.
- B. A real estate project is a 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. An enterprise is an organized undertaking whose form and behavior at any point in time is a consensus or synthesis of forces outside the enterprise attempting to determine its form and behavior and focus within the organization which can affect form, behavior, and sustaining energy over time.
  2. 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.
  3. The true profit centers in real estate are in the delivery of services and cash capital.
  4. Equity ownership is the degree to which one enterprise controls or diverts cash from another real estate enterprise.
  5. Public ownership exists to the degree real estate taxes, user fees, and other charges take a percentage of gross revenue in excess of service cost.
  6. A consumer must view space as one part of a total consumption system involving direct cost, surface cost, transportation cost and negative income of risk.
- 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.



# THE REAL ESTATE PROCESS

2. A desirable real estate solution occurs when the process permits maximum satisfaction to the consumer at a price that he can afford within the environmental limits of land while permitting the consumer, producer, and the government cash cycle to achieve solvency - cash breakeven at a minimum, after full payment for services rendered.
  3. Solvency of the total process, not value, is the critical issue.
  4. Land is an environmental constraint and not a profit center.
  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. The consumer group requires three levels of marketing sensitivity.
1. The collective consumer operating through the political process must be convinced that it should provide permits, zoning, or other approvals which franchise project.
  2. The individual consumer who rents or buys must be convinced he will improve the activity housed in terms of convenience, efficiency, security, and well-being at a periodic cash cost which is affordable.
  3. Future users consist of undefined future tenants representing a change in use which requires flexibility of site, structure, or services to maintain market edge, and therefore presumed resale liquidity.
- 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 not 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

"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 reasonably 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 improvements on it, the highest and best use may very well be determined to be different from the existing use. The existing use will continue, 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 contribution 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 appraiser's judgment and analytical skill, i.e., that the use determined from analysis represents an opinion, not a fact to be found. In appraisal practice, the concept 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 N. Boyce, Ph.D., SRPA, Ballinger Publishing Co., Cambridge, Mass., 1975. (Emphasis added.)

- G. 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 public 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, and the proforma budget and the end of the year income statement.
  3. Risk management is the control of variance between key assumptions and realizations.
  4. An appraisal is a set of assumptions about the future productivity of a property under selected conditions of certainty.
  5. A feasibility study is a test of a particular proposal under alternative sets of assumptions about the future and its tolerance for variance or priority for certainty.
- H. The concept of highest and best use of land was a commodity concept which did not consider externalities adequately. It is being replaced by concepts of most fitting use and the concept of most probable use.
1. The most fitting use is that use which is the optimal reconciliation of effective consumer demand, the cost of production, and the fiscal and environmental impact on third parties.

2. Reconciliation involves financial impact analysis on "who pays" and "who benefits"-- thus the rash of debate on how to do impact studies.
  3. The most probable use will be something less than the most fitting use depending upon 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. Most probable use 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.
- I. 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 and 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.
  5. Real estate is a collective decision and a product of the political process.

- J. 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 objective and to which any solution must adapt.
  2. Form-giving elements are those variables within the artist's 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.
- K. Ultimately there are only three major decision formats for real estate and land economics.
1. A location (and related improvements) in search of a justified use.
  2. A justified use in search of the best fitting location (and related improvements).
  3. Money in search of an investment in location and related improvements--the conversion of space-time needs to money invested over time.

EXHIBIT 3

Analysis Process: In Search of a Use(s) For a Site

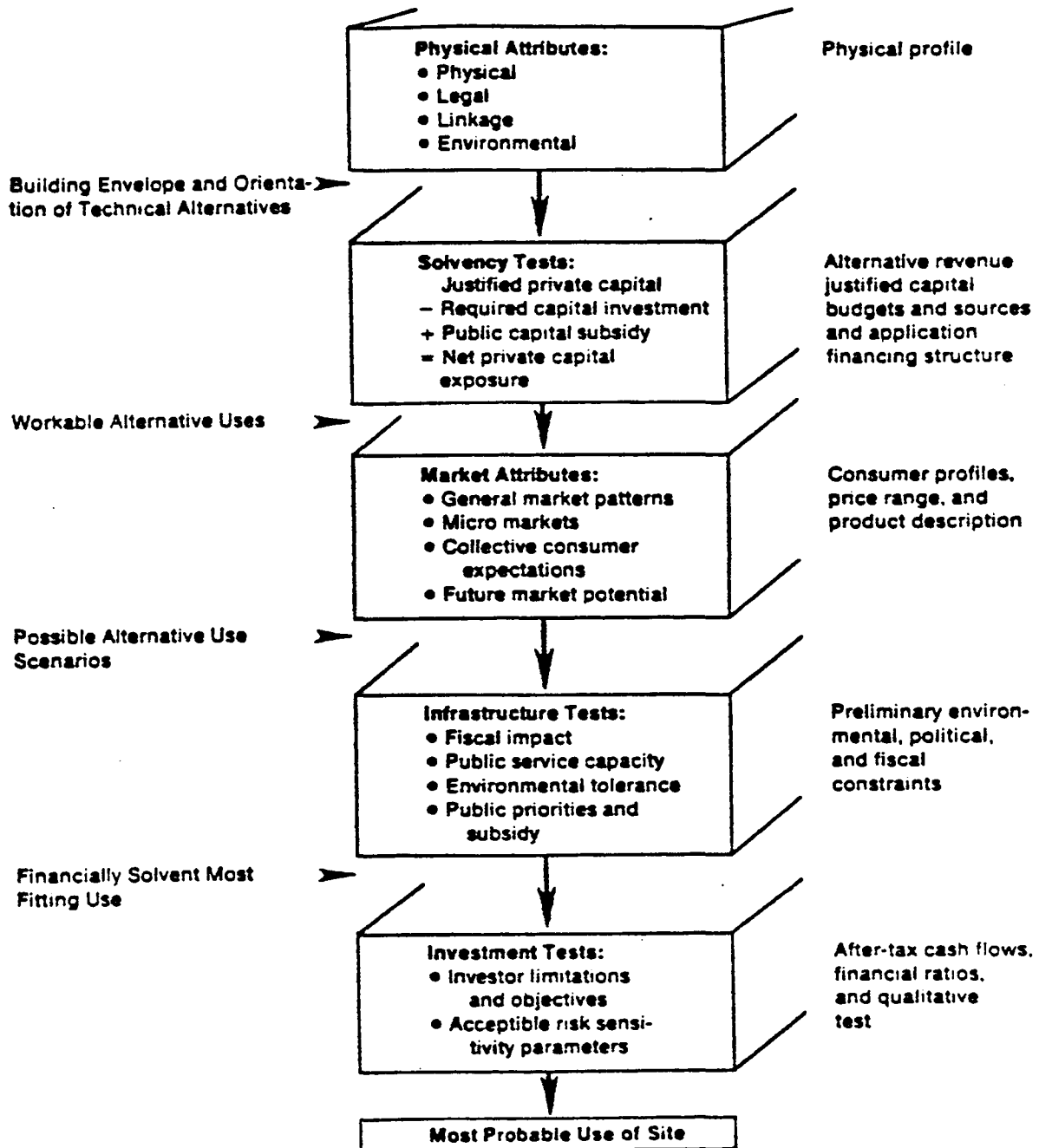
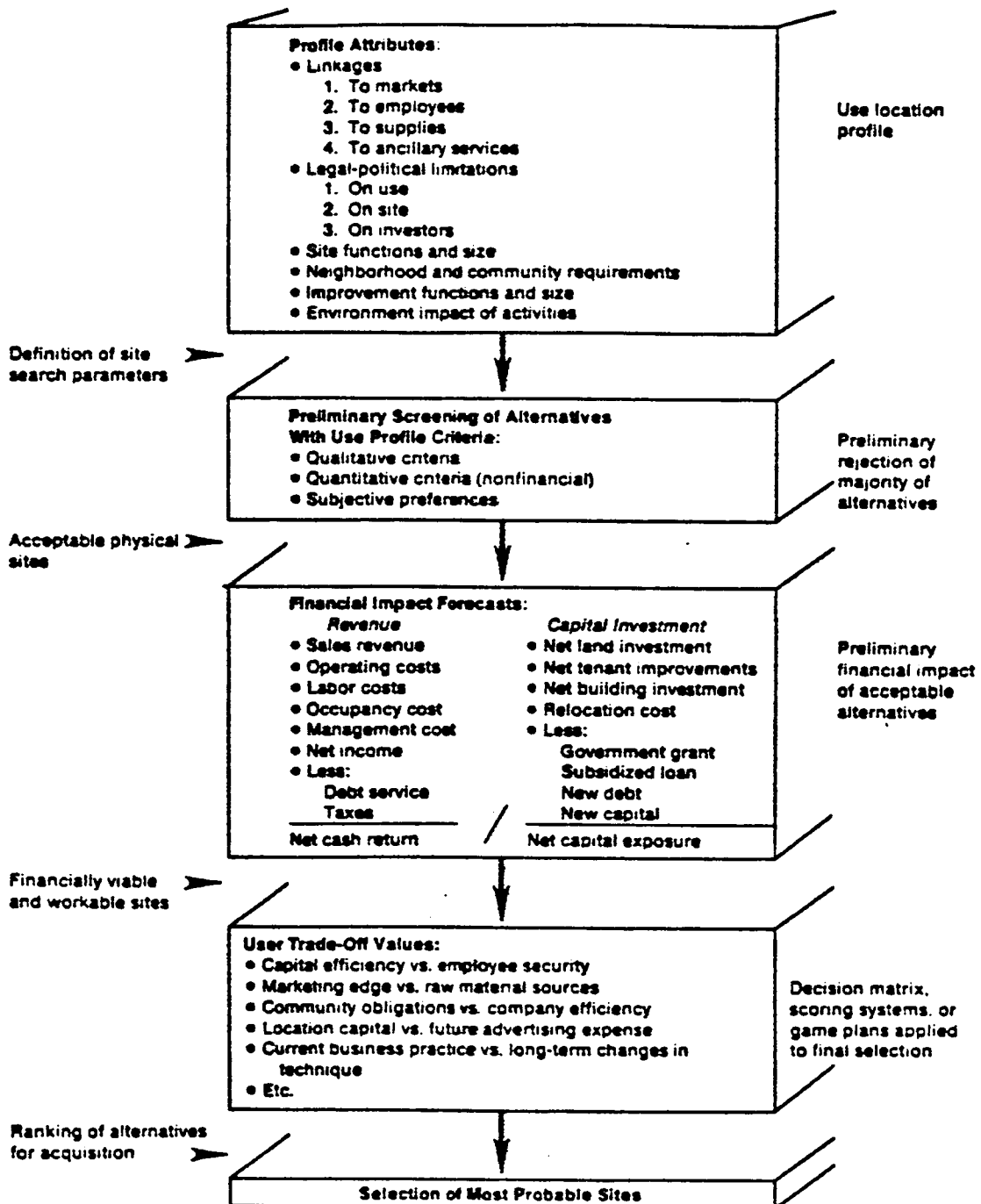


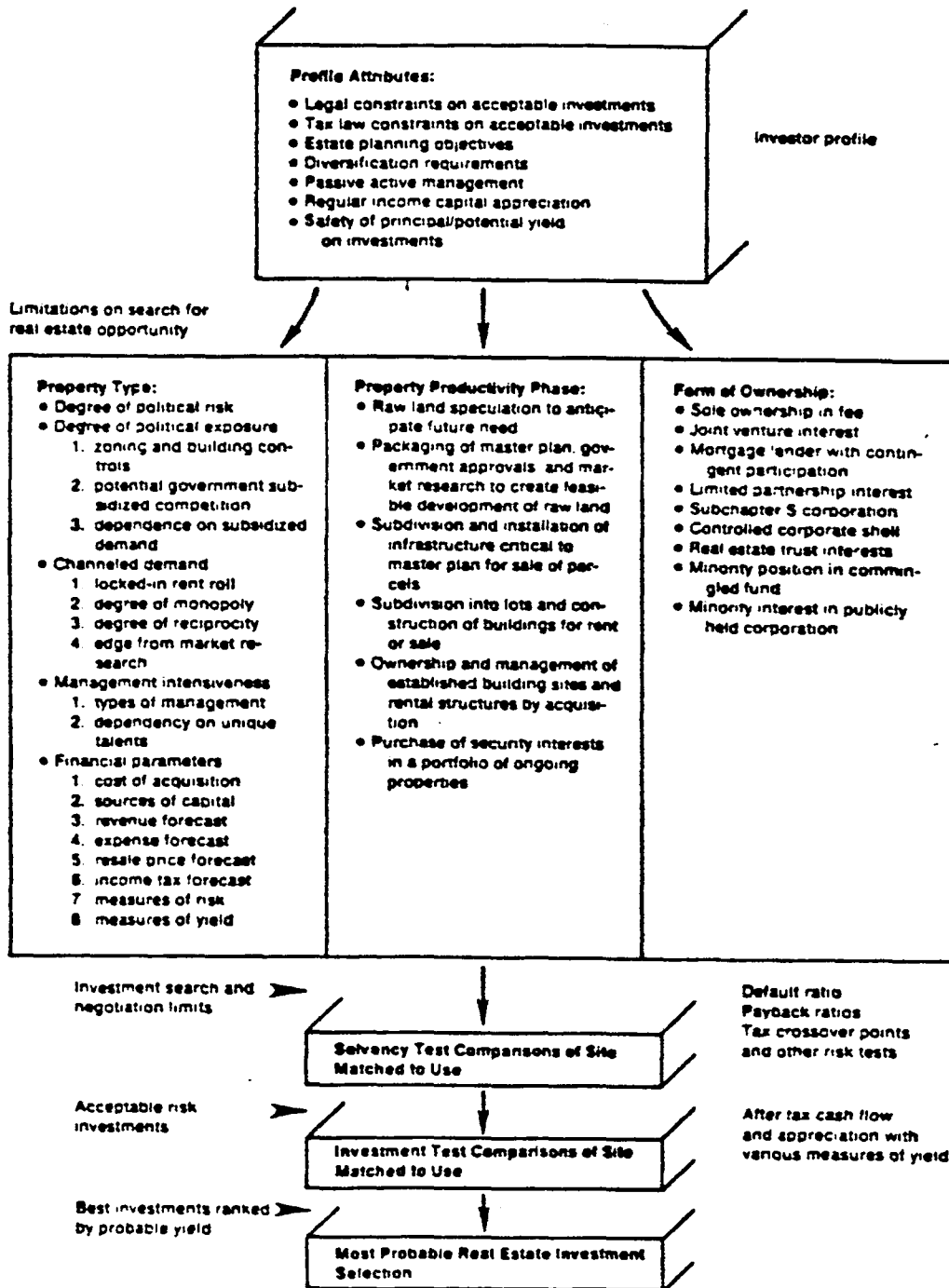
EXHIBIT 4

Analysis Process: The Search For a Site For a Use(s)



# EXHIBIT 5

## Process for Investor Selection of Real Estate



## THE NEW URBAN LAND ECONOMICS

Presented By

Professor James A. Graaskamp, Ph.D., CRE, SREA  
University of Wisconsin School of Business

SECOND HOUR

### ANALYSIS OF LAND AND IMPROVEMENTS

#### I. BASIC CONCEPTS

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

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

#### II. PHYSICAL ATTRIBUTES

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



- A. Size, shape, and lot area
- B. Topography, soils, geology, slope stability, bearing capacity, septic suitability, potential for subsidence, etc.
- C. Water table, wells, streams, ponds, storm water swales, shoreland edges, bulkhead lines, flood plain designations, etc.
- D. Flora and fauna which enhance marketability or which might cause environmental impact litigation.
- E. Concealed utility easements, old foundations, etc.
- F. Existing on-site utility services and capacity.
- G. Access points to public thoroughfares or private right-of-ways.
- H. Site improvements such as paving, retaining walls, pedestrian paths, culverts, etc.
- I. Landmark attributes or historical site features
- J. Define physical system sub-systems
  - 1. Foundation system
  - 2. Structural system
  - 3. Floor system
  - 4. Ceiling system
  - 5. Roof system
  - 6. Exterior wall system
  - 7. Interior wall system
  - 8. Horizontal circulation system
  - 9. Vertical circulation system
  - 10. Life-safety system
  - 11. HVAC system
  - 12. Site circulation system
  - 13. Social control system

### III. LEGAL ATTRIBUTES

Legal attributes should move from specific limitations on the site imposed by rights of others to private covenants, private controls, etc. It is important to recognize not only the black letter law but the composition of those authorities who have discretionary responsibility for interpretation, enforcement, or amendment of these controls relative to future uses of the site.

- A. Legal interests, vested or continued of other persons in the site.
- B. Legal description, its accuracy, and implied transfers.
- C. All local ordinances defining alternative setback lines and height limitations in order to identify alternative building envelopes permissible on the site.
- D. Private covenants limiting use, reuse, or modification of the property (urban renewal covenants, landmark building facade bequests, etc.)
- E. Applicable zoning and building code limitations on use and the critical constraints of each relative to floor area ratio (FAR) bulk, parking requirements, dwelling units (DU), etc.
- F. Special zoning options which may be available at owner's option such as rezoning, down-zoning, PUD zoning, etc.
- G. Special controls imposed by other communities through extra-territorial zoning, tax conservancy commitments, urban renewal districts, tax increment districts, county regulation of subdivision, and overlapping jurisdiction.
- H. Special state constraints on uses affecting shorelands, state highways, state airports, etc., including state industrial building codes.

- I. Special federal constraints such as airport approach zone districts, harbor and river commissions, office of environmental protection, Department of Housing and Development (HUD), provisions for the handicapped (HEW), and many more.
- J. Since the building process takes time, impending legislation is important, and regulations require interpretation or public hearings so that public attitudes and expectations may modify black letter law.
- K. A hidden source of regulation are the rules which control the lending institutions which lend the money. For example, they cannot lend on any properties located in a designated flood plain except under certain conditions which include community participation in flood prevention programs.
- L. Attitudes of sewer, water, and highway commissions.
- M. Planner's views of physical barriers to restrict "sprawl".
- N. Following the legal attribute inventory, an analysis of the static and legal attributes should be summarized in terms of competitive advantages and disadvantages for costs, pricing, and marketing.
  - 1. Some attributes lead to higher cost which the front door approach may reveal as leading to excessive rents or prices.
  - 2. Some static or legal attributes can provide monopoly advantages because its suitability is unique relative to lands all around it, because of exemption from certain regulations, or existing approvals of development plans, including licenses for dredging, building code variances, etc.
  - 3. Static attributes will also help identify "best use" or the most probable buyer.
  - 4. Lack of fit between static site attributes and merchandising data is a basic cause of unsuccessful projects.

#### IV. LINKAGES

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

- A. Streets, sidewalks, rail, and transit systems serving the site.
- B. Access points.
- C. Utility services are linkages, too.
- D. Capacity of existing systems to absorb unit volume generated on site and implications for off-site improvements budgets.
- E. Relationship of subject site to generators of potential needs and uses for the subject site.
- F. Neighborhood demographics (population, age, employment, income, etc.)
- G. Relationship to competitive alternatives and projects and exposure to interception of linkages.

#### V. DYNAMIC ATTRIBUTES

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

- A. Image conditioning of the approach zone.
- B. Visual factors in terms of prominence of the site, views from the site, potential for controlled sight lines, etc.
- C. Anxiety factors of access and security.

- D. Noise as a function of traffic count or of nearby land uses.
- E. Prevailing air currents and airborne pollution (phosphate plants or sulphite paper mills, for example).
- F. Political images established for a site by the public positions of local politicians or vested interest groups.
- G. Historical community reputation and values attached to the project site and structures.
  - 1. Recycling of old buildings within existing urban areas is fashionable among architects and the upper class.
  - 2. Recycling may establish historical roots and images.
- H. Perceived supply and demand factors.

## VI. OFF-SITE ENVIRONMENTAL IMPACTS

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

- A. Physical factors of the environment.
  - 1. Soil stability and water tables beyond the site boundaries.
  - 2. Eutrophication of lakes and streams.

3. Disruption of environmental edges, plant, and wildlife areas.
  4. Impact on energy resources.
  5. Contribution to social disintegration.
  6. Aesthetic and urban design.
- B. Social factors of the environment.
1. Displacement of existing residents and neighborhood units.
  2. Contribution to social integration or mobility barriers.
  3. Contribution to land use heterogeneity.
  4. Contribution to regional and community master plans.
- C. Economic factors of the environment.
1. Direct impact on real estate tax revenues.
  2. Direct impact on other governmental revenue.
  3. Direct impact on incremental government.
  4. Secondary contributions to local government revenues.
  5. Secondary cost burdens created for local communities.
- D. Real estate business ethic environment.
1. Impact on supply equilibrium.
  2. Impact on associated contractors.
  3. Impact on families of project sponsor.
  4. Legitimacy of financing structure.

- E. Silhouette of proposed project in terms of public perception of impact.
- F. Relationship of impact assessment to:
  - 1. Scale of project.
  - 2. Vulnerability of project sponsor to secondary consequences of political discretion.
  - 3. Stamina of project sponsor in the face of public pressure.

## VII. MOST PROBABLE USE MATRIX

Definition of the site attributes permits the appraiser or the planner to hypothesize some alternative uses for the site. (Exhibit I-2.) The appraiser should be able to set up a series of back door, revenue to justified budget parameters for these uses to suggest the parameters within which cash flows might crunch.

This technique is not unlike the residual approach, it has the same potential for misleading, but when combined with a sensitivity approach, does identify the conditions critical for financial solvency.

FEASIBILITY OF ALTERNATIVE USES

	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>	<u>Scenario 4</u>	<u>Scenario 5</u>	<u>Scenario 6</u>
<u>Feasibility Factor</u>	<u>Return to Former Use</u>	<u>Purchase by Welfare Agency</u>	<u>Conversion to Class B/C Office</u>	<u>Conversion to Apartments with Office on 1st Floor</u>	<u>Conversion to Apartments with Existing Bar</u>	<u>Demolition and Sale of Site</u>
Market Demand Risks	Demand very elastic relative to price unless room rates subsidized by welfare agencies	Welfare agencies lack capital resources to purchase and remodel facilities, given the absence of government funding	Office market becoming more price sensitive; would not accept neighborhood and lack of parking unless rents were lower than necessary to support remodeling	Strong demand for spacious two bedroom units in CBD area	Though there is a strong demand for affordable downtown housing, consumer survey shows tenant reluctance to live above noisy/potentially malodorous bar-restaurant	Soft market for vacant sites which cannot be assembled into larger plot-tage; parking revenues from 20 spaces inadequate to carry clearance costs
Legal/Political Acceptability	Inconsistent with long term City goals for Olin Place	Mixed acceptability as interim use as housing for transient males by some groups; favored by welfare advocates and disfavored by local residents	Neighborhood resistance to increased demand for street parking	Preferred use, given need for downtown housing and political statements by alderpersons for reduction of bar business in residential neighborhoods	Preferred use for housing is compromised by existing bar management agreement	Inconsistent with constituency favoring landmark designation
Technical Construction Problems and Capital Cost Risks	Failure to repair within one year may have jeopardized grandfathered non-conforming building conditions. Otherwise this use has lowest construction risks of Scenarios 1 through 5	Capital costs of renovation to state standards excessive for short term use	Variance needed for parking requirement of 1 stall per 300 SF to 1 stall per 2,500 SF of office space	Spacious apartments with views provide favorable rent/cost per SF ratio--housing code creates more remodeling risk than commercial code	Apartment mix cheapened by retaining existing bar operation--smaller units require more plumbing and bring less favorable rent/cost per SF ratio	None
Relative Investment Power Based Upon Revenue Generation Potential	\$192,765	\$120,380	\$80,331	\$103,220	(\$10,513)	\$13,778
Special Income Tax Advantages or Public Subsidies Available	None	None	Rehabilitation tax credit of 20% for older commercial building conversion plus possible industrial bond financing	Possible historic landmark status for 25% rehabilitation tax credit plus tax incremental financing (TIF) assistance	Possible historic landmark status for 25% rehabilitation tax credit. TIF less likely because increase in tax is smaller	None
Real Estate Tax Consequences to City	Modest increase in assessed value	Loss of \$194,300 tax base with tax-exempt agency as owner	Real estate tax base would be multiplied approximately 3 times the present assessment	Real estate tax base would be multiplied approximately 3 1/2 times the present assessment	Real estate tax base would be multiplied approximately 2 1/2 times the present assessment	Loss of approximately \$140,000 of tax base



## THE NEW URBAN LAND ECONOMICS

Presented By

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Wisconsin School of Business

THIRD HOUR

## REAL ESTATE MARKETING REDEFINED

## I. BASIC CONCEPTS AND MODELS

- A. In a price economy cash solvency begins with cash revenue which in turn requires a consumer willing to spend in his own self-interest. Real estate project cash flows, growth in investment value, and all related premises of leverage, arbitrage, etc., presume some level of monopoly to avoid competition and exploit spatial inertia.
- B. Free enterprise is the art of creating your own monopoly at appropriate points in time.
  - 1. For products, monopoly requires control of raw material, design, services, and marketing channels.
  - 2. For services, monopoly requires behavioral conditioning of consumer.
  - 3. Real estate is both product and service.
  - 4. Timing is concerned with a supply cycle and behavioral and demographic evolution.
  - 5. Complexities require reduction of marketing perspective to very selected segments and time frames (market gaps and windows) which can be modeled.
- C. Segmentation in both market research and merchandising to achieve monopoly reflect the following concepts:
  - 1. Market studies are of the aggregate, uncontrollable variables and forces in longer time series within which the real estate enterprise must find opportunities for customers.

2. Merchandising studies are primary research of controllable variables in abbreviated time series with which the real estate enterprise can best operate within the sea of uncontrollable variables to capture opportunities.
3. Market research is a process of disaggregation from secondary data to refined segments which scale a subset of the population who may represent a merchandising opportunity. Merchandising research is concerned with how to capture some part of that opportunity with a buy/sell transaction.
4. Positioning is the strategic selection and tactical implementation of controllable variables to achieve enterprise goals within uncontrollable market trends. Positioning starts with a "P" because the ultimate research product is concerned with:
  - a. Premise for monopoly at the margin
  - b. Profile of prospect and supply segments within population (absorption rate)
  - c. Profile of political power segments within permit process
  - d. Psychology of the transactional decision to spend or vote
  - e. Product and service standards
  - f. Product and service differentiation
  - g. Product and service pricing
  - h. Penetration into prospect profiles (capture rate)
  - i. Pace and phasing of production
  - j. Promotional and motivational channels
5. Positioning at the strategic level is the sum total of decisions made to exploit aggregate opportunities and to avoid aggregate adverse factors or potentials indicated by data on effective demand and categories of supply. The subject areas of analysis are listed in number 4 but the abstraction level of data is not malleable by the decision maker. His enterprise can be maneuvered within these larger force fields.

6. Positioning at the tactical level is concerned with all the detail of controllable variables within the subject areas listed in number 4, but the decision maker can specify the exact form these elements will play in his enterprise. In short, positioning is the objective of decisions made and the questions addressed in market and merchandising research.
  7. Thus the concept of segmentation also operates on two levels, the disaggregation of aggregate data, and the differentiation of product mix and promotion codes of merchandising.
  8. Because the research objectives listed in number 4 require integration of market data and merchandising data within models which share certain premises and hypotheses, it follows that the seminar must also recognize and maintain these links to the final questions or decisions to be resolved in a land use decision.
- D. Collective users operate politically to protect their perception of a real estate decision impact on their cash revenues, expenses, and future net worth. For purposes of favorably influencing the voting transaction (which can occur explicitly or implicitly) it is necessary to understand the political options available to various segments of collective consumers with a presumed vested interest in an enterprise decision.
1. Contiguous property owners
  2. Organized neighborhood - tenant associations
  3. Constituencies sharing common interests, such as age, school children, religion, professions, etc.
  4. Community power structure and media bias.
  5. Formal political district boards and councils
  6. Public agencies regulating community infrastructure
  7. Public agencies regulating financial institutions
- E. Most feasibility cases require the analyst to create his own models with which to structure the data available and the data which must be researched.

1. Remember, models organize the analyst, the report, and the client.
  - a. Models explain what you are going to do.
  - b. Models make relationships and key assumptions explicit.
  - c. Models permit clients to understand logic of conclusions and to test their own set of assumptions.
  
2. A market research model should be careful to recognize:
  - a. What are the questions?
  - b. What data is available - which is relevant?
  - c. What theory is available to focus data on the questions?
  - d. How will the results be communicated?
  - e. What are the abilities of the analyst?
  - f. What is the cost/benefit ratio between the model method and the question?
  
3. Market data models use aggregate data, secondary information, the easy to acquire data from census tracts, traffic counts, building permits, and so on. It is useful to scale the size of the market potential of the opportunity area, but by itself aggregate market data is relatively unimportant to the success of most projects.
  - a. Absorption rates apply to aggregate market data to determine the total size or amount of market activity in terms of how many lots were sold, how many apartments in a rental rage were newly rented, or how many square feet of leased office space were occupied.
  
4. Merchandising data models are generally primary information generated by the analyst about specific competitive projects and specific user groups which will permit an estimate of what percentage of the opportunity group can be captured for a specific project.

- a. Capture rates are the product of merchandise research and are the ratio of the total opportunity potential which might be secured for a project or must be secured to achieve financial goals. The capture rate will reflect a careful judgment of product mix, amenities, pricing, and timing.

F. Alternative purposes of primary market research

1. To establish ratios for disaggregation of secondary data to focus on specific subsets or segments of the market (to scale market opportunity).
2. To profile consumer demographics, motivations, and dissatisfactions in comparable projects.
3. To profile fears of segments of collective users within a political coalition.
4. To survey professionals who serve ultimate consumers to identify trends in terms of office layouts, technical support systems required, financing, or motivations for future use conversions.
5. To generate a definition of the competitive standard for comparable projects.
6. To discover the competitive edge in terms of site/product/service/advertising to insulate project from direct price comparison shopping and competition.

G. Recognition of real estate as a subcomponent within a larger physical and behavioral system.

1. To contribute to the efficiency of the activity housed.
2. To contribute to the security of the establishment housed.
3. To reduce anxiety and stress of occupants housed.

4. To enhance the public and self-image of the occupant.
- H. Focusing on monopolistic merchandising targets.
1. Correctly recognizing the space-time product.
  2. Correctly identifying who signs the check.
  3. Correctly discovering what motivates the signature.
  4. Providing acceptable justification for signing the check.
  5. Phasing the project to fit the pace of the target group.
- I. Combination of all elements relating to a site, in search of a use can then be integrated with financial analysis in a logic to screen alternative uses as suggested in Exhibit 3.

SITE IN SEARCH OF A USE

Static Attributes

- Physical
- Legal
- Linkage
- Environmental

Building Envelope & Orientation of Technical Alternatives

Market Attributes

- General Market Patterns
- Micro Markets
- Neighborhood Expectations
- Future Markets

*\* Consumer profiles, price range, and product description*

*\* Alternative revenue justified capital budgets and source structure and application financing*

*\* Preliminary environmental, political, and fiscal constraints*

Possible Alternative Use Scenarios

Solvency Tests

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

Acceptable Alternative Uses

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

## THE NEW URBAN LAND ECONOMICS

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University of Wisconsin School of Business

FOURTH HOUR

## I. BASIC ELEMENTS OF FINANCIAL PLANNING

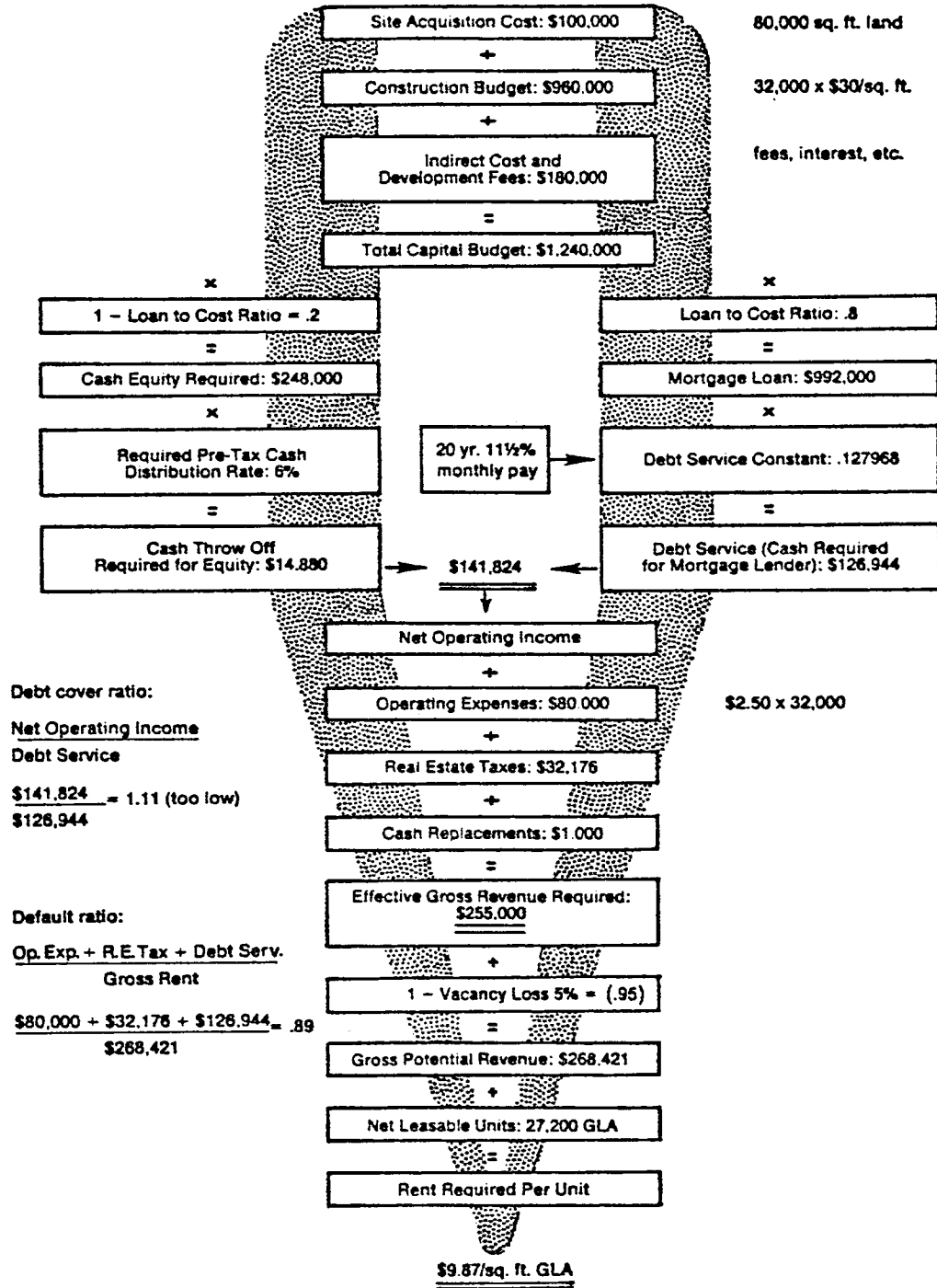
Every real estate project is an individual business enterprise which must be planned so that cash receipts are available in a timely manner to meet all required cash outlays. This planning proceeds from generalized proforma budgets for a normal year of operations toward detailed budgets integrated with the construction, marketing, and operational phases of the project.

- A. Financial Planning for future receipts and outlays requires extensive assumptions organized among the following categories.
1. The time line for segment of the real estate process to be considered from a particular viewpoint.
  2. The profit centers available to be retained or traded for financing.
  3. The expected pattern of operating revenues and expenses.
  4. The expected pattern of capital sources and applications.
  5. The expected pattern of real estate, income, or estate taxes along the time line.
  6. Strategic and tactical financial plans for control of variance (risk management).
  7. Concepts for measuring financial yield and risks.
- B. Every real estate project has a life line from concept to eventual demolition, within which the investor is choosing a specific time-line segment for planning. At any particular point on the line, only certain profit centers remain.

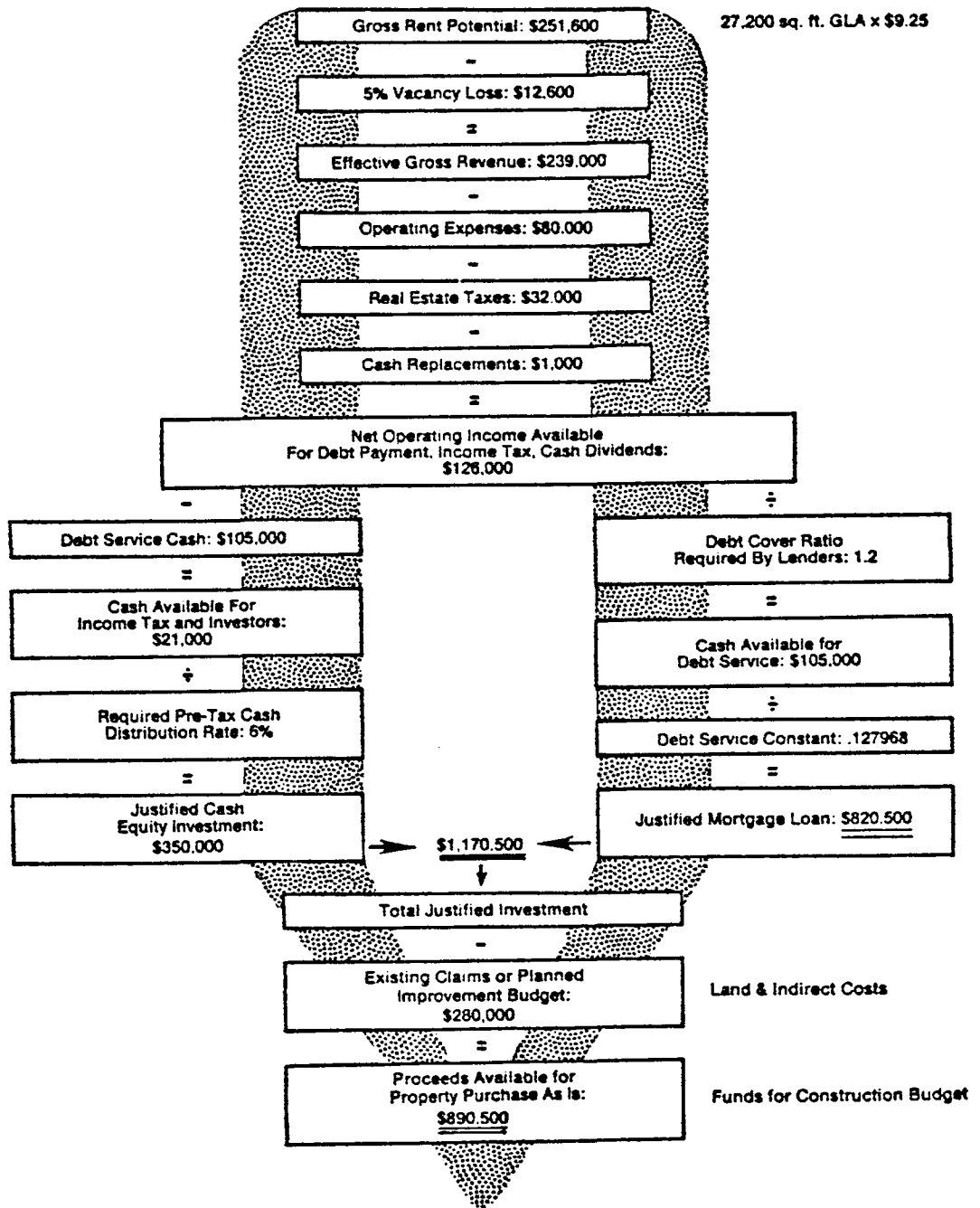


1. Security of financial sources requires matching of profit centers along the line to repayment schedules on the debt.
  2. Equity is the degree to which profit centers can be diverted to the investor's benefit and yield will be some relationship of receipts to outlays over time.
  3. The time line of the project must be synchronized to the longer term cycles of the market and the short cash cycles of the tenants.
  4. Development analysis begins with a normalized set of operating revenue and expense assumptions and then works forward to cash flow over n periods and then backward over the construction period prior to normalized operations.
- C. The preferred method of financial planning is to select a market target in terms of rent levels and services and solve for the capital budget justified by revenues.
1. The traditional method is to convert net income available for debt service by a required debt coverage ratio characteristic of financing for that type of real estate. (Consider Exhibit I-3.)
  2. The contemporary method is to view a real estate project like any other enterprise by establishing a critical cash break even point for planning purposes (sometimes called the default point) as demonstrated in Exhibit I-4.
  3. Where the architectural budget or acquisition price is already known, the financial planner begins by solving for the rent required by the capital budget desired (Exhibit I-5).
- D. A required capital structure to finance the real estate project will represent a negotiated compromise between multiple cash cycle enterprises including tenants, investors, public infrastructure, land owner, and developer. The elements of negotiation will represent arbitraging among the

**Figure 8**  
**Loan to Cost Ratio Approach**  
**(Frontdoor Approach)**

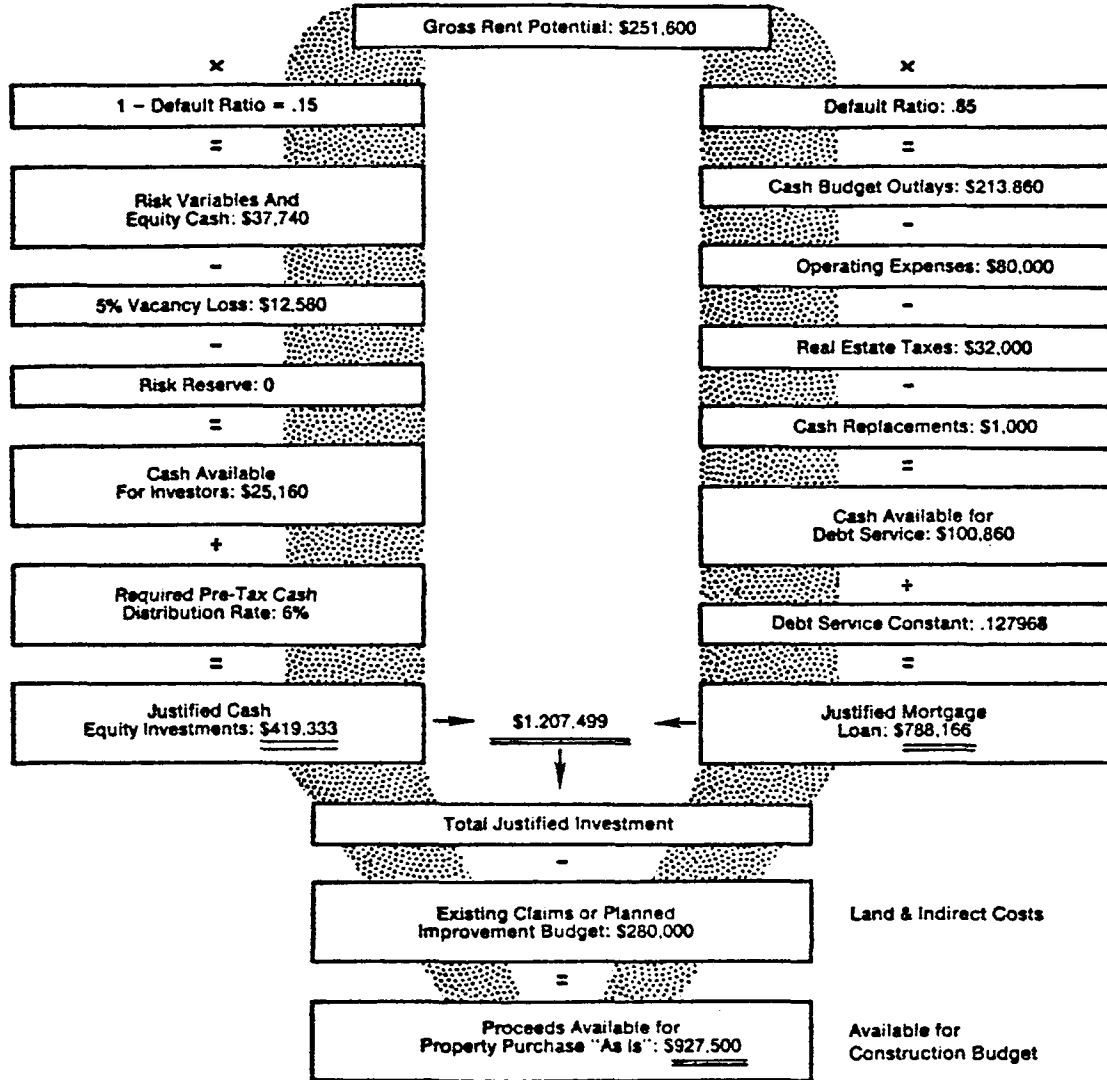


**Figure 9**  
**Debt Cover Ratio Approach**  
**(A Backdoor Approach)**  
**Lender's Point of View**



\$890,500 = \$27.80/sq. ft. justified building budget  
 32,000 sq. ft.

**Figure 10**  
**Default Ratio Approach**  
**(Another Backdoor Approach)**  
**Developer's Point of View**



\$37/sq. ft. of gross area for justified building budget

comparative advantages of each party and the risk level acceptable to the decision makers in each party at interest.

1. Owner-lender
  2. Land owner, building owner, lender, tenant
  3. City, land owner, building owner, lender, tenant, limited partner, preferred partner, general partner
  4. The arbitrage trade offs reflects the present value over time of each participant's comparative advantage in terms of payment for services, opportunity cost of money, tax advantages, ability to control and fund variance, and psychic income.
- E. Financial risk management is the control of variance between expectations and realizations, between proformas and actual profit and loss statements, or balancing of receipts and outlays over time. Risk management methods include:
1. Improving forecasts through statistical research of the critical facts.
  2. Combining risks by pooling resources, by diversifying investments, and by improving forecasting through scale of operations.
  3. Shifting risks by insurance contract, accepting the small certain loss of an insurance premium rather than the unpredictable loss of unknown frequency and severity of some insurable catastrophe like fire, collapse, death, or disability.
  4. Shifting the risk by two-party contract.
  5. Limiting liability for losses through the form of ownership as a corporation or limited partnership or esculatory clauses (which says the lender can only take the property in case of foreclosure) with which one party releases a second from an obligation to perform or for damages as a result of failure to perform.

6. Hedging is a term which covers a wide variety of devices for protecting oneself against future price fluctuations or other future contingencies. A mortgage is a straddle in future space markets, as a call on appreciation and a put to the lender if market declines.
- F. Concepts of measuring yield are all variations on the objective that receipts to the investor should exceed outlays over time to a degree sufficient to compensate for risk of loss and deferral of consumption.
1. The very simplest measure of yield is, more is better than less, sooner is better than later, and spendable is better than accruing.
  2. Overall rate of return on capital to measure positive leverage.
  3. Spendable cash on cash after taxes.
  4. Change in net worth after taxes.
  5. Change in purchasing power of spendable cash and liquidating value of net worth.
  6. Degree of variance in portfolio return.
  7. Degree of improvements in liquidity and mobility of portfolio capital.

## THE NEW URBAN LAND ECONOMICS

Presented By

Professor James A. Graaskamp, Ph.D., CRE, SREA  
University of Wisconsin School of Business

FIFTH HOUR

## I. REAL ESTATE PRODUCT AND PUBLIC INFRASTRUCTURE

The buyer or tenant of real estate space instantly becomes an ongoing customer for an infinite array of public services provided to support that particular project. Therefore the real estate project is only a short segment of a long time line continuum of cash outlays and service benefits. The question is who benefits and who pays--the fiscal impact of the incremental real estate project.

- A. The public revenue from a real estate project takes many forms and generally is poorly timed relative to the cost outlay for such services, so that the public must bridge the gap between revenues and cost with public debt, taxes, user fees, and exactions on the developer.
  - 1. The real estate taxes on new improvements
  - 2. Real estate taxes on enhanced adjacent properties
  - 3. Third level multipliers on community income and capital investment
  - 4. User fees and development permits
  - 5. Development dedications and negotiated contributions
  - 6. Sales and income taxes attributable to community growth
  - 7. Recapture of district and federal tax payments in the form of project subsidies and governmental financing
- B. The collective consumer is now aware of the consequences to each of them implied by the fiscal impact of alternative land use plans and therefore the politics of real estate must arbitrage among the comparative advantages to be enjoyed by each set of actors in the development process and the public

financing arena. Each party attempts to retain the benefits while shifting the cost, by redefinition of:

1. Percent share from special assessment versus general assessment
  2. Time lagged collection of costs relative to benefits
  3. Broader definition of geographic fiscal base than actual benefit area
  4. Broader definition of economic benefits than can be measured or expected
  5. Coalitions of beneficiaries to achieve omnibus legislation incorporating specific benefits and generalized taxation
  6. Deliberate fragmentation of systems so that downstream adverse effects are not considered
- C. Real estate development plans requiring public approval are now advocated on the basis of cash benefits to off-site beneficiaries, or at least the cash solvency guaranty of the collective consumer.
1. The land planner justifies apartment/townhouse/single family mix of the residential development in terms of tax base per child as well as environmental loads in terms of gallons of sewage, acre feet of storm water, or vehicles per hour generated and burdening public infrastructure.
  2. New office buildings or industrial parks create more tax revenue than service costs so these surplus revenue land uses become the objects of competition among various communities who are willing to buy future surpluses at some present value of the expected future cash flow.
  3. Federal or district expropriation of land for parks, military bases, or other large scale uses must provide compensation to communities for lost tax base revenues.



- D. The public is willing to purchase future benefits with such devices as:
1. Tax incremental financing which permits definition of a special district, a freeze on assessment base, and funding of a bond issue amortized from increased tax revenue, to the exclusion of all other overlapping tax districts. These bond proceeds can be used to finance public improvements, land writedowns, or financing of tenants and buyers if the "but for" criteria applies.
  2. Industrial revenue bonds permit financing of private endeavors with tax exempt public funds if it creates jobs and tax base for the community.
  3. Urban development action grants are federal grants to communities who in turn make low interest loans to selected developers to achieve lower opportunity cost of funds.
  4. Special tax offset subsidies of up to 25 percent of capital cost are available as investment tax credits for remodeling landmark buildings, updating old commercial buildings, or installing energy efficiency features.
- E. In short, urban economics is the study of local governments and service utilities as cash cycle enterprises which are first attempting to maintain cash solvency, secondly create short term surpluses (the profits of non-profits) for credibility with various constituencies and ultimately increase stock of public capital infrastructure for the delivery of services to residents at the expense of non-residents.
1. Palo Alto example
  2. Comparative advantage in the development of economic base
  3. Risk management by means of public/private joint venture or consortiums

## SECOND MODULE

### CONTEMPORARY APPRAISAL - MARKET COMPARISON APPROACH

Presented by

Professor James A. Graaskamp, Ph.D, CRE, SREA  
University of Wisconsin, School of Business

#### FIRST HOUR

##### I. Basic Concepts of Contemporary Appraisal

The basic premises of the contemporary approach stem from the fundamental belief that pricing is a behavioral science, that analysis should be inductive rather than deductive wherever possible, and that appraised values are intended to serve as a benchmark for some decision process.

A. A price is a social transaction and the behavior of the parties and configuration of the transaction reflects a consensus at some point in time between external market forces sufficiently strong to impose on the outcome, and internal forces on the supply side, sufficiently strong to pursue their own self-perceived interests.

1. Notice that the above does not presume the conditions of fair market value. (See Exhibit 1.)

- a. Both demand and supply forces to have alternatives of equal indifference
- b. Negotiation abilities of equal force, or
- c. Cash maximization as their sole criteria - all of which characterize the traditional approach.

2. Contemporary appraisal does presume that price must always be conditioned by the property rights, financing terms and conditions of sale required by the issue for which appraisal is sought as a benchmark.

3. Contemporary appraisal may therefore apply different definitions of value depending on the problem including fair market value, cost to replace, investment value or most probable price at which it will sell.

B. Value is a conditional price described as the most probable price at which a property will sell if exposed to the market for a reasonable period of time and sold subject to financing and transaction terms considered typical at that point in time and place. (See Exhibit 2.)

## EXHIBIT 1

FAIR MARKET VALUE - The highest price in terms of money (\*The Most Probable Price, Eighth Edition 1983, AIREA) which a property will bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus.

Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

1. buyer and seller are typically motivated
2. both parties are well informed or well advised, and each acting in what he considers his own best interest
3. a reasonable time is allowed for exposure in the open market
4. payment is made in cash or its equivalent
5. financing, if any, is on terms generally available in the community at the specified date and typical for the property type in its locale
6. the price represents a normal consideration for the property sold unaffected by special financing amounts and/or terms, services, fees, costs, or credits incurred in the transaction

Source: P. 137, Real Estate Appraisal Terminology, Editor Byrl Boyce

\*Not to be confused with most probable price in contemporary appraisal, which does not reflect an assumption of a competitive market with alternative, does not require ignoring of public bargaining position of the party, and which does not require cash to the seller if the market cannot have a transaction without seller financing.

## EXHIBIT 2

The most probable price is that selling price which is most likely to emerge from a transaction involving the subject property if it were to be exposed for sale in the current market for a reasonable time at terms of sale which are currently predominant for properties of the subject type.

Source: P. 8, The Appraisal of 25 N. Pinckney, by James A. Graaskamp

- C. The contemporary view sees appraisal as a limited and fictional case of feasibility analysis which, in turn, is a limited case in problem solving which, in turn, is part of a larger planning framework.
- D. Appraisal as a fictional feasibility study is a model of a decision process and, therefore, like all models is constrained by the following elements:
1. What is the nature of the question?
  2. What quantity and quality of data may be available?
  3. What theory or hypothesis may edit and focus the available data as a tentative answer to the question?
  4. What techniques and data management can be used reliably by the analysts?
  5. What techniques and data management have credibility with the ultimate decision maker hiring the analyst?
  6. What techniques and data management are cost effective in terms of the dollar consequences of the decision?
- E. In that light, the sequence of steps required of the contemporary appraisal process, referred to by Wisconsin students as RATGRAM, is as follows:
1. What is the issue for which the appraisal is sought as a benchmark? (Exhibit 3)
  2. What are the attributes of the property in terms of alternative courses of action for their productive use? (Exhibit 4)
  3. Given the alternatives, what is the most probable use?
  4. Given the most probable class use, who is the most probable buyer in terms of class, motivation profile, or market position?
  5. Given the most probable use and most probable buyer assumptions, there are three approaches to predicting most probable price:
    - a. Inference from past transactions involving properties of similar potential and buyers of similar motivation.
    - b. Failing adequate transaction data, it is then acceptable to simulate the pricing methods prototypes.
    - c. Failing to find either similar properties or articulate buyers, the appraiser is then permitted to use normative methods which indicate what might happen if buyer and seller were as smart as the appraiser.

EXHIBIT 3

PROBLEM SITUATIONS AND VALUE REQUIREMENTS

Transaction Type	Decision Parameters	Environment of Analysis	Value Needs
1. Sale	<p>How much can I sell it for?</p> <ul style="list-style-type: none"> <li>-asking price <math>V_O</math></li> <li>-<math>V_S</math> to seller</li> <li>-<math>V_T</math> as the final acceptance price</li> <li>-marketing time (velocity)</li> <li>-finance terms</li> </ul>	<p>Concern with what will happen under real conditions, not idealized conditions</p> <ul style="list-style-type: none"> <li>-analyze market</li> <li>-rate of turnover</li> <li>-price trends</li> <li>-comparable sales</li> <li>-measure of central tendency by way of average sales</li> <li>-change in conditions will change most probable selling price</li> </ul>	<p>Most probable selling price (<math>V_P</math>)</p> <ul style="list-style-type: none"> <li>-the most likely, not the highest nor lowest, but in statistical terms the central tendency under a given set of conditions</li> </ul>
2. Purchase	<p>What should I reasonably pay? What will it sell for?</p> <ul style="list-style-type: none"> <li>-offer not too high/low</li> <li>-highest price willing to pay (buyer's <math>V_S</math>)</li> <li>-if income is known and gives a desired rate of return, can a value be simulated?</li> </ul>	<p>Same conditions as a sale transaction</p>	<ul style="list-style-type: none"> <li>-Average or range of comparables</li> <li>-Replacement cost new</li> <li>-Compares existing property under current market conditions</li> <li>-Present worth, future income</li> <li>-Market capitalization rates: a) market update b) agent's subjective rate</li> <li>-Most probable selling price (<math>V_P</math>) a) current conditions b) future pattern</li> </ul>

EXHIBIT 3 (continued)

Transaction Type	Decision Parameters	Environment of Analysis	Value Needs
3. Trade	Value of both or all properties in trade are analyzed on same basis	Short-term cycle can necessitate adjustment due to submarkets	$V_p$ , but more emphasis on $V_s$ of parties involved than market conditions
4. Extension of credit	Can it carry the debt burden given the objectives of investor	Subject to money markets and general social and policy constraints	-Loan to value ratio: -debt to collateral value -Future selling price ( $V_p$ ) - $V_p$ considers pattern of future debt, based on mortgage contract
5. Eminent domain	What is the legal definition of value to be used? -not just present value of market recognized benefits, but all future benefits--i.e., commodity vs. resource	To achieve value definition must eliminate market value if inherent worth measured by a perfect transaction between all wise persons -actual sales used as guide to hypothetical value points -imperfect market vs. legal definition of value	Fair market value ( $V_e$ ) required by law; however, law tends to favor reliance on direct sales which $V_p$ best illustrates; ethical portion subject to appraiser's judgment
6. Insurance	What is legal definition? What is real loss of hazard? -replacement cost vs. reproduction cost -actual cash value (ACV) vs. replacement cost	-Contractual agreements -Standard of indemnity -Changing concepts: real estate vs. property -Legal definition vs. needs of parties involved	-Actual cash value (ACV) -Reproduction cost less depreciation--amount to indemnify -Replacement cost new -All the above are applied to total property and portion lost

EXHIBIT 3 (continued)

Transaction Type	Decision Parameters	Environment of Analysis	Value Needs
7. Property tax assessment	<p>What is a fair tax basis per site? What is the land and building contribution?</p> <ul style="list-style-type: none"> <li>-equal treatment on a mass basis</li> <li>-legally/politically determined ratio of assessed to market value</li> </ul>	<ul style="list-style-type: none"> <li>-Mass appraisal</li> <li>-Legal/political influence</li> <li>-Only need challenge on basis of equal treatment of sites</li> </ul>	<p>Fair market value (<math>V_e</math>) basis; <math>V_p</math> altered by mass appraisal format</p> <ul style="list-style-type: none"> <li>-assessed value ratio applied to <math>V_e</math></li> <li>-equity only on spatial relation and property type basis; equity not based on ability to pay</li> </ul>
8. Depreciation base	<p>What is value at beginning? What is value at end? What is the duration of productive life?</p>	<p>Dynamic institutional constraints fluctuate with tax reform and rulings</p> <ul style="list-style-type: none"> <li>-arbitrary methods due to tax administration</li> <li>-tax allowance on deductions</li> <li>-recapture of wasting asset via income stream</li> <li>-productive life (arbitrary)?</li> </ul>	<ul style="list-style-type: none"> <li>-Cost new on new buildings (book value or most probable cost, <math>V_c</math>)</li> <li>-Need consider marginal productivity of improvements</li> <li>-Land vs. improvement dichotomy for existing properties</li> <li>-<math>V_p</math> if value by legal requirements for inheritance or estate tax</li> <li>-Cost of reproduction less arbitrary depreciation (arbitrary on part of IRS)</li> <li>-Capital gains and ordinary income tax, allocation of depreciation</li> <li>-PV of entire property income over holding period and land value at end of economic life of present building (property residual)</li> <li>-<math>V_{p1}</math> and <math>V_{pn}</math> necessary?</li> </ul>

EXHIBIT 3 (continued)

Transaction Type	Decision Parameters	Environment of Analysis	Value Needs
9. Inheritance tax	<p><math>V_c</math>, <math>V_p</math>, or <math>V_e</math>--which is best for depreciation basis?</p> <p>-goal: to tax wealth received based on ability to pay</p> <p>-basis for capital gains</p>	<p>-Disposition of estate and taxing authorities' standards</p> <p>-<math>V_e</math> or <math>V_p</math>, the basis changes with real estate cycle: boom, then <math>V_e</math> lower than <math>V_p</math></p>	<p><math>V_e</math> or <math>V_p</math>--<math>V_p</math> short run, <math>V_e</math> long run</p> <p>-<math>V_e</math> preferred as base for capital gains during a slump</p> <p>-<math>V_p</math> better for inheritance during slump</p> <p>-both figures useful if need decision to keep or sell</p> <p>-if assessment lower than <math>V_p</math>, sell, then reinvest in like property and keep depreciation basis for future--capital gain determination</p>
10. Utilization	<p>What is preferred use?</p> <p>What is price as it relates to productivity?</p> <p>What are taxes? What is appreciation and capital gains potential?</p> <p>-price given use</p> <p>-tax level</p> <p>-cost of improvements</p> <p>-amount of financing</p> <p>-income and expense forecast</p>	<p>-Static attributes</p> <p>-Legal/political constraints</p> <p>-Financial constraints</p> <p>-Economic Constraints</p> <p>-Environmental constraints</p> <p>-Not just single value estimate, but address problem in range</p>	<p>-<math>V_p</math></p> <p>-Investment value <math>V_{sj}</math></p> <p>-Most probable use (MPU)</p> <p>-Most fitting use (MFU)</p> <p>-Capitalization rate--based on market or investor-owner objectives</p>



EXHIBIT 4

Critical Issues Which Define Appraisal Process

Function of the Appraisal	Property Rights	Relevant Definition of Value	Allocation of Productivity	Buyer Motivation Presumed
Tax assessment	Fee simple private rights unencumbered	Fair market value	Income attributable to land & structures only	Purchase of economic productivity
Mortgage loan (non-participating)	Encumbered fee simple private rights plus additional rights pledged	Regulations - fair market value Underwriting - solvency price or liquidating value	Fixed income pledged from all sources less costs of creative management	Share of economic productivity contributed by capital
Mortgage loan (participatory)	Encumbered title plus non-vested interest in selected future revenues	Present value of all future cash flows	Variable income pledged plus share of reversionary interest	Share of economic productivity contributed by capital plus share in selected management returns plus positioning against devaluation due to changing conditions
Sale of an investment	Encumbered title plus vested entitlements plus going concern profit center opportunities	Most probable price above minimum acceptable alternative opportunity	Return from land, structures, personalty, and selected entitlements	Increase in spendable cash Increase in liquidity value of estate Positioning to maximize probability of survival of benefits despite changing conditions
Purchase of investments	Encumbered title plus positioning for access to entitlements	Most probable price within perceived peril point limit	Land, structure, personalty, and intangible assets less profit centers for management	Increase in spendable cash Increase in liquidity value of estate Positioning to maximize probability of survival of benefits despite changing conditions
Going concern purchase of a business	Encumbered title plus positioning for access to entitlements plus reduction in risk for business start-up plus monopolistic market controls	Most probable price within perceived costs of alternatives	Land, structure, personalty, and intangible assets and good will plus profit centers for management	Increase in spendable cash Increase in liquidity value of estate Positioning to maximize probability of survival of benefits despite changing conditions

6. With an initial estimate of value, it may then be modified for external conditions unique to the parties, the place or the time.
7. The adjusted value must then be tested to demonstrate that results at that price would be consistent with the minimum goals of all major parties to the transaction.
8. Since the appraiser is predicting price under conditions of uncertainty and many different market terms, the appraisal conclusion must be expressed as a central tendency within a transaction zone which is qualified by financial terms and/or critical assumptions about unknowable facts.
  - a. Although the American Institute of Real Estate Appraisers uses fair market value and most probable price interchangeably, that is a travesty on the work of modern theorists and a deliberate attempt to confuse or negate the implied criticism of traditional ways by contemporary analysts.
  - b. Contemporary theory recognizes explicitly the errors in forecasting, the role of financial terms, and the reality of bargaining position.

CONTEMPORARY APPRAISAL - MARKET COMPARISON APPROACH

Presented by

Professor James A. Graaskamp, Ph.D, CRE, SREA  
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SECOND HOUR

I. Concept of Most Probable Buyer Type/Most Probable Price

Ratcliff Theory would place as much emphasis on behavior of prospective buyers or investors as on the operating behavior and characteristics of a property. Appraisal is trying to predict how people, buyer and seller, will behave in the future, converting a decision to a mutually acceptable price.

A. Each party is operating under certain assumptions and constraints:

1. Buyers assume they will have to pay no less than some specific price, that others are bidding for the property, that they cannot afford to pay more than a certain amount of income for shelter or business location, or that a desired use requires a specific set of attributes.
2. Sellers assume buyers see the property in the same way they do, that the property has some inherent value and utility, and that it's just a matter of time before some buyer can be found to pay the asking price.

B. A transaction matches motivation of buyer and seller imperfectly and mismatches increase as the appraiser selects additional comparable sales.

1. Developer seeks financial efficiency in the building while insurance company seeks financial efficiency in terms of operations including visibility.
2. Seller of an old house is irritated with its deficiencies while a young couple buys with excitement about remodeling opportunities.
3. Seller sells to improve liquidity with leaseback while buyer purchases to avoid devaluation of liquid resources.
4. One man's floor is another man's ceiling.

5. Therefore, the eventual sales price at which two parties will agree is arranged within a zone of expectations and requirements reflecting the assumptions of each party. Indeed, some transactions are designed so that the final price is determined late based upon whose assumptions prove to be more correct in a speculative situation.
- C. Ratcliff identified the significant set of alternative values or perspectives of value, including:
1.  $V_s$  - value to the owner or user.
  2.  $V_c$  - cost of constructing a substitute property.
  3.  $V_p$  - a probabilistic prediction of what the property will sell for
  4.  $V_o$  - price at which the property is offered for sale.
  5.  $V_b$  - bid price by a prospective purchaser
  6.  $V_t$  - the price at which the property is actually sold, as a historic fact.
- D. Both buyer and seller enter negotiations with a subjective value expectation ( $V_s$ ) which is a constraint in bargaining for the property.
1. "The actual selling price will usually represent a compromise between what the buyer would have paid if necessary and what the seller would have taken as a last resort." p. 13, Ratcliff, Valuation for Real Estate Decisions.
  2. Therefore, the appraisal must take more than just the buyer viewpoint of the transaction or the appraisal will not be of a value that reaches the minimum the seller can or would accept.
- E. This leads then to the concept of a transaction zone around a point which is the central tendency of bargaining, a point we call most probable price. Notice the assumptions of most probable price may be somewhat more acceptable in terms of pragmatic realism than those of fair market value.
1. Subjective value ( $V_s$ ) is a figure with which buyers and sellers enter the market as a constraint in the bargaining. The actual selling price will represent a compromise between what the buyer would have paid if necessary and what the seller would have taken as a last resort.
  2. In residential work, where there are many sales, the transaction zone may be defined statistically as the standard deviation of the estimate.

3. The possible variance or error in the estimate of probable sales price may be intuitive by the appraiser.
  4. The zone may be defined by the logic of bargaining positions. The seller wants to cover his debt and broker fees; the buyer assumes a certain value in a new use less remodeling costs, less a cushion for unexpected costs and profit.
  5. In the cast of investment properties, sensitivity analysis may define the range of alternative outcomes.
  6. There may be certain conditions which cannot be known by the appraiser but which would change his estimate as to what the buyer or seller would accept; the appraiser may define the transaction zone as the range between optimistic and pessimistic impacts of external events.
- F. The important function of the transaction zone is to alert the reader of the report:
1. To the fact that an appraisal value is not a certainty but a prediction of a future hypothetical business event.
  2. Present value is the purchase of a set of assumptions about the future and therefore value depends on which set of assumptions the buyer and seller "buy."
  3. The reliability of a prediction is important in using probable price as a benchmark for a decision; reliability is less important in assessment than in investment, conservatism more important in lending than in equity investment, etc.
- G. The Ratcliff viewpoint is just plain common sense. On page 14 of his text he states his premise:
- "The fundamental concepts of value and price which are central to appraisal are at the heart of the social science of economics. Economic goods are valuable because of their utility (productivity) and scarcity. Thus in analyzing the value of a parcel of real estate, the starting point is with its inherent utility - the characteristics and qualities which can make it productive and desirable, and for which people are willing to pay.

"But price is set in the market place. To serve his client's needs, the appraiser seeks to predict the price at which the subject property will probably sell. Viewing the property as a package of potentially productive qualities, the appraiser must predict the outcome of the interaction of the market forces of demand and supply to which the property might be exposed and which could trigger a transaction from which market price will emerge.

"Economics is a behavioral science, descriptive of the economic behavior of people under various conditions. It is the appraiser's task to predict how people, both buyers and sellers, will behave with respect to the subject property when it is exposed for sale. People make values and determine prices."

- H. Most probable selling price is a derivative of the theoretical work of Prof. Richard U. Ratcliff, William Kinnard, Paul Wendt, and others.
1. The quotable definition: "The most probable price is that selling price which is most likely to emerge from a transaction involving the subject property if it were to be exposed for sale in the current market for a reasonable time at terms of sale which are currently predominant for properties of the subject type."
  2. This approach makes the point conclusion explicitly a statement of the central tendency (mode, mean, or median) around which a transaction price is likely to fall. Thus it generally supplies a valuation as a range of prices within which a transaction would most likely occur, similar to but not necessarily a concept of statistical standard error. This range will be called a transaction zone.
- I. General format of RATGRAM Appraisal follows common sense logic:
1. Define the issue for which the appraisal is sought in order to select the appropriate definition of value.
  2. Analyze alternative uses of property to select most probable use as of date of appraisal.
  3. Infer from probable use the most probable buyer-type, financial motivations, and negotiation position.

4. Define comparability and test applicability of three alternative approaches.
  - a. Preferred method is to infer buyer behavior from completed market transactions.
  - b. In the absence of sales, simulate buyer estimation methods and constraints.
  - c. Knowing nothing of buyers' methods, fall back to normative approaches.

J. In the contemporary approach, note:

1. Any method is judged on the reliability with which it predicts transaction price - not on intellectual elegance-robustness.
2. Buyer-type is generally a class, but it could be a single buyer. The statistical marketplace assumption does not control.
3. There is no need that buyers be fully informed as the market may provide evidence that prices are being set by ignorance; there is no need that buyers have reasonable choices if the seller is enjoying a monopoly position.
4. Finally, it should be noted that the logical development from productivity analysis to selection of the appraisal report structures the form of the report.

K. Since appraisal starts from what is known about a specific piece of property (Productivity Analysis, Chapter 2 in Ratcliff), it is similar to a feasibility report until one has determined the probable use and the probable buyer. (See Exhibit 5.)

1. The traditional appraisal report always moves from the general to the specific, subject to a series of limiting conditions. Many of these special conditions are professional courtesy to avoid competition with other professions at the same time that one avoids paying the other professions and continues as a lone wolf in appraisal, controlling the customer, a psychological hang-up of real estate brokerage.

Thus the appraiser avoids:

- a. Engineering factors
  - b. Finance and taxation matters
  - c. Title issues, surveys, etc.
  - d. Legal character of leases, permits, and other contracts
2. At the same time the element of uncertainty, left implicit by a single number conclusion, is hedged by additional limiting conditions including the appraisal practice of ignoring politics, land use administration, and personalities.
- a. The practice of using limiting conditions has moved to the point where the appraiser supports consistency based on faulty premises rather than honesty as the reliability of a prediction.
  - b. Nevertheless, all an investor buys is a set of assumptions about the future.
  - c. Since risk is the variance between assumptions and realizations, how can the appraiser evaluate the probable productivity of the property without evaluating all the assumptions which can be made explicit.
  - d. Thus the transaction zone of range of estimates together with other report writing techniques are intended to provide better methods of recognizing the need for tolerance in the decision process for the conditions of uncertainty which surround the appraisal estimate.



## EXHIBIT 5

## CONTEMPORARY REAL ESTATE APPRAISAL REPORT OUTLINE

## Letter of Transmittal

1. Brief statement of appraisal issue
2. Definition of value applied
3. Value conclusion (qualified by financing, terms of sale, and range of probable transaction zone as appropriate)
4. Sensitivity of conclusion to critical assumptions
5. Property observations or recommendations
6. Incorporation by reference of limiting assumptions and conditions

## Table of Contents

## List of Exhibits

## Digest of Facts, Assumptions, and Conclusions

1. Property type
2. Property location
3. Property ownership
4. Determinant physical attributes
5. Controlling legal-political attributes
6. Pivotal linkage attributes
7. Marketable dynamic attributes
8. Most probable use conclusion
9. Most probable buyer profile assumed
10. Initial probable price prediction and central tendency
11. Adjustment of preliminary value estimate for external factors or market position of parties
12. Testing of corrected probable price for consistency with most probable buyer objectives
13. Final value conclusion and range of error estimate as appropriate

## I. Appraisal Problem Assignment

- A. Statement of issue or circumstances for which appraisal is intended to serve as a decision benchmark and date of valuation
- B. Special problems implicit in property type or issue that affect appraisal methodology and definition of value

## EXHIBIT 5 (continued)

- C. Special assumptions or instructions that are provided by others
- D. Definition of value, which is the objective of appraisal analysis and disciplines appraisal process
  - 1. Selected definition and source
  - 2. Implicit conditions of the definition
  - 3. Assumptions required by relevant legal rulings
- E. Definition of legal interests to be appraised
  - 1. Legal description and source
  - 2. Permits, political approvals, and other public use entitlements
  - 3. Fixtures or personalty to be included with sale
  - 4. Specific assets or liabilities excluded as inconsistent with issue or premise of appraisal

## II. Property Analysis to Determine Alternative Uses

## A. Site Analysis

- 1. Physical (static) site attributes (size, shape, geology, slope, soil hydrology, etc.)
- 2. Special site improvements (wells, bulkheads, irrigation systems, parking surfaces with unique salvage or re-use characteristics, etc.)
- 3. Legal-political attributes (applicable federal, state and local zoning, covenants, easements, special assessments, or other land use codes and ordinances, etc.)
- 4. Linkages of site (key relationships to networks, populations, or activity centers that might generate need for subject property)
- 5. Dynamic attributes of site (perceptual responses of people to site in terms of anxiety, visibility, prestige, aesthetics, etc.)
- 6. Environmental attributes of site as related to off-site systems or impact areas.

## B. Improvement Analysis

- 1. Physical (static) attributes of improvements, cataloged by type, construction, layout, condition, structural flaws, etc.
- 2. Mechanical attributes (brief statement of heating, ventilating, air conditioning, electrical, plumbing, and fire or safety systems in terms of limitations on use or efficiency)

## EXHIBIT 5 (continued)

3. In short, it is useful to subdivide improvements into subsystems:
    - a. Foundation system
    - b. Structural system
    - c. Vertical circulation
    - d. Horizontal circulation
    - e. Floor system
    - f. Ceiling system
    - g. Roof system
    - h. Internal wall system
    - i. External wall system
    - j. HVAC system
    - k. Communications system
    - l. Traffic separation system
    - m. Security system
    - n. Life safety system
    - o. Waste removal system
  4. Special structural linkages to off-site elements (tunnels, bridges, adjoining structures, etc.)
  5. Legal-political constraints on use of existing improvements (federal, state and local building codes, fire codes, conditional use procedures, neighborhood associations, and inspection liens of record for violations).
  6. Dynamic attributes of existing improvements (impressions created by type, bulk, texture, previous uses, past history, or functional efficiency)
  7. Current uses and tenancies of improvements, if any
  8. Environmental impact attributes of improvements on environs
- C. Identification of Alternative Use Scenarios for Subject Property
1. Marketing existing uses of property as is
  2. Renovation of existing property and marketing improved space
  3. Redirection of existing property to alternative tenancies and uses
  4. Replacement of existing improvements or program with new uses

## EXHIBIT 5 (continued)

## III. Selection of Most Probable Use

## A. Comparative Analysis of Alternative Uses

1. Testing and ranking alternative use strategies for legal-political compatibility
2. Testing alternative use scenarios for fit to physical property attributes within reasonable cost to cure
3. Selection of scenarios that justify market research

## B. Analysis of Effective Demand for Selected Uses

1. Search for rents and income potentials of scenario space-time products
2. Screen and rank market targets
3. Apply income-justified residual investment approach to rank economic power of alternative market scenarios
4. Evaluate marginal revenue, marginal investment risk trade-offs

## C. Summary Matrix for Selection of Most Probable Use Scenario

1. Physical fit
2. Legal-political risk
3. Strength of market demand
4. Adequacy of available financing
5. Revenue and cost assumptions risk

## IV. Prediction of Price for Subject Property

## A. Specification of Most Probable Buyer Type Implied by Most Probable Use

1. Criteria motivations of alternative buyer types
2. Selection of most probable buyer type as basis for prediction
3. Specification of essential site, improvement, financial, or key decision criteria of principal alternative buyer types

## B. Explanation of Appraisal Methodology for Prediction of Probable Purchase Price

1. Preferred method: to infer buyer behavior from actual market transaction and market data available from sales by comparable buyers of acceptable alternative properties

## EXHIBIT 5 (continued)

2. In the absence of adequate market sales data, the alternative method selected for simulation of probable buyer decision process
  3. If market influence of simulation is impossible, select normative model such as investment value, or cost to replace
- C. Search for Comparable Market Sales Transactions
1. Unit of comparison
  2. Method of comparison
  4. Investigation of sale transaction circumstances
  5. Evaluation for comparability
  6. Definition of predominant terms of sale
  7. Source of comparative adjustments
- D. Determination of Suitability of Existing Market Data for Inference of Value for Subject Property
1. Where data is adequate, selection of market comparison method to estimate value
  2. Where data is lacking or misleading, selection of method leads to simulation in E or normative methods in F

## COMTEMPORARY APPRAISAL - MARKET COMPARISON APPROACH

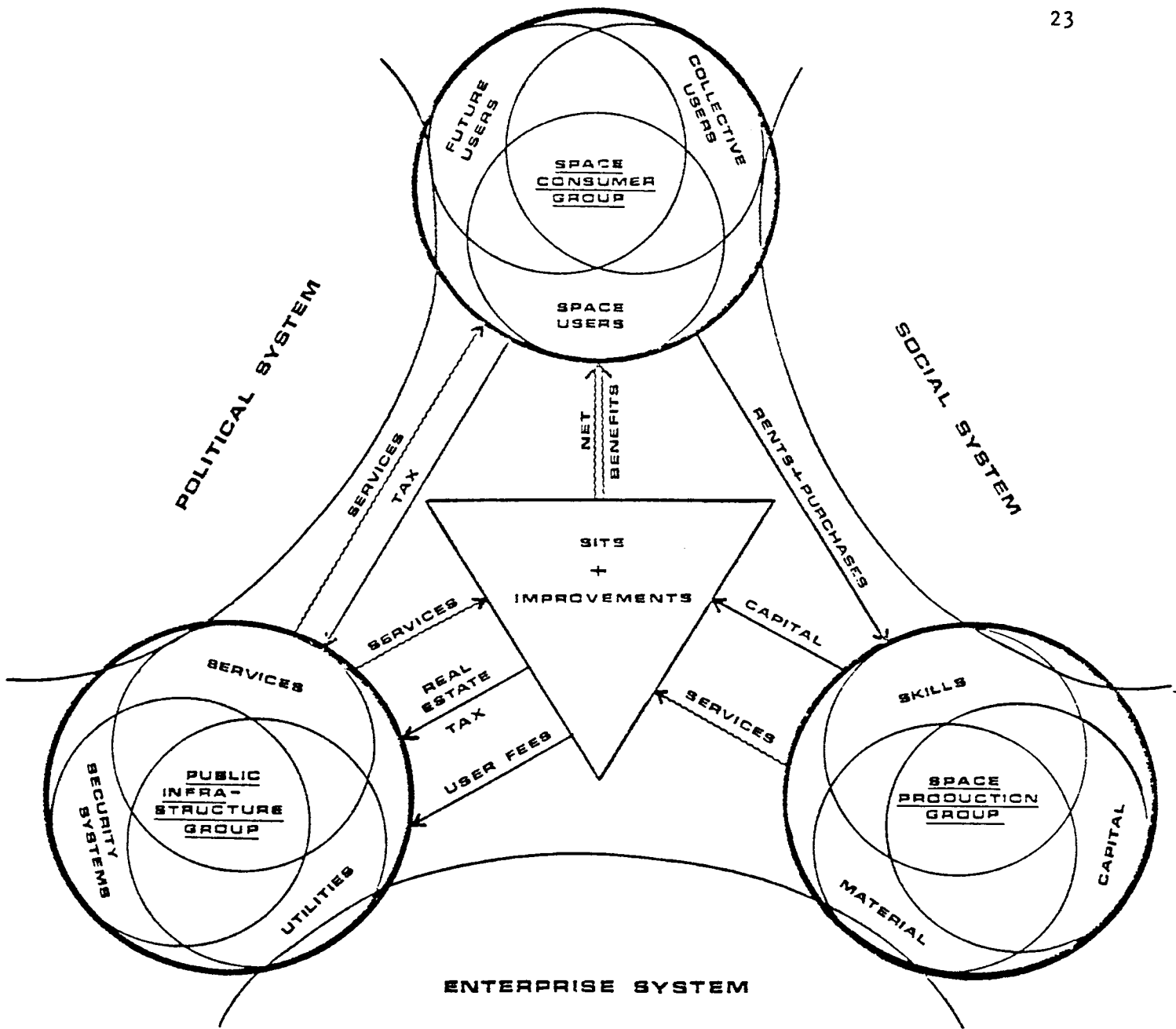
Presented by

Professor James A. Graaskamp, Ph.D, CRE, SREA  
University of Wisconsin, School of Business

## THIRD HOUR

- I. Basic Concepts and Definitions to Define Most Probable Use
  - 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 value, court opinions.
    6. Private rights to use are those which remain after the public has exercised its rights to control, to tax, or to condemn.
  - B. A real estate project is a 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.
    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 income 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 production 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 6.)
1. Each of these three decision groups represent an enterprise, an organized undertaking. All are cash cycle enterprises constrained by a need for cash solvency, both short and long term.
  2. A desirable real estate solution occurs when the process permits maximum satisfaction to the consumer at a price that he can afford within the environmental limits of land while permitting the consumer, producer, and the government cash cycle to achieve solvency - cash breakeven at a minimum, after full payment for services rendered.
  3. Solvency of the total process, not value, is the critical issue.
  4. Land is an environmental constraint and not a profit center.
  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 create location by analyzing:
1. Static attributes
  2. Legal-political attributes
  3. Linkage attributes
  4. Dynamic 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:



# THE REAL ESTATE PROCESS



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.

"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 reasonably 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 improvements on it, the highest and best use may very well be determined to be different from the existing use. The existing use will continue, 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 contribution 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 appraiser's judgment and analytical skill, i.e., that the use determined from analysis represents an opinion, not a fact to be found. In appraisal practice, the concept 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 Boyce, Ph.D, SRPA, Ballinger Publishing Co., Cambridge, Mass. 1975. (Emphasis added.)

- 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 public 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 assumptions and realizations.
  4. An appraisal is a set of assumptions about the future productivity 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 replaced by concept of most fitting use and the concept of most probable use.
1. The most fitting use is that use which is the optimal reconciliation of effective consumer demand, the cost of production, and the fiscal and environmental impact on third parties.
  2. Reconciliation involves financial impact analysis on "who pays" and "who benefits" - thus the rash of debate on how to do impact studies.
  3. The most probable use will be something less than the most fitting use depending on topical constraints imposed by current political factors, the state of real estate technology, and short term solvency pressures on consumer, producer, or public agency.
  4. Most probable use means that an appraisal is first a feasibility study of alternative uses for a site in search of a user, an investor, and 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 objective 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. An enterprise is any organized undertaking, and a real estate problem or project always begins from the viewpoint of some enterprise relative to its environment.
1. The systems engineer sees the eventual form of an enterprise, in terms of both its configuration and behavior, as representing a negotiated consensus between two general sources of power--the power of the environment to dictate form and behavior of the organization on the one hand and the power of the organization to decide for itself what its characteristics and behavior will be on the other.
  2. The systems 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.

## CONTEMPORARY APPRAISAL - MARKET COMPARISON APPROACH

Presented by

Professor James A. Graaskamp, Ph.D, CRE, SREA  
University of Wisconsin, School of Business

## FOURTH HOUR

## I. Inference From Weighted Point System Comparisons

Application from Market Comparison Approach requires correct definition of a common denominator to be used as a unit of comparison to establish degree of sameness before adjusting for less significant differences.

- A. Selection of a comparable unit as the basis for comparison; should reflect user or investor viewpoint as to source of productivity.
  - 1. Conventional physical units should be tested or compared to see which one explains the greatest percentage of variance.
  - 2. Adjusted prices should be tested to see if variance is greater or less on the average per unit after adjustments.
- B. 25 N. Pinckney sales demonstrated that shop keepers purchased per unit of first floor space while real estate developers purchased per unit of gross floor area.
- C. The computer makes it possible to test a single linear regression comparing adjusted sales price to a number of alternative independent variables to select the one unit which reduces the variance between sales the most. (See Exhibit 7.)
- D. Linear regression has more everyday application to appraisal than multiple regression. In the U.S. regression is used for intermediate analysis rather than for setting price as the dependent variable. It has limited use for pricing because:

COMPARABLE VACANT LARGE LOT LAND SALES

EXHIBIT 7

SALE NUMBER	LOCATION	AVAILABILITY OF SEWER AND WATER	ZONING	SALE DATE	GRANTOR	GRANTEE	PRICE	ACRES	PRICE PER ACRE
4	Highway 50	No	Ag	12/76	Rudy Industrial Park, Inc.	Wis. Electric Power Company	\$700,475	155.66	\$ 4,500
5	Highway 158	No	Ag	6/79	Fitts	City of Kenosha	\$696,920	133.00	\$ 5,240
19	Highway G	No	Ag	11/77		Thomas Campbell	\$188,373	53.87	\$ 3,500
32	Highway 158	Yes	Comm	1980		Shopko	\$415,800	75.60	\$ 5,500

WEIGHTED SCORE MATRIX FOR COMPARABLE  
LARGE SITE LAND SALES BASED  
UPON PRICE SENSITIVE ATTRIBUTES

ATTRIBUTE	WEIGHT	#4 WEPCO (BNY 50)	#5 KENOSHA INDUSTRIAL PARK	#19 CAMPBELL (BNY G)	#32 SBOPKO	SUBJECT (COMMERCIAL/ RETAIL)
<u>Physical Attributes</u>		[1]				
Size of Site	20%	1/ .20	1/ .20	5/1.00	3/ .60	1/ .20
Site Topography	10%	3/ .30	3/ .30	3/ .30	1/ .10	5/ .50
<u>Linkages</u>						
Highway Frontage	30%	5/1.50	5/1.50	1/ .30	5/1.50	5/1.50
Availability of Rail	10%	5/ .50	5/ .50	1/ .10	1/ .10	1/ .10
Availability of Utilities	20%	1/ .20	5/1.00	1/ .20	5/1.00	1/ .20
<u>Sum</u>	<u>10%</u>	<u>1/ .10</u>	<u>1/ .10</u>	<u>5/ .50</u>	<u>3/ .30</u>	<u>3/ .30</u>
TOTAL POINT SCORE	100%	2.80	3.60	2.40	3.60	2.80
-----						
Sale Price		\$700,475	\$696,920	\$188,375	\$415,800	---
Date of Sale		12/76	6/79	11/77	6/76	---
Time Adjustment [2]		+ 2%	- 2%	0%	+ 4%	---
Adjusted Sale Price		\$609,413 [3]	\$648,136 [4]	\$188,373	\$432,432	1,655,280
Acres		155.66	133	53.87	75.6	127
Adjusted Price per Acre		\$3,915	\$4,873	\$3,500	\$5,720	---
Total Point Score		2.80	3.60	2.40	3.60	2.80
Price per Acre Point Score		\$1,398	\$1,354	\$1,458	\$1,589	---

POINT SCORE ADJUSTMENT PROCESS -  
LARGE SITE LAND SALES

MOST PROBABLE PRICE COMPUTATION USING MEAN PRICE PER POINT EQUATION METHOD

Number of sales = 4  
Subject Size = 154.5

		SUBJECT	COMPARABLE SALES -- POINT SCORES			
		*****	*****			
			4	5	19	32
* PRICE/ACRE --->			3915.00	4873.00	3500.00	5720.00
FACTORS	WEIGHTS					
*****	*****					
1 UTILITIES	.2	1	1	5	1	5
2 FRONTAGE	.3	5	5	5	1	5
3 SIZE	.2	1	1	1	5	3
4 RAIL	.1	1	5	5	1	1
5 TOPOG	.1	5	3	3	3	1
6 USE	.1	3	1	1	5	3
7						
8						
9						
10						
	-----	1				
FACTORS x WEIGHTS		SUBJECT	COMPARABLE SALES			
*****		*****	*****			
			4	5	19	32
1 UTILITIES		.2	.2	1	.2	1
2 FRONTAGE		1.5	1.5	1.5	.3	1.5
3 SIZE		.2	.2	.2	1	.6
4 RAIL		.1	.5	.5	.1	.1
5 TOPOG		.5	.3	.3	.3	.1
6 USE		.3	.1	.1	.5	.3
7		0	0	0	0	0
8		0	0	0	0	0
9		0	0	0	0	0
10		0	0	0	0	0
TOTAL SCORE		2.8	2.8	3.6	2.4	3.6



EXHIBIT 7 (Continued)

CALCULATION OF MOST PROBABLE PRICE  
USING MEAN PRICE PER POINT EQUATION METHOD

COMPARABLE SALE NUMBER	ADJUSTED SELLING PRICE PER ACRE	WEIGHTED POINT SCORE	PRICE PER ACRE PER WEIGHTED POINT SCORE
1	3915	2.8	1398.21
2	4873	3.6	1353.61
3	3500	2.4	1458.33
4	5720	3.6	1588.89
5	0	.00001	.00
6	0	.00001	.00
7	0	.00001	.00
8	0	.00001	.00
9	0	.00001	.00
10	0	.00001	.00
			5799.05

Central Tendency (Mean):

The mean price per acre per point (x) =  $\frac{5799.048}{4} = 1449.762$

Where:

x	$\bar{x}$	(x- $\bar{x}$ )	(x- $\bar{x}$ ) <sup>2</sup>	n	n-1
1398.214	1449.762	-51.5476	2657.157	4	3
1353.611	1449.762	-96.1508	9244.975		
1458.333	1449.762	8.571429	73.46939		
1588.889	1449.762	139.1270	19356.32		
0	1449.762	0	0		
0	1449.762	0	0		
0	1449.762	0	0		
0	1449.762	0	0		
0	1449.762	0	0		
0	1449.762	0	0		
			31331.92		

Dispersion about the mean = the square root of  $\frac{(x - \bar{x})^2}{n - 1} = 102.1958$

Therefore,

The Value Range is : 1449.762 +/- 102.1958  
 or 1347.566 to 1551.958

Since the subject's point score is: 2.8

Score	x	Value	=	\$/ACRE
2.8		1347.566		3773.19
2.8		1449.762		4059.33
2.8		1551.958		4345.48

Since the acreage of the subject is: 154.5

It follows that:

	\$/ACRE	x	ACRES	=	Estimated Value	
Low Estimate	3773.19	x	154.5	=	582957.9	or 583000
Central Tendency	4059.33	x	154.5	=	627166.5	or 627000
High Estimate	4345.48	x	154.5	=	671376.7	or 671000

## EXHIBIT 7 (Continued)

## Computation of Least Squares Fit of Sales Price and Property Score

## [STEP 1]

Sale	Y	X	Y <sup>2</sup>	X <sup>2</sup>	XY
1	3915	2.8	15327225	7.840000	10962
2	4873	3.6	23746129	12.96000	17542.8
3	3500	2.4	12250000	5.760000	8400
4	5720	3.6	32718400	12.96000	20592
5	0	0	0	0	0
6	0	0	0	0	0
7	0	0	0	0	0
8	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
	18008	12.4	84041754	39.52000	57496.8

## [STEP 2]

$$\bar{Y} = \frac{\text{The sum of Y's}}{n} = 4502$$

$$\bar{X} = \frac{\text{The sum of X's}}{n} = 3.1$$

## [STEP 3]

$$\begin{aligned} \text{The sum of } y^2 \text{'s} &= (\text{The sum of } Y^2 \text{'s}) - n(\bar{Y})^2 \\ &= 2969738. \end{aligned}$$

$$\begin{aligned} \text{The sum of } x^2 \text{'s} &= (\text{The sum of } X^2 \text{'s}) - n(\bar{X})^2 \\ &= 1.080000 \end{aligned}$$

$$\begin{aligned} \text{The sum of } xy &= (\text{The sum of } XY) - n(\bar{X}\bar{Y}) \\ &= 1672 \end{aligned}$$

## EXHIBIT 7 (Continued)

[STEP 4]

b = slope of price point relationship

$$b = \frac{\text{The sum of } xy}{\frac{\text{The sum of } x^2}{2}} = 1548.148$$

[STEP 5]

a = intercept

$$a = \bar{Y} - b\bar{X} = -297.259$$

[STEP 6]

$$\text{Syx} = \text{The square root of } \frac{(\text{The sum of } y^2 \text{'s}) - b(\text{The sum of } xy)}{n - 2}$$

$$= 1524.011$$

[STEP 7]

$$r = \frac{\text{The sum of } xy}{\text{The square root of } (\text{The sum of } x^2 \text{'s}) \times (\text{The sum of } y^2 \text{'s})}$$

$$= .9336096$$

$$r^2 = .8716270$$

## EXHIBIT 7 (Continued)

[STEP 8]

Subject Value = 3988.67 Estimated by Regression Equation:  $y = a + bX$

COMPARABLE NUMBER	WEIGHTED POINT SCORE	ESTIMATED PRICE PER ACRE	ACTUAL PRICE PER ACRE	RESIDUAL ERROR
4	2.8	3988.67	3915	73.67
5	3.6	5064.22	4873	191.22
19	2.4	3450.89	3500	-49.11
32	3.6	5064.22	5280	-215.78
	0	.00	0	.00
	0	.00	0	.00
	0	.00	0	.00
	0	.00	0	.00
	0	.00	0	.00
	0	.00	0	.00
	0	.00	0	.00
				-----
		NET ERROR		.00

1. Theory:
    - a. Violation of data requirements of independence, normally distributed error, degrees of freedom, etc.
    - b. Comparison of subject to mean of set
    - c. Where market comparison is sameness or set set theory, not statistical variance within a heterogeneous group
    - d. Responsibility of appraiser to select comps and make specific adjustments
  2. Practice:
    - a. Lack of adequate comparables
    - b. Failure of appraiser to view all properties and set adjustments
    - c. Inability to communicate with credibility to property owner or jury
- E. Basic steps for market comparison approach using price per point per unit
1. Define the unit of comparison
  2. Set up an ordinal scale for property variables of importance to the buyer
  3. Convert ordinal scale for each variable to a cardinal scale, using common denominator of 100% to determine weighted point score for property.
  4. Establish weighted price per point per unit for each comparable and the subject
  5. Divide dollars per unit by point score
  6. Determine mean price per point per unit using linear and straight averaging techniques
- F. Some case examples:
1. Burned-out hotel (See Exhibit 8.)
  2. Industrial site (See Exhibit 9.)
  3. Dilmore method to reduce implied weight of points (See Exhibit 10)

## FEASIBILITY OF ALTERNATIVE USES

	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>	<u>Scenario 4</u>	<u>Scenario 5</u>	<u>Scenario 6</u>
<u>Feasibility Factor</u>	<u>Return to Former Use</u>	<u>Purchase by Welfare Agency</u>	<u>Conversion to Class B/C Office</u>	<u>Conversion to Apartments with Office on 1st Floor</u>	<u>Conversion to Apartments with Existing Bar</u>	<u>Demolition and Sale of Site</u>
Market Demand Risks	Demand very elastic relative to price unless room rates subsidized by welfare agencies	Welfare agencies lack capital resources to purchase and remodel facilities, given the absence of government funding	Office market becoming more price sensitive; would not accept neighborhood and lack of parking unless rents were lower than necessary to support remodeling	Strong demand for spacious two bedroom units in CBD area	Though there is a strong demand for affordable downtown housing, consumer survey shows tenant reluctance to live above noisy/potentially malodorous bar-restaurant	Soft market for vacant sites which cannot be assembled into larger plot-tage; parking revenues from 20 spaces inadequate to carry clearance costs
Legal/Political Acceptability	Inconsistent with long term City goals for Olin Place	Mixed acceptability as interim use as housing for transient sales by some groups; favored by welfare advocates and disfavored by local residents	Neighborhood resistance to increased demand for street parking	Preferred use, given need for downtown housing and political statements by alderpersons for reduction of bar business in residential neighborhoods	Preferred use for housing is compromised by existing bar management agreement	Inconsistent with constituency favoring landmark designation
Technical Construction Problems and Capital Cost Risks	Failure to repair within one year may have jeopardized grandfathered non-conforming building conditions. Otherwise this use has lowest construction risks of Scenarios 1 through 5	Capital costs of renovation to state standards excessive for short term use	Variance needed for parking requirement of 1 stall per 300 SF to 1 stall per 2,500 SF of office space	Spacious apartments with views provide favorable rent/cost per SF ratio--housing code creates more remodeling risk than commercial code	Apartment mix cheapened by retaining existing bar operation--smaller units require more plumbing and bring less favorable rent/cost per SF ratio	None
Relative Investment Power Based Upon Revenue Generation Potential	\$192,765	\$120,380	\$80,331	\$103,220	(\$10,513)	\$13,778
Special Income Tax Advantages or Public Subsidies Available	None	None	Rehabilitation tax credit of 20% for older commercial building conversion plus possible industrial bond financing	Possible historic landmark status for 25% rehabilitation tax credit plus tax incremental financing (TIF) assistance	Possible historic landmark status for 25% rehabilitation tax credit. TIF less likely because increase in tax is smaller	None
Real Estate Tax Consequences to City	Modest increase in assessed value	Loss of \$194,300 tax base with tax-exempt agency as owner	Real estate tax base would be multiplied approximately 3 times the present assessment	Real estate tax base would be multiplied approximately 3 1/2 times the present assessment	Real estate tax base would be multiplied approximately 2 1/2 times the present assessment	Loss of approximately \$140,000 of tax base

## EXHIBIT 8 (Continued)

## SCALE FOR SCORING COMPARABLE SALE ATTRIBUTES

Location 15%	<p>5 = Corner lot with high visibility on major traffic artery</p> <p>3 = Inside lot with low visibility on major traffic artery</p> <p>1 = Inside lot with low visibility on secondary street</p>
Investor Perception of Neighborhood Image 15%	<p>5 = Strong identification with Square (within 1 block) or established commercial or residential area</p> <p>3 = Neutral investor attitude</p> <p>1 = General identification with deteriorated neighborhood</p>
Structural Condition of Improvements 25%	<p>5 = Fire-resistant construction, well maintained, operational, marketable</p> <p>3 = Ordinary mill construction (brick bearing walls-wood beams), poorly maintained, needs mechanical work</p> <p>1 = Boarded up and/or partially damaged or vandalized</p>
Reuse Potential 30%	<p>5 = Dominant commercial/retail reuse potential with anticipation of Landmark designation with 1981 tax laws applied</p> <p>4 = Dominant commercial/retail reuse potential with anticipation of Landmark designation prior to 1981 tax law</p> <p>3 = Residential reuse potential with 1981 tax laws applied</p> <p>2 = Residential reuse potential prior to 1981 tax law</p> <p>1 = Warehouse</p> <p>0 = Improvements demolished leaving land only</p>



## EXHIBIT 8 (Continued)

Bargaining Position  
of Seller  
15%

- 5 = Income adequate to carry property or seller with strong asset position
- 3 = Little or no steady income but seller not known to be under financial pressures
- 1 = Building owner known to have financial pressures or multiple liens on property

WEIGHTED MATRIX FOR COMPARABLE PROPERTIES

		Rating/Weighted Rating							
		#1	#2	#3	#4	#5	#6	#7	Cardinal Hotel
FEATURE	WRIGHT	<u>Frutachi</u> <u>215-219 King</u>	<u>Sutherland Elec.</u> <u>323 E. Wilson</u>	<u>Fess Hotel</u> <u>123 E. Doty</u>	<u>Miller Horne</u> <u>714 Williamson</u>	<u>Miller Horne</u> <u>722 Williamson</u>	<u>Atrium</u> <u>25 N. Pinckney</u>	<u>Old Sorority</u> <u>10 Langdon</u>	<u>SUBJECT</u>
Location	15%	3/ .45	5/ .75	5/ .75	3/ .45	3/ .45	1/ .15	3/ .45	5/ .75
Investor Perception of Neighborhood Image	15%	3/ .45	3/ .45	5/ .75	1/ .15	1/ .15	5/ .75	5/ .75	1/ .15
Structural Condition of Improvements at Time of Sale	25%	3/ .75	5/1.25	1/ .25	5/1.25	5/1.25	3/ .75	1/ .25	1/ .25
Reuse Potential	30%	4/1.2	1/ .30	4/1.2	2/ .60	4/1.2	4/1.2	4/1.2	5/1.5
Bargaining Position of Seller	15%	<u>5/ .75</u>	<u>3/ .45</u>	<u>1/ .15</u>	<u>3/ .45</u>	<u>1/ .15</u>	<u>1/ .15</u>	<u>1/ .15</u>	<u>3/ .45</u>
Total Point Score		3.6	3.2	3.1	2.9	3.2	3.0	2.8	3.1

EXHIBIT 8 (Continued)

	#1 Fruttschi 215-219 King	#2 Sutherland Elec. 323 E. Wilson	#3 Feas Hotel 123 E. Doty	#4 Miller Horne 714 Williamson	#5 Miller Horne 722 Williamson	#6 Atrium 25 N. Pinckney	#7 Old Sorority 10 Langdon
Nominal Sale Price	\$320,000	\$165,000	\$120,000	\$148,000	\$300,000	\$150,000	\$91,000
Date of Sale	November 1978	July 1979	January 1975	January 1979	November 1981	April 1977	July 1981
Terms of Sale	Land contract \$50,000 - down 270,000 - 2 yrs 10% Year 1 6% Year 2	Cash to seller	Land contract	Land contract \$23,000 down 125,000 @ 9 3/4% - 5 years	Land contract	\$100,000 cash 50,000 seller 2nd subordinated to construction loan	Cash to seller
Adjustment for:							
Terms of Sale	Discount 10%	No adjustment	5% Finder's fee for \$320,000 construction loan	Reduce to \$140,000	Discount 20% for creative financing	Discount 2nd-20%	None
Time of Sale (5%/year from 1/1/79 on)	Appreciate 17.5%	Appreciate 15%	Appreciate 17.5%	Appreciate 17.5%	Appreciate 2.5%	Appreciate 17.5%	Appreciate 5%
Adjusted Price for Terms and Time	\$338,400	\$189,750	\$121,500	\$164,500	\$246,000	\$164,500	\$95,550
Land Area	21,728 SF	8,221 SF	8,712 SF	8,712 SF	17,424 SF	8,712 SF	6,720 SF
Adjustment for Land Area Differences @ \$5.00/SF	(\$108,640)	(\$41,105)	(\$43,560)	(\$43,560)	(\$87,120)	(\$43,560)	(\$33,600)
Adjusted Price less Allowance for Land Value	\$229,760	\$148,645	\$77,940	\$120,940	\$158,880	\$120,940	\$61,950
Gross Building Area (GBA) (Square Feet)	21,000 SF	17,790 SF	9,330 SF	28,000 SF	30,000 SF	16,060 SF	10,500 SF
Adjusted Price per Square Foot of GBA	\$10.94/SF of GBA	\$8.36/SF of GBA	\$8.35/SF of GBA	\$4.32/SF of GBA	\$5.30/SF of GBA	\$7.53/SF of GBA	\$5.90/SF of GBA
Total Point Score	3.6	3.2	3.1	2.9	3.2	3.0	2.8
Price per Square Foot/Point Score	\$3.04	\$2.61	\$2.69	\$1.49	\$1.66	\$2.51	\$2.11

EXHIBIT 8 (Continued)

## EXHIBIT 8 (Continued)

CALCULATION OF MOST PROBABLE PRICE USING  
MEAN PRICE PER POINT EQUATION METHOD

Comparable Property	Adjusted Selling Price per SF of GBA	Weighted Point Score	$\frac{\text{Price per SF}}{\text{Weighted Point Score}}$ (x)
1	\$10.94	3.6	\$3.04
2	8.36	3.2	2.61
3	8.35	3.1	2.69
4	4.32	2.9	1.49
5	5.30	3.2	1.66
6	7.53	3.0	2.51
7	5.90	2.8	<u>2.11</u>
TOTAL			\$16.11

$$\text{Central Tendency} = \frac{\sum x}{n} = \frac{16.11}{7} = 2.30$$

$$\text{Dispersion} = \sqrt{\frac{\sum (x-\bar{x})^2}{(n-1)}} = \sqrt{\frac{1.9417}{6}} = .569$$

where:

x	$\bar{x}$	$(x-\bar{x})$	$(x-\bar{x})^2$	n	n-1
3.04	2.30	.74	.5476	7	6
2.61	2.30	.31	.0961		
2.69	2.30	.39	.1521		
1.49	2.30	.81	.6561		
1.66	2.30	.64	.4096		
2.51	2.30	.21	.0441		
2.11	2.30	.19	.0361		
$\sum (x-x)^2 =$			1.9417		

## EXHIBIT 8 (Continued)

Value range:  $x \pm \text{dispersion} = 2.30 \pm .57$

Gross            Weighted  
Building x Point    x (Central Tendency  $\pm$  Dispersion) =  
Area            Score

17,900 SF x 3.1    x            (2.30  $\pm$  .57)            =

High Estimate of \$159,256 or \$160,000

Central Tendency of \$127,627 or \$130,000

Low Estimate of \$95,998 or \$100,000

---

All value estimates are rounded

## EXHIBIT 9

approximately seven miles from the subject site and 1/4 mile from Highway 51.

Comparable Sale 6, located on the corner of Pflaum Road and Advance Road, has been used for an office/warehouse for the Harvest Day Wholesalers. Similar one story steel buildings have been built on the other three corners of the intersection. All of the platted sites have the full complement of utilities available with curb and gutter installed. These improved properties in the East Addition of Glendale Industrial Park have been well maintained. This site is approximately 9 miles from the subject and 1/4 mile from Highway 51.

C. Adjustments for Differences to Relate the  
Comparables to the Subject Property

To estimate the fair market value of the subject property, based upon the sale prices of the comparables, adjustments are made to account for the differences in the price sensitive attributes of the comparables and the subject property. The comparable properties and the subject property are scored according to the scale detailed in Exhibit 9.

The subject site, which contains 2.5 acres, receives a score of 3 because it is an average sized lot. Since it does not command a more highly visible corner location, a score of 1 is given.

## EXHIBIT 9 (Continued)

SCALE FOR SCORING COMPARABLE SALES  
BASED UPON PRICE SENSITIVE ATTRIBUTES

## PHYSICAL ATTRIBUTES = 35%

Size 20%	5 = Less than 1 acre 3 = 1 to 4 acres 1 = Greater than 4 acres
Corner Location 15%	5 = Yes 3 = Next to corner on a major road 1 = No

## LINKAGES = 50%

Proximity to Major Retail Area 20%	5 = Near a shopping center 3 = Near strip retail area 1 = No retail uses in sight
Access to Major Highways 15%	5 = On a major boulevard or highway 3 = On a traffic collector 1 = On a side street
Availability of Madison Metro 5%	5 = On a bus line 3 = Within 2-3 blocks of bus line 1 = None
Availability of Utilities 10%	5 = Water, sewer, gas, curb, and gutter 3 = Water, sewer, gas 1 = None

## EXHIBIT 9 (Continued)

DYNAMIC ATTRIBUTES = 15%

Positive Public Recognition of Street/Location 5%	5 = High visibility or recognition of location 3 = Average 1 = Relatively unknown
--	--

Perceived Adverse Influences 5%	5 = None 3 = Noise/Odor/Visual Problems 1 = Physically threatening
---------------------------------------	--

Immediate View from Property Frontage 5%	5 = Well-landscaped office, shops, and residential 3 = Office/warehouses well-screened and partially landscaped 1 = Assortment of office/warehouse uses with inadequate screening and/or poorly maintained or vacant
---	---



## EXHIBIT 9 (Continued)

Linkages are extremely sensitive to price. Sites located in major retail areas command higher prices than do warehouses and light manufacturing sites. No retail uses are in sight of the subject so a score of 1 is given. International Lane, a traffic collector, feeds into Packers Avenue, a major arterial, so the subject receives a score of 3. A bus line on Packers Avenue is within two to three blocks of the subject to yield a score of 3. Electricity, telephone, and natural gas lines are available in the general area, but there are no curbs, gutters, or sidewalks. A score of 3 is given the subject for the availability of utilities.

Dynamic attributes, (the public's perceptions of the property's attributes) contribute to value. Since International Lane is a well-known location with positive public recognition, the subject is given a score of 5. Since the noise from planes landing and taking off could be disruptive, the subject receives a 3. The view from the subject is marred by old barracks converted to offices and warehouse buildings that would no longer meet the more stringent architectural controls now in existence in Truax Air Park West, so the subject receives a score of 1.

## EXHIBIT 9 (Continued)

Each comparable is scored in a similar manner; the weighted point score matrix which details the calculation of a total point score for both the comparable and the subject is found in Exhibit 10.

The price per square foot for each comparable is divided by its point score and the results are also found in Exhibit 10.

The mean point score per square foot is applied to the point score of the subject to indicate a central tendency value of \$111,000, or \$1.01 per square foot. These calculations are detailed in Exhibit 11.

The range of estimates yields a high of \$123,500, or \$1.13 per square foot and a low of \$98,000, or \$0.90 per square foot.

As a check on the appropriateness of the appraiser's selection and weighing of price sensitive factors, the point scores calculated for each comparable is multiplied by the mean price per square foot per point score to predict or estimate the actual selling price of each comparable. The results are as follows:

COMPARABLE NUMBER	WEIGHTED POINT SCORE	ESTIMATED PRICE/SF	ACTUAL PRICE/SF	RESIDUAL ERROR
1	3.30	1.45	1.50	-.05
2	2.20	0.96	1.03	-.07
3	3.80	1.67	1.55 (adj.)	+.12
4	3.40	1.50	1.55	-.05
5	2.10	0.92	0.96	-.04
6	3.20	1.41	1.32	+.09
7	2.50	1.10	0.91	+.19
8	2.50	1.10	1.28	-.18
9	2.10	0.92	1.00	±.08
NET RESIDUAL ERRORS				+.09

## EXHIBIT 9 (Continued)

WEIGHTED POINT SCORE MATRIX FOR COMPARABLE SALES  
BASED UPON PRICE SENSITIVE ATTRIBUTES

ATTRIBUTE	WEIGHT	#1 1905 ABERG AVENUE	#2 1801 COMMERCIAL AVENUE
<u>Physical Attributes</u>			
		[1]	
Size of Site	20%	3/ .60	1/ .20
Corner Location	15%	1/ .15	1/ .15
<u>Linkages</u>			
Proximity to Retail	20%	3/ .60	1/ .20
Access to Major Roads	15%	5/ .75	3/ .45
Availability of City Bus	5%	3/ .25	5/ .25
Availability of Utilities	10%	5/ .50	5/ .50
<u>Dynamic Attributes</u>			
Public Recognition	5%	5/ .25	3/ .15
Perceived Adverse Factors	5%	3/ .15	5/ .25
View from Site	<u>5%</u>	<u>1/ .05</u>	<u>1/ .05</u>
	100%		
TOTAL POINT SCORE		3.30	2.20
-----			
Sale Price		\$80,000	\$181,150
Date of Sale		8/82	10/80
Land Area (SF)		53,426 (1.23 A)	175,547 (4.03 A)
Price per Square Foot		\$1.50	\$1.03
Total Point Score		3.30	2.20
Price per SF/Point Score		\$0.45	\$0.47

[1] Explanation of weighted score: point score/score x weight

EXHIBIT 9 (Continued)

ATTRIBUTE	WEIGHT	#3 3520 PACKERS AVENUE	#4 814 ATLAS AVENUE (Backs on to Cottage Grove Rd.)	#5 LOT 1, BLK. 7, MADISON INDUSTRIAL SUB., #1	#6 2447 ADVANCE (a.k.a. 4701 Pflaum Road)	#7 LOT 6, BLK. 3, MADISON INDUSTRIAL SUB., #1
<u>Physical Attributes</u>		[1]				
Size of Site	20%	5/1.00	3/ .60	3/ .60	3/ .60	5/1.00
Corner Location	15%	5/ .75	1/ .15	1/ .15	5/ .75	1/ .15
<u>Linkages</u>						
Proximity to Retail	20%	3/ .60	3/ .60	1/ .20	1/ .20	1/ .20
Access to Major Roads	15%	3/ .45	5/ .75	1/ .15	3/ .45	1/ .15
Availability of City Bus	5%	5/ .25	5/ .25	1/ .05	1/ .05	1/ .05
Availability of Utilities	10%	5/ .50	5/ .50	5/ .50	5/ .50	5/ .50
<u>Dynamic Attributes</u>						
Public Recognition	5%	1/ .05	3/ .15	1/ .05	5/ .25	1/ .05
Perceived Adverse Factors	5%	3/ .15	5/ .25	5/ .25	5/ .25	5/ .25
View from Site	<u>5%</u> 100%	<u>1/ .05</u>	<u>3/ .15</u>	<u>3/ .15</u>	<u>3/ .15</u>	<u>3/ .15</u>
TOTAL POINT SCORE		3.80	3.40	2.10	3.20	2.50
-----						
Sale Price		\$30,000	\$125,000	\$70,000	\$60,000	\$20,900
Date of Sale		2/79	6/83	9/82	9/82	9/82
Land Area (SF)		21,747 (0.50)	80,613 (1.85 A)	73,109 (1.68 A)	45,472 (1.04 A)	22,997 (0.53 A)
Price per Square Foot		\$1.55 [2]	\$1.55	\$0.96	\$1.32	\$0.91
Total Point Score		3.80	3.40	2.10	3.20	2.50
Price per SF/Point Score		\$0.41	\$0.46	\$0.46	\$0.41	\$0.36

[1] Explanation of weighted score: point score/score x weight  
 [2] This older sale is adjusted upward 12 percent for time. (1.12 x \$1.38 = \$1.55)

EXHIBIT 9 (Continued)

ATTRIBUTE	WEIGHT	#8 LOT 2, BLK. 6. MADISON INDUSTRIAL SUB., #1	#9 4484 ROBERTSON ROAD MADISON IND. SUB., #1	SUBJECT LOT 2, CSM 928
<u>Physical Attributes</u>		[1]		
Size of Site	20%	5/1.00	3/ .60	3/ .60
Corner Location	15%	1/ .15	1/ .15	1/ .15
<u>Linkages</u>				
Proximity to Retail	20%	1/ .20	1/ .20	1/ .20
Access to Major Roads	15%	1/ .15	1/ .15	3/ .45
Availability of City Bus	5%	1/ .05	1/ .05	3/ .15
Availability of Utilities	10%	5/ .50	5/ .50	3/ .30
<u>Dynamic Attributes</u>				
Public Recognition	5%	1/ .05	1/ .05	5/ .25
Perceived Adverse Factors	5%	5/ .25	5/ .25	3/ .15
View from Site	<u>5%</u> 100%	<u>3/ .15</u>	<u>3/ .15</u>	<u>1/ .05</u>
TOTAL POINT SCORE		2.50	2.10	2.30
-----				
Sale Price		\$32,000	\$98,600	N/A
Date of Sale		2/82	1/82	N/A
Land Area (SF)		24,975 (0.57)	98,600 (2.26 A)	109,493 (2.51 A)
Price per Square Foot		\$1.28	\$1.00	N/A
Total Point Score		2.50	2.10	2.30
Price per SF/Point Score		\$0.51	\$0.48	N/A

[1] Explanation of weighted score: point score/score x weight

## EXHIBIT 9 (Continued)

CALCULATION OF MOST PROBABLE PRICE USING  
MEAN PRICE PER POINT EQUATION METHOD

Comparable Property	Adjusted Selling Price per SF	Weighted Point Score	<u>Price per SF</u> Weighted Point Score
1	\$1.50	3.30	\$0.45
2	1.03	2.20	0.47
3	1.55	3.80	0.41
4	1.55	3.40	0.46
5	0.96	2.10	0.46
6	1.32	3.20	0.41
7	0.91	2.50	0.36
8	1.28	2.50	0.51
9	1.00	2.10	<u>0.48</u>
		TOTAL	\$4.01

$$\text{Central Tendency [1]} = \frac{\sum x}{n} = \frac{4.01}{9} = .44$$

$$\text{Dispersion} = \sqrt{\frac{\sum (x-x)^2}{(n-1)}} = \sqrt{\frac{.0168}{8}} = .05$$

$$[1] \quad x = \text{Sum of } \frac{\text{Price per SF}}{\text{Weighted Point Score}}$$

$n$  = Number of Observations

$$\bar{x} = \text{Average } \frac{\text{Price per SF}}{\text{Weighted Point Score}}$$

## EXHIBIT 9 (Continued)

where:

$\underline{x}$	$\bar{x}$	$\angle(x-\bar{x})\angle$	$(x-\bar{x})^2$	$\underline{n}$	$n-1$
.42	.44	.02	.0004	9	8
.47	.44	.03	.0009		
.41	.44	.03	.0009		
.46	.44	.02	.0004		
.46	.44	.02	.0004		
.41	.44	.03	.0009		
.36	.44	.08	.0064		
.51	.44	.07	.0049		
.48	.44	.04	.0016		

$$\sum(x - \bar{x})^2 = .0168$$

Value range for subject property:

$$\bar{x} \pm \text{dispersion} = \$0.44 \pm .05$$

Square  
Footage of Subject x Weighted Point Score x (Central Tendency  $\pm$  Dispersion) =

$$109,493 \times 2.30 \times (\$0.44 \pm .05) =$$

High Estimate of \$123,500 or \$1.13 per square foot

Central Tendency of \$111,000 or \$1.01 per square foot

Low Estimate of \$98,000 or \$0.90 per square foot

## EXHIBIT 9 (Continued)

There appears to be a tight fit between the estimated and the actual price; so it can be concluded that the selection and weighing of the price sensitive factors successfully reflected buyer behavior.

The market comparable approach is sensitive to the appraiser's ability to predict buyer perceptions in a changing market. The weighted point scores are an attempt to capture these perceptions. Consequently, this calculated value is only the initial step in determining the final price estimate. This initial transaction zone must be adjusted in light of certain external factors such as the buyer's alternative option to lease surrounding land from Dane County instead of buying in fee which, in turn, will be affected by the current cost of financing land purchases, the income tax consequences of buy vs. lease decision, and the effect of the Consumer Price Index (CPI) escalator upon rental rates for leased land. Other external factors include the effect of the Truax Air Park covenants upon the quality of future development in the area, and the future expansion of the Dane County Regional Airport.

D. The Effect of Dane County Leased Lands Upon the Fair Market Value of the Subject

Dane County purchased the Truax Airport and surrounding lands from the City of Madison in 1974. A map of the area is shown previously in Exhibit 7. Dane County has platted 160



## CONTEMPORARY APPRAISAL - MARKET COMPARISON APPROACH

Presented by

Professor James A. Graaskamp, Ph.D., CRE, SREA  
University of Wisconsin, School of Business

## FIFTH HOUR

## I. Automated Market Comparison Using Euclidian Distance

University of Wisconsin Real Estate program with H. Robert Knitter, Director of School of Business Computer Center has developed a semi-automatic market comparison system for appraisal of class properties which simulates the traditional market comparison approach.

- A. The system is called MKT COMP and it combines a data base on comparable sales with euclidian distance in order to match comparables to subject property ex-anti, adjust for differences, and discard outliers ex-post before estimating probable price as the mean or weighted mean of the adjusted comparables.
- B. Common requirements of any market comparison system are:
1. Sales comparables available for analysis
  2. Variables to inventory
  3. Variables on which to adjust because of correlation with price
  4. Rates of adjustment for differences in useful variables
  5. Selection of comparable sales most like subject property
- C. Concept of most like is critical in choosing best subset of comparables. Euclidian distance measures sameness of observations within a set in order to rank degree of sameness in order to bracket subject property with comparables. Advantages include:
1. Explainable ordinal ranking
  2. Comparison to subject property for purposes of ranking
  3. High tolerance for error in selection of adjustment factors
  4. Adjustment factors can be in dollars per unit, dollars per unit of difference or dollars per special transformation unit to permit curvilinear relationships

**REALTY RESEARCHERS**

REALTY RESEARCHERS BUILDING  
586 SHADES CREST ROAD  
BIRMINGHAM, ALABAMA 35226  
(205) 823-5479

GENE DILMORE, SREA-MAI-ASA  
GARY DILMORE, SRA

APPRAISAL REPORT

THE PROPERTY

Two lots containing a total of 31,301 square feet, improved with a 1-story medical office building containing 8,870 sq. ft. gross building area and approximately 7,185 sq. ft. net rentable area.

LEGAL DESCRIPTION

Property identified as Tax Assessor's Parcel No. 23-1-1-6-6 and Parcel No. 23-1-2-1-12, legally described as all of Lots 3 and 8 and Lot 4 except SE 15 ft., survey of J. N. Easterwood First Addition, as recorded in Map Book 22 Page 49, Probate Office of Jefferson County, Alabama.

PURPOSE OF APPRAISAL

To estimate the market value of the unencumbered fee simple interest in the above-described property, as of March 11, 1983. Market value is defined as: the most probable selling price of the property, if properly exposed to the market for a reasonable period of time, with both seller and purchaser being reasonably well-informed, and neither acting under compulsion.

LOCATION

The property is located in the Roebuck-Center Point area of Birmingham, in a commercially-developed neighborhood. It is accessible to a densely populated residential area. The trend of the area is toward continued enhancing values, and continued desirability of location.

ZONING & BEST USE

The property is zoned for commercial use. Its present use, as a medical office with parking area, is in conformity with the zoning, and is considered to be the highest and best use for the site.

STREETS & UTILITIES

Subject is on a paved street, with all utilities available.

LOT

Lots 3 contains 9,350 square feet, Lot 4 11,651 square feet, and Lot 8 (the parking area) contains approximately 10,300 square feet, with a total area of 31,301 square feet. Lot 8 is accessible via a drive adjoining Lot 4, and is separated by Lot 7. The land is level.

IMPROVEMENTS

A one-story medical office building, containing 8,870 square feet gross building area, and approximately 7,185 sq. ft. net rentable area, built 1963 with remodeling in 1965, in average condition.

Exterior is 70% brick over block, 30% block, with concrete slab floor structure, built-up roof, g. i. gutters and downspouts. Floor cover is approximately 95% vinyl asbestos and 5% carpeted. Interior finish is sheetrock, panel, and vinyl paper. Ceilings are suspended acoustical tile, with part fluorescent and part incandescent lighting.

Heating and cooling is by electric heat pumps. The dialysis area has additional plumbing, and some walls have leaded X-ray areas. There is a covered walkway around most of the structure. Site improvements include approximately 7,000 sq. ft. of asphalt paving.

#### VALUATION

##### Market Data--Land

The first step in the valuation consists of estimation of the land value. On the following two pages will be found computer printouts of 6 commercial lot sales in the area. Following the sales, is the printout of a program which applies the Dilmore Size Adjustment curves to the sales, after they are adjusted for items other than size. This program tests the data for fit to seven curves, and selects the best fit, indicating the proper adjustment to be applied for differentials in size between the sold properties and subject.

## RECORD 5

STREET HW 11  
 ADDRESS NW COR BROOKHURST DR  
 DATE 80.1031  
 SIZE 20818  
 PRICE/SF 3.84  
 ID# 0  
 SELLER ROEBUCK CREST BLDG LTD  
 PURCHASER BEN L CHENAULT ET EL  
 DB 1516/465  
 PRICE 80000  
 DESCR B/ROEBUCK CRST ADD TO BROOKHURST  
 REM OFF BLT

## RECORD 2

STREET 1 AV N  
 ADDRESS 8324  
 DATE 78.1226  
 SIZE 10000  
 PRICE/SF 3.80  
 ID# 0  
 SELLER JESSIE MAE STEGER  
 PURCHASER EAST LAKE AUTO PARTS INC  
 DB 1704/603  
 PRICE 38000  
 DESCR 50 X 200 IN 12/15A RUGBY 2ND  
 REM OLD HSE-USED FOR OFF

## RECORD 6

STREET HW 11  
 ADDRESS NE COR BROOKHURST DR  
 DATE 80.0321  
 SIZE 453024  
 PRICE/SF .99  
 ID# 23-1-1-1-2-9  
 SELLER BROOKHURST PARTNERSHIP  
 PURCHASER E M CORP  
 DB 1894/307  
 PRICE 450000  
 DESCR PT NE/NE 1-17-2W  
 REM 10.4 AC @ 3269 JUST E OF BRUNO SHP CTR

## RECORD 9

STREET 1 AV N  
 ADDRESS 8320  
 DATE 81.0825  
 SIZE 8675  
 PRICE/SF 4.44  
 ID# 23-11-2-12-16  
 SELLER MAURINE B NELSON  
 PURCHASER EAST LAKE AUTO PTS INC  
 DB 2098/970  
 PRICE 38500  
 DESCR 10/15-A RUGBY LD & IMP CO 2ND. ADD  
 REM ADJ EL AUTO PTS EXIST SITE

## RECORD 8

STREET CP RD  
 ADDRESS E/S 1500 BLK  
 DATE 81.0528  
 SIZE 16660  
 PRICE/SF 3.96  
 ID# 12-4-19-3-1-4  
 SELLER LANNY VINES ET AL  
 PURCHASER SOUTHEASTERN MEATS INC  
 DB 2064/720  
 PRICE 66000  
 DESCR 110.31/111.14 X 150/150.79 LEV DTCH ACRS SOU PT  
 REM IN NE/SW 19-16-1W

## RECORD 12

STREET ORCHARD RD  
 ADDRESS S/S 124' E OF PKWY  
 DATE 80.0124  
 SIZE 54308  
 PRICE/SF 2.95  
 ID# 13-1-36-4-15-5  
 SELLER ROEBUCK PROF BLDG LTD  
 PURCHASER STEAK & ALE OF AL INC  
 DB 1872/539  
 PRICE 160000  
 DESCR 189.2/262.9 X 206.7/273.8  
 REM STEAK & ALE

ADJ FACTORS FOR		75%	77.5%	80%	82.5%	85%	87.5%	90%
#	1	0.84	0.86	0.88	0.89	0.91	0.92	0.94
#	2	0.62	0.66	0.69	0.73	0.76	0.80	0.84
#	3	3.03	2.67	2.36	2.10	1.87	1.67	1.50
#	4	0.59	0.62	0.66	0.70	0.74	0.78	0.82
#	5	0.77	0.79	0.82	0.84	0.86	0.89	0.91
#	6	1.26	1.22	1.19	1.17	1.14	1.11	1.09

MEAN OF PRICES = 4.455

STANDARD DEVIATION OF PRICES = 1.68408

COEFFICIENT OF VARIATION = .378019

MEAN OF PRICES ADJ'D W/ 75% CURVE = 3.99556

STD DEV = .523886

COEFF OF VAR = .131117

MEAN OF PRICES ADJ'D W/ 77.5% CURVE = 3.99545

STD DEV = .449433

COEFF OF VAR = .112486

MEAN OF PRICES ADJ'D W/ 80% CURVE = 4.00967

STD DEV = .499363

COEFF OF VAR = .12454

MEAN OF PRICES ADJ'D W/ 82.5% CURVE = 4.03624

STD DEV = .622586

COEFF OF VAR = .154249

MEAN OF PRICES ADJ'D W/ 85% CURVE = 4.07281

STD DEV = .770282

COEFF OF VAR = .189128

MEAN OF PRICES ADJ'D W/ 87.5% CURVE = 4.11963

STD DEV = .928646

COEFF OF VAR = .22542

MEAN OF PRICES ADJ'D W/ 90% CURVE = 4.17396

STD DEV = 1.08489

COEFF OF VAR = .259918

#### RECAP OF SIZES & PRICES

SALE#	SIZE	PRICE
1	20,818	\$5.00
2	10,000	\$5.94
3	453,054	\$1.35
4	8,675	\$5.67
5	16,660	\$4.91
6	54,308	\$3.86

SUB 31,301

The land valuation may be summarized as follows:

Land Sales Adjustment Chart

<u>Sale #</u>	<u>Price</u>	<u>Time</u>	<u>Location</u>	<u>=</u>	<u>Size</u>	<u>Adjusted Ind.</u>
1	\$3.84	1.24	1.05	\$5.00	.86	\$4.30
2	\$3.80	1.42	1.10	\$5.94	.66	\$3.92
3	\$0.99	1.30	1.05	\$1.35	2.67	\$3.60
4	\$4.44	1.16	1.10	\$5.67	.62	\$3.52
5	\$3.96	1.18	1.05	\$4.91	.79	\$3.88
6	\$2.95	1.31	1.00	\$3.86	1.22	\$4.71

Land Value Indication for Subject:

31,301 sq. ft. @ \$4.00 sq. ft., or: (R) \$125,000

COST APPROACH TO VALUE

In applying the cost approach for a preliminary value indication, we have used the Marshall & Swift cost service. We have tested their costs against numerous known local contract costs, and found them to be quite reliable.

The building was classified as Class C construction, medical office, low cost to average quality. On the following page will be found the printout from the Marshall and Swift computerized cost service.

Preliminary value indication from the Cost Approach to value is: (R) \$377,500



COST ESTIMATE FOR: CARRAWAY MEDICAL CENTER  
 PROPERTY OWNER: DR'S COLLINS & BURNETT  
 ADDRESS: 9228 PARKWAY EAST, BIRMINGHAM, ALABAMA  
 SURVEYED BY: GD  
 DATE OF SURVEY: 3/11/83

DESCRIPTION:

OCCUPANCY: MEDICAL OFFICE  
 FLOOR AREA: 8,870 Square Feet      AVERAGE STORY HEIGHT: 12.0 Feet  
 CLASS: C Masonry      EFFECTIVE AGE: 20 Years  
 COST RANK: 1.5 Low/Average      CONDITION: 3.0 Average  
 NUMBER OF STORIES: 1.0      COST AS OF: 03/83

EXTERIOR WALL:  
 Brick,Block Back-Up..... 100%  
 HEATING AND COOLING:  
 Heat Pump..... 100%

	UNITS	COST	TOTAL
BASIC STRUCTURE COST:	8,870	39.81	353,155
EXTRAS:			
Site Improvements.....			1,500
Paving,Asphalt.....	7,000	0.87	6,090
REPLACEMENT COST NEW.....			360,745
LESS DEPRECIATION:			
Physical and Functional.....	<30.0%>		<108,224>
DEPRECIATED COST.....			252,521
Estimated Land Value.....			125,000
INDICATED VALUE BY COST APPROACH:			377,521

Cost Data by MARSHALL and SWIFT

SALE COMPARISON APPROACH TO VALUE

Among sales of small office buildings which were investigated and analyzed in estimating value of subject were the following:

- (1) Crenshaw Bldg, 1016 S 18th St. Sold 7/17/82, Deed Book 2217 Page 128, for \$800,000. 2 sty, blt 1965, 29,400 sq.ft. lot, 17,117 sq.ft. bldg. At estimated \$7.50 rt, indicated gross annual multiplier is 6.23. Assigning 5% vacancy and \$3 expenses gives an indicated overall rate of return of 9.21%.
- (2) 3700 S. 4th Ave. Sold 6/30/82, DB 2210 P 794, for \$250,000. 21,179 sq.ft. lot, 7,000 sq.ft. NRA. Blt 1972. At estimated rent of \$6.50, gross income multiplier is 5.49. Assigning 5% vacancy & \$2.75 exp, indicates overall rate of 9.59%.
- (3) 1732 Oxmoor Road. Sold 4/15/82, MLS, for \$105,000. 10,000 sq.ft. lot, 1996 sq.ft. bldg, 25 yrs old.
- (4) 1210 S. 20th. St. Sold 8/24/81, DB 2099 P 692, for \$680,000. 31,066 sq.ft. lot, 11,960 sq.ft. bldg., built 1956. Rt. 9.83. GAM was 5.79. Assigning 5% vac and \$3.50 expenses indicates an overall rate of 10.27%.
- (5) 1703-B Center Point Hwy. Sold 8/21/79, DB 1803 P 811, for \$100,000. 8,883 sq.ft. lot, 2,496 sq.ft. bldg GBA, est NRA of 2,250 sq.ft. Blt 1977, Texcote and asbestos exterior.

(6) 1905 Oxmoor Road. Sold 10/8/79, DB 1833 P 98, for \$190,000. 8,950 sq.ft. lot, 3,502 sq.ft. bldg, blt 78. Gross annual multiplier was 5.78, indicated overall rate 11.85%.

(7) 3100 Independence Ave. Sold 1/4/82, DB 2149 P 315, for \$360,000. A 15,000 sq.ft. lot, 4,730 sq.ft. bldg. Indicated GAM was 8.46; indicated overall rate 7%.

(8) 2717 S. 19th Pl. Sold 6/1/82, DB 2201 P 481, for \$101,750. A 7,000 sq.ft. lot, approx. 2,500 sq.ft. NRA in bldg. Blt 1972.

(9) 11 Office Park Circle. Sold 7/1/81, DB 2078 P 345, for \$265,000. A 49,068 sq.ft. lot, bldg approx 3,600 sq.ft. NRA. Built 1965. Indicated GAM was 8.41; indicated overall rate 7.22%.

The sales were analyzed, using a procedure proposed by Dr. Richard U. Ratcliff, elaborated and implemented by Dr. James A. Graaskamp, with modifications by Gene Dilmore.

The comparison procedure is basically as follows: First, land value is calculated as of the sale date for each comparable property. The indicated land value is then deducted from the sale price, eliminating this major element from the price differentials. Then the remainder price, for improvements only, is reduced to price per square foot of net rentable area.

Next, the properties are assigned comparative quality points for the major property attributes. Points are in accordance with qualitative ratings, as follows:

<u>Rating</u>	<u>Points</u>
Excellent	26
Good	20
Average	15
Fair	13
Poor	10

The major categories of property attributes considered, and the relative weights assigned to each were as follows:

Effective Age	30%
Space Quality (Construction, Design, Finish)	50%
Marketability (Accessibility, linkages to clients & customers, amenities)	<u>20%</u>
	100%

Each assignment of quality points is given its appropriate weight, and the weighted quality points totaled. For example, a rating of Fair in regard to Age (13 points, x 30% weight); a rating of Average in regard to space quality (15 points, x 50% weight); and a rating of Good in regard to Marketability Factors (20 points, x 20% weight) gives, for Sale #1, a total of 15.40 quality points.

Next, we divide the "Price Per Square Foot for Improvements" by the number of quality points, in order to reduce the comparisons to a common denominator. In the case of Sale #1, the price of improvements of \$27.87 per square foot, divided by 15.40 quality points, yields an indicator of a price of \$1.81 per square foot/per quality point. Note that these comparative ratings are thus independent of subject property, which is then assigned quality ratings in the same manner.

Finally, we examine the central tendency of these nine indicators, for a value indication for subject improvements, and add subject land value for a total market value indication.

The analysis is summarized in the following matrix:

Comparable Sales Analysis Matrix

<u>Sale #</u>	<u>Ident.</u>	<u>Price</u>	<u>Land</u>	<u>Improvements</u>	<u>Imps Sq Ft</u>
1	Crnshw	800,000	323,000	477,500	\$27.87
2	3700 4 Av	250,000	74,000	176,000	\$25.14
3	1732 Ox	105,000	40,000	65,000	\$32.57
4	1210 S 20	680,000	310,000	370,000	\$30.94
5	1703-B	100,000	33,000	67,000	\$29.78
6	1905 Oxm	190,000	36,000	154,000	\$43.97
7	3100 Ind	360,000	75,000	285,000	\$60.25
8	2717 19 Pl	101,750	28,000	73,750	\$29.50
9	11 Off Pk	265,000	147,000	118,000	\$32.78

Comparable Sales Analysis Matrix--Cont'd

Sale #	Age	Sp Qual	Mktblty	Quality	Price Per
	<u>Rating</u>	<u>Rating</u>	<u>Rating</u>	<u>Points</u>	<u>Point/SF</u>
1	13/.3	15/.5	20/.2	15.40	\$1.81
2	13/.3	13/.5	15/.2	13.40	\$1.88
3	10/.3	15/.5	20/.2	14.50	\$2.25
4	10/.3	20/.5	20/.2	17.00	\$1.82
5	20/.3	13/.5	13/.2	15.10	\$1.97
6	26/.3	20/.5	20/.2	21.80	\$2.02
7	20/.3	23/.5	23/.2	22.10	\$2.73
8	15/.3	13/.5	15/.2	14.00	\$2.11
9	13/.3	20/.5	20/.2	17.90	\$1.83
			Mean		\$2.05
			Standard Deviation		\$0.30
Subject	13/.3	20/.5	15/.2	16.90	

Value for subject from this approach is indicated as follows:

16.90 quality points for subject x \$2.05 per point per square foot = \$34.65 per square foot. 7,185 sq. ft. @ \$34.65 =

indicated value for improvements (R) \$249,000

Adding back the land: Land 125,000

Preliminary Value Indication \$374,000

Applying the standard deviation gives a confidence interval of plus or minus one standard deviation, of: \$340,000 to \$408,000, with most probable figure of \$374,000.

(Standard deviation of \$0.30 x 15.60 points = \$4.77 x 7,185 sq. ft. = a standard deviation, in dollars, of plus or minus (R) \$34,000.)

Preliminary Value Indication from Sale Comparison Approach:

\$374,000

INCOME APPROACH TO VALUE

The building is currently leased, as follows:

Offices 1 & 2: Community Dialysis Center, 2,400 sq. ft., rent \$1,100 per month; 5 year lease through 5/85. Office 2: Douglas Collins, M.D., 1,100 sq. ft., rent \$475 per month. Office 4: J. Ippolito, M.D., 1,050, rent \$600 per month; month-to-month lease. Office 5: James Burnett, M.D., 2,635 sq. ft., rent \$1,300 per month.

Since only a portion of the building is leased to unrelated parties, and the lease on Offices 1 and 2 expires in 2 years, market rental was projected by comparison with other office rentals in the general area. Among rent comparables considered were the following:

- (1) Brookhurst Office Bldg, 266 Gadsden Hwy. Built 1978, 2 sty, 7,300 sq. ft. Rent \$8.00.
- (2) Corporate East Bldg, 213 Gadsden Hwy. Built 1977, 2 sty, 28,808 sq. ft. Rent \$9.50.
- (3) Plaza Courtyard, 9229 Todd Drive. Built 1980, 2 sty, 9,400 sq. ft. Rent \$8.00.

(4) Social Security Bldg East, 9217 Todd Drive. Built 1975, 2 sty, 13,000. Rent \$9.00.

Comparison with these and other rent comparables indicated for subject a market rental value of approximately: \$8.50 per sq. ft.

A vacancy allowance of 5% was assigned. Operating expenses were deducted in accordance with expense data on numerous office buildings in our files.

In the preceding comparable sale data, it will be noted that a number of the sales have indicated overall net rates of return calculated. From these sales, we derived an overall capitalization rate for subject of 10%. The income approach to value may be summarized as follows:



Income Approach Summary

Gross Potential Rental		
7,185 sq.ft. NRA @ \$8.50		\$61,072
Less Vacancy Allowance 5%		<u>3,054</u>
Effective Gross Rental		\$58,018
Less Operating Expenses:		
Taxes (.60)	\$4,335	
Insurance (.13)	935	
Utilities (1.50)	10,775	
Janitorial (.45)	3,200	
Repairs & Maint. (.25)	1,800	
Pest Control, Waste Disp	500	
Management (5%)	2,901	
Misc	<u>250</u>	<u>24,696</u> (3.44)
Net Rental		\$33,322
Capitalized @ 10% =		
Preliminary Value Indication		\$333,000

VALUE CONCLUSION

A preliminary value indication was derived from the cost approach at \$377,500, from the income approach at \$333,000, and from the sale comparison approach at \$374,000. The concept of "most probable purchaser" is quite relevant for this type of small office: although there is some investor-market, the market for this type of property is made up more of purchasers for owner-occupancy. For this reason, the sale comparison approach is more heavily weighted than it would be for a primarily investment property.

The preliminary value indications may be weighted for a correlated value conclusion, as follows:

Cost Approach \$377,500 x 15% = \$56,625

Income Approach \$333,000 x 25% = \$83,250

Sale Comparison \$374,000 x 60% = \$224,400

100% = \$364,275 (R) \$364,000

FINAL ESTIMATE OF MARKET VALUE OF SUBJECT PROPERTY AS OF  
MARCH 11, 1983:

\$364,000

Respectfully submitted,

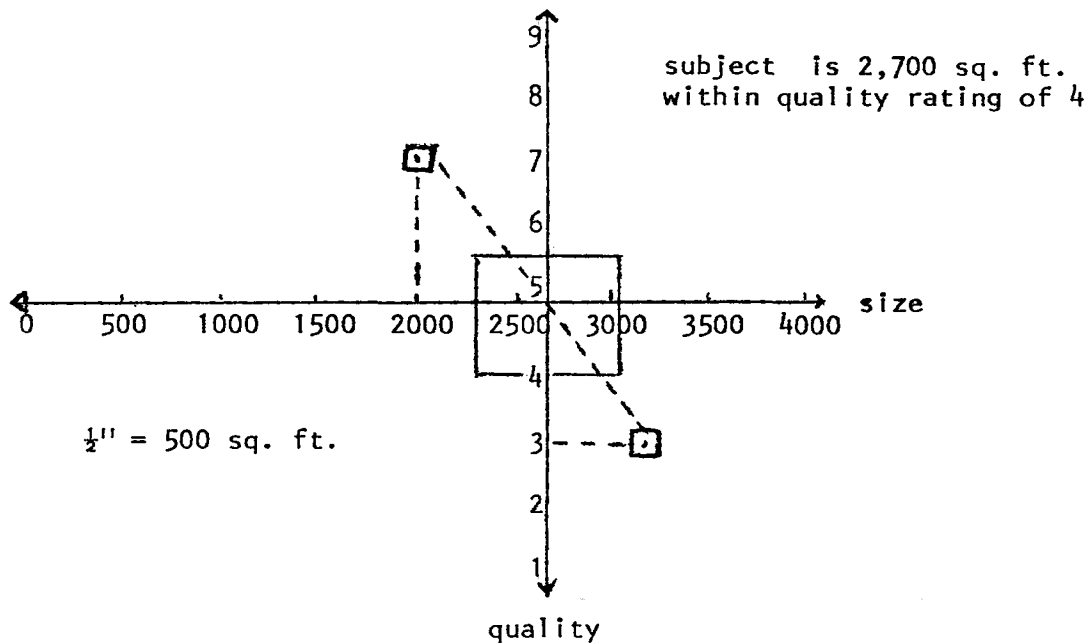
Gene Dilmore

Gary Dilmore

## EXHIBIT 11

Demonstration of Euclidian Distance  
For Selection of Best Comparable

Comparable 1 = 2,000 sq. ft. and quality 7 sold for \$80,000  
 Comparable 2 = 3,000 sq. ft. and quality 3 sold for \$110,000  
 Adjustment for difference in size is \$20 per sq. ft.  
 Adjustment for difference in quality is 2% of sales price



$$\begin{aligned} \text{Comp. 1 Euclidian distance dollars} &= [(2,700-2,000)\$20]^2 + [(5-7) \cdot 0.02 \times 80,000]^2 \\ &= 14,000^2 + 3200^2 \text{ or } 196,000 + 1,024,000 = \\ &1,220,000 \end{aligned}$$

$$\begin{aligned} \text{Comp. 2 Euclidian distance in dollars} &= [(2,700-3,000)\$20]^2 + [(5-3) \cdot 0.02 \times 110,000]^2 \\ &= 300 \times 20 \text{ or } 6000^2 + 4400^2 \\ &= 360,000 + 193,600 = 553,600 \end{aligned}$$

Therefore, Comparable 2 is most comparable to the subject property, because hypotenuse  $\sqrt{553,600}$  is shorter than hypotenuse  $\sqrt{1,220,000}$ .

- D. Consider that the market comparison method typically involves comparison of selected comparables with a subject property in terms of certain differences with a dollar adjustment made to actual sales price for the extent of the differences. The process might be represented as:

$$V_k = A_1 (X_s - X_k)_1 + A_2 \times (X_{s2} - X_{k2})$$

$V_p = \text{average of } V_k$

Refer to diagram of Euclidian Distance (See Exhibit 11.)

- II. One application of the system is for residential assessment in the upper income community of Maple Bluff, Wisconsin. There is a wide variance in size of residential units (900 sq. ft. to 9,000 sq. ft.), lot size (5,000 sq. ft. to 5 acres), and locational factors including lake views, a country club, and a railroad. All the details of the system are provided in Exhibit 12.

AUTOMATED MKT COMP ASSESSMENT SYSTEM

For Maple Bluff  
Dane County, Wisconsin

Implemented By

Jean B. Davis

Date of Inspection\_\_\_\_\_

Name of Inspector\_\_\_\_\_

VILLAGE OF MAPLE BLUFF  
DANE COUNTY  
WISCONSIN

## SINGLE FAMILY RESIDENTIAL INFORMATION FORM

1. \_\_\_\_\_ Tax Parcel Number
2. \_\_\_\_\_ Property Owner
3. \_\_\_\_\_ Street Number
4. \_\_\_\_\_ Street Name

LAND DATA

5. \_\_\_\_\_ Previous Lot Sale Price
6. \_\_\_\_\_ Previous Lot Sale Date
7. \_\_\_\_\_ X Geocode
8. \_\_\_\_\_ Y Geocode
9. \_\_\_\_\_ Neighborhood Number  
(01-18)
10. \_\_\_\_\_ Lot Square Feet  
(rounded to nearest 500 ft.)
11. \_\_\_\_\_ Lot Front Feet  
(rounded to nearest foot)
12. \_\_\_\_\_ Lot Depth  
(rounded to nearest foot)

13. \_\_\_\_\_ Lot Subdividable  
 (smaller of A, B,  
 A & B apply only to unplatted-uncertified lots)
- 0 = No
- CONDITIONS WHICH MUST  
BE MET:
- A = Unplatted =  $\frac{\text{Lot area} - 40,000 \text{ sq. ft.}}{\text{Gross Lots } 25,000 \text{ sq. ft.}}$   
 (round down to next integer value)
- B = Net Additional Lots =  $\frac{\text{Lake frontage} - 100 \text{ ft.}}{\text{Additional Lots}}$   
 (round down to next integer value)
1. All lots must have no less than 40' of street frontage or a single driveway (apron) easement.
2. Platted vacant lots (within a parcel) will be treated as buildable if, separately or in combination, the total area is  $\leq$  14,000 SF, and conforms to condition #1.
14. \_\_\_\_\_ Lot Oversized (but not subdividable)  
 0 = under 65,000 sq.ft.;  
 1 = oversize lot
15. \_\_\_\_\_ Lake Access Easement  
 0 = No; 1 = Yes
16. \_\_\_\_\_ Shore Quality  
 3 = inaccessible bluff/Dengel Bay  
 2 = shallow  
 1 = mud; 0 = no dominant problem
17. \_\_\_\_\_ Water Quality  
 3 = odor; 2 = flotsam; 1 = weeds;  
 0 = no dominant problem
18. \_\_\_\_\_ Lake Front Feet  
 (rounded to nearest foot)
19. \_\_\_\_\_ Lot on Corner  
 0 = No; 1 = Yes

20. \_\_\_\_\_ Lot on Cul-de-sac  
0 = No; 1 = Yes
21. \_\_\_\_\_ Inside Lot  
0 = No; 1 = Yes
22. \_\_\_\_\_ Lot Wooded  
0 = Below average (0 to 3 major trees)  
1 = Average wooded lot (4 to 7 major trees)  
2 = Above average lot (more than 7 major trees)
23. \_\_\_\_\_ Lot View  
0 = Commercial lot or railroad lot  
1 = Average view  
2 = Golf course or park view  
3 = Water average (non-State Capitol view)  
4 = Water superior (State Capitol view)
24. \_\_\_\_\_ Lot Topography  
0 = Severe, non-usable slope  
1 = Wet pockets  
2 = Downsloping lot,  
3 = Level contour  
4 = Upward sloping lot
25. \_\_\_\_\_ Adverse Influence  
0 = None  
1 = Contiguous lake easement  
2 = Joint driveway  
3 = Other (high lines, etc.)  
4 = Commercial property  
5 = Public property or exposure  
6 = Railroad  
7 = High traffic  
9 = Combination

If lot suffers from two adverse influences, enter the higher value.

SITE IMPROVEMENT DATA

26. \_\_\_\_\_ Tennis Court
27. \_\_\_\_\_ Outdoor Pool
28. \_\_\_\_\_ Patio
29. \_\_\_\_\_ Storage Shed
30. \_\_\_\_\_ Boathouse



## EXHIBIT 12 (Continued)

31. \_\_\_\_\_ Seawall
32. \_\_\_\_\_ Indoor Pool
33. \_\_\_\_\_ Elevator
34. \_\_\_\_\_ Other Structure Name
35. \_\_\_\_\_ Other Structure Value
36. \_\_\_\_\_ Other Structure Name
37. \_\_\_\_\_ Other Structure Value
38. \_\_\_\_\_ Special Structures Total  
(Sum of columns 26 - 37)
39. \_\_\_\_\_ Driveway  
(score = style, material)

STYLEMATERIAL

- 1 = Linear into garage-  
back into street
- 2 = Linear with turn-  
around space
- 3 = Circular
- 4 = Large with parking  
space and turnaround  
space
- 5 = Circular with parking  
space

- 1 = Dirt
- 2 = Gravel
- 3 = Asphalt
- 4 = Concrete/Brick

40. \_\_\_\_\_ Neighborhood Foliage
- 1 = New and raw
- 2 = Some mature trees
- 3 = Shady
41. \_\_\_\_\_ Landscaping
- 1 = Little or none
- 2 = Average
- 3 = Above average
42. \_\_\_\_\_ Screening of Back
- 0 = Little or none
- 1 = Yes

43.. \_\_\_\_\_ Screening of Front

0 = Little or none  
1 = Yes

44. \_\_\_\_\_ Curb and Gutter

0 = No; 1 = Yes

45. \_\_\_\_\_ Sidewalk

0 = No; 1 = Yes

IMPROVEMENT DATA

46. \_\_\_\_\_ Previous Sale Price

47. \_\_\_\_\_ Previous Sale Date

48. \_\_\_\_\_ Year Built

49. \_\_\_\_\_ Era

0 = Pre-1910                      3 = 1950-1969  
1 = 1910-1929                    4 = 1970 to present  
2 = 1930-1949

50. \_\_\_\_\_ Square Feet Living Space

51. \_\_\_\_\_ Number of Stories

0 = Vacant Lot                    1.6 = Multilevel  
1 = 1 Story                        2 = 2 Stories  
1.3 = 1-1/2 Stories              2.3 = 2-1/2 Stories

52. \_\_\_\_\_ Roof

(score = style, material)

STYLE

1 = Gable  
2 = Hip  
3 = Mansard  
4 = Gambrel  
5 = Flat  
6 = Single pitch

MATERIAL

1 = Gravel  
2 = Asphalt shingles  
3 = Wood shake/shingle  
4 = Slate shingles  
5 = Tile  
6 = Metal

53. \_\_\_\_\_ Exterior
- |                             |                                     |
|-----------------------------|-------------------------------------|
| 0 = Concrete block          | 6 = Part masonry/<br>stained boards |
| 1 = Wood siding/frame       | 7 = Part masonry/aluminum           |
| 2 = Stucco                  | 8 = Predominantly brick<br>vener    |
| 3 = Stained boards/shingles | 9 = Predominantly stone             |
| 4 = Aluminum siding         |                                     |
| 5 = Part masonry/frame      |                                     |
54. \_\_\_\_\_ Garage Type
- |                    |                           |
|--------------------|---------------------------|
| 0 = None           | 5 = 2-3 car detached      |
| 1 = Carport        | 6 = 2-3 car basement      |
| 2 = 1 car detached | 7 = 2 car attached, small |
| 3 = 1 car basement | 8 = 2 car attached, large |
| 4 = 1 car attached | 9 = 3 car attached        |
55. \_\_\_\_\_ Building Style
- |   |  |
|---|--|
| 1 = Cottage   | 6 = Good builder's<br>suburban/mansion |
| 2 = Pre-1940  | 7 = Architectural<br>contemporary      |
| 3 = Standard builder's<br>suburban (Owner custom<br>obsolescence) | 8 = Architectural<br>traditional       |
| 4 = Architectural modern  | 9 = Architectural colonial             |
| 5 = Pre-1940 remodeled  |  |
56. \_\_\_\_\_ Basement Type
- |             |   |
|-------------|---|
| 0 = Slab    | 4 = Partially exposed (opening on<br>grade at least one side)                 |
| 1 = Crawl   | 5 = Exposed (raised ranch/bilevel-<br>English basement- window sill at grade) |
| 2 = Partial |   |
| 3 = Full    |   |
57. \_\_\_\_\_ Basement Condition
- |                                       |
|---------------------------------------|
| 0 = No problem                        |
| 2 = Mild problem due to seepage/aging |
| 5 = Poor condition or no basement     |
58. \_\_\_\_\_ Appearance to Neighbors
- |                        |
|------------------------|
| 1 = Less attractive    |
| 2 = Equally attractive |
| 3 = More attractive    |
59. \_\_\_\_\_ Quality
- |  |                         |
|--|-------------------------|
| 0 = Uninhabitable                              | 5 = Well-maintained     |
| 1 = Major mechanical or<br>structural problems | 6 = Maintained like new |
| 2 = Interior damage                            | 7 = New--standard       |
| 3 = Exterior maintenance<br>required           | 8 = New--custom         |
| 4 = Average condition                          | 9 = New--deluxe         |

## EXHIBIT 12 (Continued)

60. \_\_\_\_\_ Enclosed Porch  
 0 = None                      5 = Average glass  
 1 = Small screen            6 = Large glass  
 2 = Average screen        7 = Small glass, heated  
 3 = Large screen           8 = Average glass, heated  
 4 = Small glass             9 = Large glass, heated
61. \_\_\_\_\_ Total Number of Rooms
62. \_\_\_\_\_ Total Number of Bedrooms
63. \_\_\_\_\_ Total Number of Bathrooms  
 (sum of bathroom scores)
64. \_\_\_\_\_ Half  
 (Score = .5 for each)
65. \_\_\_\_\_ Three-quarter  
 (Score = .75 for each)
66. \_\_\_\_\_ Full  
 (Score = 1 for each)
67. \_\_\_\_\_ Bathroom on First Floor  
 0 = No  
 1 = Yes
68. \_\_\_\_\_ Total Number of Fireplaces
69. \_\_\_\_\_ Living Room  
 (score = size, layout)
- | <u>SIZE</u>  | <u>LAYOUT</u>   |
|--------------|-----------------|
| 1 = Small    | 1 = Poor        |
| 2 = Moderate | 2 = Indifferent |
| 3 = Large    | 3 = Good        |
70. \_\_\_\_\_ Dining Room  
 0 = None  
STYLE  
 1 = At end of living room  
 2 = Dining L  
 3 = Full dining area  
 4 = Separate room

## EXHIBIT 12 (Continued)

71. \_\_\_\_\_ Den/Library/Study  
 0 = None         2 = Average  
 1 = Small        3 = Large
72. \_\_\_\_\_ Kitchen Score  
 Score = (Size \* Type \* Work area) + Eating space
73. \_\_\_\_\_ Kitchen Size  
 1 = Small  
 2 = Average  
 3 = Large
74. \_\_\_\_\_ Kitchen Type  
 1 = Single wall    4 = U-shaped  
 2 = Pullman       5 = L- or U-shaped with island  
 3 = L-shaped
75. \_\_\_\_\_ Kitchen Work Area  
 To calculate kitchen score use:  
 0 = Obsolete ( .5)  
 1 = Dated ( .75)  
 2 = Modern (1.00)
76. \_\_\_\_\_ Kitchen Eating Space  
 To calculate kitchen score use:  
 0 = None                             0  
 1 = Counter/Stools                 .2  
 2 = Space for table/chairs        .4  
 3 = Breakfast nook                 .6
77. \_\_\_\_\_ Family Room  
 (Score = location, size)  
 0 = None  

<u>LOCATION</u>	<u>SIZE</u>
1 = Poor	1 = Small
2 = Adjoining kitchen	2 = Average
3 = Fully separate and well located	3 = Large
78. \_\_\_\_\_ Recreation Room  
 0 = None  
 1 = Yes (Must have fully finished floor, ceiling, and walls)
79. \_\_\_\_\_ Laundry Area Score  
 (Score = location \* type)

80. \_\_\_\_\_ Laundry Area Location

LOCATION

- 1 = Basement
- 2 = At grade
- 3 = Second floor

81. \_\_\_\_\_ Laundry Area Type

0 = None

TYPE

- 1 = Exposed
- 2 = Enclosed closet
- 3 = Separate room

82. \_\_\_\_\_ Heating System Score  
(Score = Fuel \* Type)

83. \_\_\_\_\_ Heating Fuel

FUEL

- 1 = Electricity
- 2 = Oil
- 3 = Gas

84. \_\_\_\_\_ Heating Type

TYPE

- 1 = Old hot water - radiators
- 2 = Old low pressure steam - radiators
- 3 = Old hot water integrated with water heater
- 4 = Gravity hot air grills on floor
- 5 = Hot water-baseboards
- 6 = Forced hot air
- 7 = Forced hot air-zoned
- 8 = Multiple forced hot air units

85. \_\_\_\_\_ Electrical Service

AMPERAGE

- 1 = 30 amp.
- 2 = 60 amp.
- 3 = 100 amp.
- 4 = 125 amp.
- 5 = 150 amp.
- 6 = > 150 amp.

## EXHIBIT 12 (Continued)

86. \_\_\_\_\_ Water Heater  
 Score = (Capacity, Fuel)  
 0 = With hot water heat system
- | <u>CAPACITY OF UNIT</u> |               | <u>FUEL</u>  |
|-------------------------|---------------|--------------|
| 1 = 20 gal.             | 5 = 75 gal.   | 1 = Electric |
| 2 = 30 gal.             | 6 = 100 gal.  | 2 = Solar    |
| 3 = 40 gal.             | 7 = 100+ gal. | 3 = Oil      |
| 4 = 50 gal.             |               | 4 = Gas      |
87. \_\_\_\_\_ Interior Circulation (Traffic pattern)  
 0 = Poor  
 1 = Moderately good  
 2 = Good  
 3 = Excellent
88. \_\_\_\_\_ Total Special Features Score  
 (Sum of all special features points)

SPECIAL FEATURES

1. \_\_\_\_\_ Front Exterior Entry  
(Score = Sum of style and function)  

<u>STYLE</u>	<u>FUNCTION</u>
0 = Single door	-1 = Unprotected
1 = Double door	2 = Protected
  
2. \_\_\_\_\_ Front Interior Entry  
(Score = Sum of points)
  - 3 = Entrance direct to living room
  - 0 = Vestibule (hall entry)
  - 1 = Foyer (enclosed entry)
  - 2 = Spacious vestibule
  - 3 = Spacious foyer
  
3. \_\_\_\_\_ Master Bedroom Suite  
(Score = Sum of points)
  - 1 = Extra closet space
  - 2 = Dressing area
  - 3 = Sitting area
  
4. \_\_\_\_\_ Living Room Extras  
(Score = Sum of points)
  - 3 = Classical cathedral ceiling
  - 0 = None
  - 1 = Contemporary sloped ceiling,  
built-in cabinets
  - 2 = Sunken multi-level, special natural  
illumination, deluxe woodwork
  
5. \_\_\_\_\_ Dining Room Extras  
(Score = Sum of points)
  - 0 = None
  - 1 = Built-in china cabinet, break front/buffet
  - 2 = Wet bar
  - 3 = Deluxe built-ins
  
6. \_\_\_\_\_ Den/Library/Study Extras  
(Score = Sum of points)
  - 0 = None
  - 1 = Built-in cabinets
  - 2 = Deluxe woodwork



SPECIAL FEATURES (Continued)

7. \_\_\_\_\_ Kitchen Extras  
(Score = Sum of Points)  
 0 = None  
 1 = Each built-in appliance, serving pantry/bar, direct access to outside, grill/BBQ, more than one sink area  
 -3 = No window  
 -2 = Below average window area  
 0 = Average window area  
 1 = Above average window area
8. \_\_\_\_\_ Family Room Extras  
(Score = Sum of points)  
 0 = None  
 1 = Built-in cabinets, deluxe flooring, deluxe paneling, sloped ceiling  
 2 = Wet bar  
 5 = Kitchen facilities
9. \_\_\_\_\_ Number of Special Spaces  
(Score = Sum of points)  
 0 = None  
 1 = Special woodwork/craft area  
 2 = Dark room  
 3 = Sewing, sitting, office areas, partially finished recreation room
10. \_\_\_\_\_ Recreation Room Extras  
(Score = Sum of ponits)  
 0 = None  
 1 = Built-in cabinets  
 2 = Wet bar  
 5 = Kitchen facilities
11. \_\_\_\_\_ Household Extras  
(Score = Sum of points)  
 0 = None  
 1 = Greenhouse - attached at window, special indirect lighting  
 2 = Security system  
 3 = Greenhouse - attached and walk-in, sauna  
 5 = Central air conditioning, grand spiral staircase

VILLAGE OF MAPLE BLUFF, DANE COUNTY  
 SINGLE-FAMILY RESIDENTIAL TAX INFORMATION FORM  
 AS OF JANUARY 1, 1980

1	Tax Parcel Number			
2	Property Owner			
3	Street Number			
4	Street Name			
5	Previous Lot Sale Price	PLSPRICE		
6	Previous Lot Sale Date	PLSDATE		
7	Geocode X	GEO X		
8	Geocode Y	GEO Y		
9	Neighborhood Number	NBRHD		
10	Lot Square Feet	LTSOFT		
11	Lot Front Feet	LTFEFT		
12	Lot Depth	LTDPTH		
13	Lot Subdividable	LOTSDIV		
14	Lot Oversized	LOTQVSZD		
15	Lake Access Easement	LKACC		
16	Shore Quality	SHORE		
17	Water Quality	WATER		
18	Lake Front Feet	LKFEFT		
19	Lot on Corner	LTCNR		
20	Lot on Cul de Sac	LTCUL		
21	Inside Lot	LTINS		
22	Lot Wooded	LTWOOD		
23	Lot View	LTVIEW		
24	Lot Topo	LTTOPO		
25	Adverse Influence	ADINF		
26	Tennis Court	TENCT		
27	Outdoor Pool	OUTPOOL		
28	Patio	PATIO		
29	Storage Shed	STSHD		
30	Boathouse	BTHSE		
31	Seawall	SEAWLL		
32	Indoor Pool	INPOOL		
33	Elevator	ELEV		
34	Other Structure Name	STCT1		
35	Other Structure Value	VALUE1		
36	Other Structure Name	STCT2		
37	Other Structure Value	VALUE2		
38	Special Structures Total	SPCTOT		
39	Driveway	DRVWY		
40	Neighborhood Foliage	NBRFOL		
41	Landscaping	LNDSCP		
42	Screening of Back	CRBK		
43	Screening of Front	SCRFT		
44	Curb Gutter	CRBGTR		
45	Sidewalk	SIDWLK		
46	Previous Sale Price	PSPR		
47	Previous Sale Date	PSDATE		
48	Year Built	YRBLT		
49	Era		ERA	
50	Sq. Ft. Living Space		SQFTLS	
51	Number of Stories		STORIES	
52	Roof		ROOF	
53	Exterior		EXTER	
54	Garage Type		GARAGE	
55	Building Style		STYLE	
56	Basement Type		BSMTYP	
57	Basement Condition		BSMTCND	
58	Appearance to Neighbors		APPEARS	
59	Quality		QUALTY	
60	Enclosed Porch		PORCH	
61	Total Number Rooms		ROOMS	
62	Total Number Bedrooms		BDRMS	
63	Total Number Bathrooms		BATHS	
64	Half		HFNBTH	
65	Three Quarters		THQBTH	
66	Full		FULLBTH	
67	On First Floor		BTHIST	
68	Total Number Fireplaces		FPLAC	
69	Living Room		LIVRM	
70	Dining Room		DINRM	
71	Den/Library/Study		DEN	
72	Kitchen Score		KTCHSCR	
73	Kitchen Size		KTCHSZ	
74	Kitchen Type		KTCHTYPE	
75	Kitchen Work Area		KTCHWRK	
76	Kitchen Eating Space		KTCHEAT	
77	Family Room		FMLYRM	
78	Recreation Room		RECRM	
79	Laundry Area Score		LAUNSCR	
80	Laundry Area Location		LAUNLOC	
81	Laundry Area Type		LAUNTYP	
82	Heating System Score		HTGSCR	
83	Heating Fuel		HTGFUEL	
84	Heating Type		HTGTYP	
85	Electrical Service		ELECTSRV	
86	Water Heater		WTRHTR	
87	Interior Circulation		INTCIR	
88	Special Features Score		SPFTSCR	

VILLAGE OF MAPLE BLUFF, DANE COUNTY  
PROPERTY TAX ASSESSMENT  
CHANGE IN ASSESSMENT DATA

Tax Parcel Number \_\_\_\_\_ Date \_\_\_\_\_

Name of Property Owner \_\_\_\_\_

Address of Property Owner \_\_\_\_\_

Description of Changes:

Data Base Changes:

<u>Data Item</u>	<u>Column Number</u>	<u>Previous Entry</u>	<u>Updated Entry</u>
------------------	----------------------	-----------------------	----------------------

Signature of Reviewer \_\_\_\_\_

Date Entered in Data Base \_\_\_\_\_ Initials \_\_\_\_\_

MARKET COMP OUTPUT  
FACTOR FILE

SET WIDTH 132

Ready

RUN (150,54)MKTHS  
ENTER FACTOR FILENAME  
\*LAKE20.FAC

ENTER COMPARABLE FILENAME  
\*LAKEXX.COM

ENTER SUBJECT FILENAME  
\*LAKE.SUB

				0.00000			
					Adjustment		Selection
					Factor	Type	Factor
0	0	0	0	0.00000			
1	4		0.00000				
2	2		83.00000				
3	100		2.00000				
4	4		0.00000				
5	1		0.00000				
0	0		0.00000				
1	PSPR	0.	C.	1.00000	0.	C.	1.00000
2	PSDATE	2.	C.	0.00000	2.	C.	0.05000
3	MBRHD	1.	C.	1500.00000	1.	C.	5000.00000
4	LTSOFT	1.	C.	0.44000	1.	C.	0.44000
5	LOTSDIV	1.	C.	15500.00000	1.	C.	15500.00000
6	SHORE	2.	C.	-0.02000	2.	C.	-0.02000
7	WATER	2.	C.	-0.02000	2.	C.	-0.02000
8	LKFFT	1.	C.	0.00000	1.	C.	0.00000
9	EFFLKFT	1.	C.	350.00000	1.	C.	3000.00000
10	LTCMR	1.	C.	-750.00000	1.	C.	-750.00000
11	LTCUL	1.	C.	500.00000	1.	C.	500.00000
12	LTWOOD	2.	C.	0.02000	2.	C.	0.02000
13	LTVIEW	2.	C.	0.02000	2.	C.	0.02000
14	LTTOPO	2.	C.	0.03000	2.	C.	0.03000
15	ADINF	2.	C.	-0.01500	2.	C.	-0.01500
16	SPCTOT	1.	C.	1.00000	1.	C.	1.00000
17	YRBLT	1.	C.	0.00000	1.	C.	0.00000
18	EFFAGE	3.	C.	0.50000	3.	C.	2.00000
19	SQFTLS	1.	C.	0.00000	1.	C.	0.00000
20	EFFSQFT	1.	C.	20.00000	1.	C.	90.00000
21	STORIES	2.	C.	0.00000	2.	C.	0.00000
22	EXTER	2.	C.	0.00000	2.	C.	0.00000
23	GARAGE	2.	C.	0.01000	2.	C.	0.01000
24	STYLE	2.	C.	0.01000	2.	C.	0.01000
25	BSHTYP	2.	C.	0.01500	2.	C.	0.01500
26	BSHTCND	1.	C.	-750.00000	1.	C.	-750.00000
27	QUALTY	2.	C.	0.02000	2.	C.	0.02000
28	PORCH	1.	C.	600.00000	1.	C.	600.00000
29	BORMS	1.	C.	1500.00000	1.	C.	5000.00000
30	BATHS	1.	C.	4000.00000	1.	C.	4000.00000
31	FPLAC	1.	C.	750.00000	1.	C.	750.00000
32	DINRM	2.	C.	0.02000	2.	C.	0.02000
33	DEN	1.	C.	1000.00000	1.	C.	1000.00000
34	KTCHSCR	1.	C.	850.00000	1.	C.	850.00000
35	FANRM	1.	C.	100.00000	1.	C.	100.00000
36	RECRM	1.	C.	2000.00000	1.	C.	2000.00000
37	LAUNSCR	1.	C.	300.00000	1.	C.	300.00000
38	HTGSCR	1.	C.	200.00000	1.	C.	200.00000
39	INTCIR	2.	C.	0.01000	2.	C.	0.01000
40	SPFTSCR	1.	C.	350.00000	1.	C.	350.00000

ENTER SUMMARY FILENAME  
\*JEAN.BAS

MARKET COMPARISON ADJUSTMENT GRID  
LAKE FRONT RESIDENTIAL PROPERTY

PROPERTY REPORT  
9 4601108 45 CAMBRIDGE RD ADJUSTMENT ==  
FACTOR TYP RATE AVE. S-DEV.

PSPR	0.	1.00	207075.	18046.
PSDATE	2.	0.00	0.	0.
MBRHD	1.	1500.00	3000.	3464.
LTSUFT	1.	0.44	-3135.	2358.
LOTSDIV	1.	15500.00	0.	0.
SHORE	2.	-0.02	1800.	3600.
WATER	2.	-0.02	-2154.	4308.
LKFFT	1.	0.00	0.	0.
EFFLKFT	1.	350.00	1138.	827.
LTCMR	1.	-750.00	0.	0.
LTCUL	1.	500.00	0.	0.
LTHOOD	2.	0.02	-1077.	2154.
LTVICM	2.	0.02	1977.	2301.
LTTOPU	2.	0.03	2966.	3452.
ADINF	2.	-0.01	0.	0.
SPCTOT	1.	1.00	350.	839.
YRBLT	1.	0.00	0.	0.
EFFAGE	3.	0.50	-3589.	6878.
SQFTLS	1.	0.00	0.	0.
EFFSQFT	1.	20.00	4530.	4490.
STORIES	2.	0.00	0.	0.
EXTER	2.	0.01	-969.	1939.
GARAGE	2.	0.01	1077.	2154.
STYLE	2.	0.01	4150.	3686.
BSMTYP	2.	0.01	-808.	1616.
BSMTCND	1.	-750.00	0.	0.
QUALTY	2.	0.02	4142.	362.
PURCH	1.	600.00	900.	1039.
BDRMS	1.	1500.00	0.	1225.
BATHS	1.	4000.00	-1250.	1893.
FPLAC	1.	750.00	-187.	375.
DINRM	2.	0.02	-367.	5442.
DEM	1.	1000.00	1250.	957.
KTCHSCA	1.	850.00	11199.	2400.
FANRM	1.	100.00	0.	0.
RECRM	1.	2000.00	-1000.	1155.
LAUMSCR	1.	300.00	-150.	300.
HTGSCA	1.	200.00	-600.	1337.
INTCIR	2.	0.01	1533.	1037.
SPFTSCR	1.	350.00	-525.	1841.

2:9 4601108 45 CAMBRIDGE RD	2-AMT	ADJ	3-AMT	ADJ	12-AMT	ADJ	11-AMT	ADJ
3:12 4601110 33 CAMBRIDGE RD	215000.00	215000.00	217900.00	217900.00	215400.00	215400.00	180000.00	180000.00
12:516 4601462 1177 FARMELL DR	82.08	82.08	80.33	0.	82.50	0.	82.17	0.
11:511 4601457 1311 FARMELL DR	17.00	17.00	17.00	0.	13.00	6000.	13.00	6000.
FACTOR SUBJECT	18000.00	18000.00	29500.00	-5000.	29000.00	-4840.	24000.00	-2640.
PSPR	0.00	0.00	0.00	0.	0.00	0.	0.00	0.
PSDATE	0.00	0.00	0.00	0.	0.00	0.	0.00	0.
MBRHD	0.00	0.00	0.00	0.	0.00	0.	0.00	0.
LTSUFT	0.00	0.00	0.00	0.	0.00	0.	0.00	0.
LOTSDIV	0.00	0.00	0.00	0.	0.00	0.	0.00	0.
SHORE	0.00	0.00	0.00	0.	0.00	-8616.	2.00	0.
WATER	2.00	2.00	2.00	0.	2.00	0.	70.00	0.
LKFFT	80.00	80.00	77.00	0.	60.00	0.	75.00	1750.
EFFLKFT	80.00	80.00	77.00	1050.	75.00	1750.	0.00	0.
LTCMR	0.00	0.00	0.00	0.	0.00	0.	0.00	0.
LTCUL	0.00	0.00	0.00	0.	0.00	0.	0.00	0.
LTHOOD	1.00	1.00	1.00	0.	2.00	-4308.	1.00	0.
LTVICM	4.00	4.00	3.00	0.	3.00	4308.	3.00	3600.
LTTOPU	3.00	3.00	3.00	0.	2.00	6462.	2.00	5400.
ADINF	0.00	0.00	0.00	0.	0.00	0.	0.00	0.
SPCTOT	0.00	0.00	200.00	-200.	0.00	0.	-1600.00	1600.
YRBLT	1930.00	1930.00	1925.00	0.	1939.00	0.	1947.00	0.
EFFAGE	64.77	64.77	62.46	4029.	69.39	-7171.	73.49	-11215.
SQFTLS	3060.00	3060.00	3000.00	0.	2460.00	0.	2500.00	0.
EFFSQFT	2750.00	2714.00	2714.00	720.	2278.00	9440.	2388.00	7240.
STORIES	2.00	2.00	2.00	0.	2.00	0.	2.00	0.
EXTER	5.00	5.00	5.00	0.	8.00	-3877.	5.00	0.
GARAGE	7.00	7.00	7.00	0.	5.00	4308.	7.00	0.
STYLE	8.00	8.00	5.00	6537.	5.00	6462.	6.00	3600.
BSMTYP	3.00	3.00	3.00	0.	4.00	-3231.	3.00	0.
BSMTCND	2.00	2.00	2.00	0.	2.00	0.	2.00	0.
QUALTY	6.00	5.00	5.00	4300.	5.00	4308.	5.00	3600.
PURCH	8.00	8.00	8.00	0.	5.00	1800.	5.00	1800.
BDRMS	4.00	4.00	5.00	-1500.	4.00	0.	3.00	1500.
BATHS	2.25	2.25	2.50	-1000.	3.25	-4000.	2.25	0.
FPLAC	2.00	2.00	2.00	0.	2.00	0.	3.00	-750.
DINRM	3.00	3.00	4.00	-4358.	4.00	-4308.	1.00	7200.
DEM	2.00	2.00	0.00	2000.	0.00	2000.	1.00	1000.
KTCHSCA	15.40	0.50	0.50	12665.	1.50	11815.	6.40	7650.
FANRM	0.00	0.00	0.00	0.	0.00	0.	0.00	0.
RECRM	0.00	0.00	0.00	0.	1.00	-2000.	1.00	-2000.
LAUMSCR	1.00	1.00	1.00	0.	1.00	0.	3.00	-600.
HTGSCA	3.00	3.00	2.00	200.	16.00	-2600.	3.00	0.
INTCIR	2.00	2.00	1.00	2179.	1.00	2154.	1.00	1800.
SPFTSCR	7.00	4.00	4.00	1050.	12.00	-1750.	14.00	-2450.

ADJUSTED AMOUNT 233735. 246700. 229506.  
SELECTION INDEX 16959. 36705. 61335. 221285. 63548.

AVE ADJUSTED AMT 231274. 8070.  
WEIGHTED AVE. 233500.

EXHIBIT 12 (Continued)

PROPERTY CARD  
LAKE FRONT RESIDENTIAL PROPERTY

1983 PROPERTY CARD - PARCEL- 44Q1108

45 CAMBRIDGE RD  
MADISON, MI 53704

LAND DATA

PREVIOUS LOT SALE PRICE	0
PREVIOUS LOT SALE DATE	0
LEOCODE	77.
NEIGHBORHOOD NUMBER	17
LOT SQ. FT.*	18000
LOT FRONT FT.*	80
LOT DEPTH*	223
LOT SUBDIVIDABLE	No
LOT OVERSIZED	No
LAKE ACCESS EASEMENT	No
SHORE QUALITY	No dominant problem
WATER QUALITY	Floresam
LAKE FRONT FT.	80
LOT ON CORNER	No
LOT ON CUL DE SAC	No
INSIDE LOT	No
LOT WOODED	4 to 7 major trees
LOT VIEW	Water, Capitol
LOT TOPOGRAPHY	Level contour
ADVEPSE INFLUENCE	None

SPECIAL STRUCTURES AND SITE IMPROVEMENTS

TENNIS COURT	0
OUTDOOR POOL	0
PATIO	0
STORAGE SHED	0
BOATHOUSE	0
SEAWALL	0
INDOOR POOL	0
ELEVATOR	0
0.	0
0.	0
SPECIAL STRUCTURES TOTAL	0
DRIVEWAY	Linear, gravel
NEIGHBORHOOD FOLIAGE	Shady
LANDSCAPING	Average
SCREENING OF BACK	Little or none
SCREENING OF FRONT	Yes
CURB AND GUTTER	No
SIDEWALK	No

\*APPROX. USING VILLAGE MAP

IMPROVEMENT DATA

PREVIOUS SALE PRICE	215000
PREVIOUS SALE DATE	0202
YEAR BUILT	1930
EKA	1930-1949
SQ. FT. LIVING SPACE	3060
NUMBER OF STORIES	2 Stories
BUILDING STYLE	Architectural Traditional
ROOF	Gable, asphalt shingles
EXTERIOR	Part masonry/frame
GARAGE	2 Car attached, small
BASEMENT TYPE	Full
BASEMENT CONDITION	Mild seepage/aging
QUALITY	Maintained like new
APPEARANCE TO NEIGHBORS	Equally attractive
ENCLOSED PORCH	Average glass, heated
NUMBER OF ROOMS	11
NUMBER OF BEDROOMS	4
NUMBER OF BATHROOMS	2.25
HALF BATHS	1
THREE QUARTER BATHS	1
FULL BATHS	1
BATH ON FIRST FLOOR	Yes
NUMBER OF FIREPLACES	2
LIVING ROOM	Moderate size, average layout
DINING ROOM	Full dining area
DEM/LIBRARY/STUDY	Average size
FAMILY ROOM	None
KITCHEN SCORE	15.40
SIZE	Large
TYPE	L or U with island
WORK AREA	Modern
EATING SPACE	Space for table/chairs
RECREATION ROOM	None
LAUNDRY AREA SCORE	1
LOCATION	Basement
TYPE	Exposed
HEATING SYSTEM SCORE	3
FUEL	Gas
TYPE	Old hot water-radiators
ELECTRICAL SERVICE	60 amp.
WATER HEATER	40 gal., electric
TRAFFIC PATTERN	Good
SPECIAL FEATURES SCORE	7
LAND IMPROVEMENTS	64,000
1982 ASSESSMENT	148,500
	212,500

LAND IMPROVEMENTS	64,000
1982 ASSESSMENT	164,500
	233,500

MARKET COMPARISON ADJUSTMENT GRID  
NON-LAKE RESIDENTIAL PROPERTY

PROPERTY REPORT 1 2

2 460110 37 OLD SHORE RD ADJUSTMENT ==  
FACTOR TYP RATE AVE. S-DEV.

5:43 4601146 74 CAMBRIDGE RD  
17:147 4601220 200 LAKEWOOD BLV  
15:139 4601212 236 LAKEWOOD BLV  
3:32 4601132 159 LAKEWOOD BLVD

PSPR	0.	1.00	118500.	12662.
PSDATE	2.	0.00	0.	0.
NBRHD	1.	1500.00	-750.	1500.
LTSQFT	1.	0.44	-2255.	1570.
LOTSQIV	1.	15500.00	0.	0.
SHORE	2.	-0.02	0.	0.
WATER	2.	-0.02	0.	0.
LKFFT	1.	0.00	0.	0.
EFFLKFT	1.	350.00	0.	0.
LTCNP	1.	-750.00	-562.	375.
LTCUL	1.	500.00	0.	0.
LTHOOD	2.	0.02	1745.	1187.
LTVIEW	2.	0.02	0.	0.
LTTOPD	2.	0.03	0.	0.
ADINF	2.	-0.01	-7695.	3194.
SPCTUT	1.	1.00	4100.	115.
YPBLT	1.	0.00	0.	0.
EFFAGE	3.	0.50	-3327.	6617.
SQFTLS	1.	0.00	0.	0.
EFFSQFT	1.	20.00	3895.	3245.
STORIES	2.	0.00	0.	0.
EXTER	2.	0.01	3203.	922.
GAPAGE	2.	0.01	2028.	1792.
STYLE	2.	0.01	2425.	2824.
BSMTYP	2.	0.01	1661.	2251.
BSMTCND	1.	-750.00	-2438.	1772.
QUALTY	2.	0.02	320.	4880.
PURCH	1.	600.00	1200.	693.
BDRMS	1.	1500.00	1125.	750.
BATHS	1.	4000.00	0.	2944.
FPLAC	1.	750.00	-375.	433.
DINRM	2.	2.02	2410.	2191.
DEM	1.	1000.00	-750.	957.
KTCHSCR	1.	850.00	-510.	1530.
FAMRM	1.	100.00	-500.	935.
RECRM	1.	2000.00	0.	0.
LAUNSCR	1.	300.00	-300.	424.
HTGSCR	1.	200.00	-1350.	1237.
INTCIR	2.	0.01	275.	550.
SPFTJCK	1.	350.00	-700.	1137.

FACTOR	SUBJECT	S-AMT	ADJ	17-AMT	ADJ	15-AMT	ADJ	13-AMT	ADJ
PSPR	49000.00	110000.00	100000.	106000.00	106000.	125000.00	125000.	133000.00	133000.
PSDATE	78.42	82.67	0.	82.33	0.	80.58	0.	81.67	0.
NBRHD	5.00	7.00	-3000.	5.00	0.	5.00	0.	5.00	0.
LTSQFT	13500.00	23500.00	-4400.	15000.00	-660.	17500.00	-1760.	18500.00	-2200.
LOTSQIV	0.00	0.00	0.	0.00	0.	0.00	0.	0.00	0.
SHORE	0.00	0.00	0.	0.00	0.	0.00	0.	0.00	0.
WATER	0.00	0.00	0.	0.00	0.	0.00	0.	0.00	0.
LKFFT	0.00	0.00	0.	0.00	0.	0.00	0.	0.00	0.
EFFLKFT	0.00	0.00	0.	0.00	0.	0.00	0.	0.00	0.
LTCMR	1.00	0.00	-750.	1.00	0.	0.00	-750.	0.00	-750.
LTCUL	0.00	0.00	0.	0.00	0.	0.00	0.	0.00	0.
LTHOOD	1.00	0.00	2200.	0.00	2120.	1.00	0.	0.00	2660.
LTVIEW	1.00	1.00	0.	1.00	0.	1.00	0.	1.00	0.
LTTOPD	3.00	3.00	0.	3.00	0.	3.00	0.	3.00	0.
ADINF	5.00	0.00	-8250.	3.00	-3180.	0.00	-9375.	0.00	-9975.
SPCTUT	0.00	0.00	0.	200.00	-200.	200.00	-200.	0.00	0.
YRBLT	1928.00	1917.00	0.	1949.00	0.	1928.00	0.	1948.00	0.
EFFAGE	63.82	59.16	4332.	75.22	-8032.	63.82	0.	74.60	-9610.
SQFTLS	3080.00	2660.00	0.	2860.00	0.	2500.00	0.	3080.00	0.
EFFSQFT	2763.00	2496.00	5340.	2626.00	2740.	2388.00	7500.	2763.00	0.
STORIES	2.00	2.30	0.	1.00	0.	2.00	0.	2.00	0.
EXTER	8.00	2.00	3960.	5.00	1908.	3.00	3750.	4.00	3192.
GAPAGE	8.00	5.00	3300.	7.00	1060.	5.00	3750.	8.00	0.
STYLE	9.00	5.00	4400.	4.00	5300.	9.00	0.	9.00	0.
BSMTYP	3.00	3.00	0.	0.00	4770.	2.00	1875.	3.00	0.
BSMTCND	5.00	0.00	-3750.	5.00	0.	2.00	-2250.	0.00	-3750.
QUALTY	9.00	2.00	6600.	5.00	0.	5.00	0.	7.00	-5320.
PURCH	3.00	2.00	600.	0.00	1800.	2.00	600.	0.00	1800.
BDRMS	5.00	4.00	1500.	4.00	1500.	5.00	0.	4.00	1500.
BATHS	2.50	3.50	-4000.	1.75	3000.	2.50	0.	2.25	1000.
FPLAC	1.00	1.00	0.	2.00	-750.	1.00	0.	2.00	-750.
DINRM	4.00	3.00	2200.	3.00	2120.	4.00	0.	2.00	5320.
DEM	0.00	0.00	0.	1.00	-1000.	0.00	0.	2.00	-2000.
KTCHSCR	5.10	6.60	-1275.	6.60	-1275.	6.60	-1275.	3.00	1785.
FAMRM	22.00	32.00	-1000.	31.00	-900.	32.00	-1000.	13.00	900.
RECRM	0.00	0.00	0.	0.00	0.	0.00	0.	0.00	0.
LAUNSCR	1.00	1.00	0.	4.00	-900.	2.00	-300.	1.00	0.
HTGSCR	4.00	3.00	260.	12.00	-1600.	10.00	-1200.	16.00	-2800.
INTCIR	2.00	1.00	1100.	2.00	0.	2.00	0.	2.00	0.
SPFTJCK	7.00	11.00	-1400.	8.00	-350.	5.00	700.	12.00	-1750.

ADJUSTED AMOUNT 117967. 113471. 125065. 112252.  
SELECTION INDEX 35065. 36287. 34736. 42399.

AVE ADJUSTED AMT 117174. 5795.  
WEIGHTED AVE. 117500.

EXHIBIT 12 (Continued)  
PROPERTY CARD  
NON-LAKE RESIDENTIAL PROPERTY

1983 PROPERTY CARD - PARCEL 460110

37 OLD SHORE RD  
MADISON, WI 53704

LAND DATA

PREVIOUS LOT SALE PRICE	0
PREVIOUS LOT SALE DATE	0
GEOCODE	93.
NEIGHBORHOOD NUMBER	5
LOT SQ. FT.*	13500
LOT FRONT FT.*	107
LOT DEPTH*	160
LOT SUBDIVIDABLE	No
LOT OVERSIZED	No
LAKE ACCESS EASEMENT	No
LAKE FRONT FT.	0
LOT ON CORNER	Yes
LOT ON CUL DE SAC	No
INSIDE LOT	No
LOT WOODED	4 to 7 major trees
LOT VIEW	Average view
LOT TOPOGRAPHY	Level contour
ADVERSE INFLUENCE	Public property or exposure

SPECIAL STRUCTURES AND SITE IMPROVEMENTS

TENNIS COURT	0
OUTDOOR POOL	0
PATIO	0
STORAGE SHED	0
BATHHOUSE	0
SEAWALL	0
INDOOR POOL	0
ELEVATOR	0
C.	0
C.	0
SPECIAL STRUCTURES TOTAL	0
DRIVEWAY	Linear with turn space, concrete
NEIGHBORHOOD FOLIAGE	Shady
LANDSCAPING	Above average
SCREENING OF BACK	Little or none
SCREENING OF FRONT	Little or none
CURB AND GUTTER	No
SIDEWALK	No

\*APPROX. USING VILLAGE MAP

IMPROVEMENT DATA

PREVIOUS SALE PRICE	89000
PREVIOUS SALE DATE	7800
YEAR BUILT	1928
ERA	1910-1929
SQ. FT. LIVING SPACE	3080
NUMBER OF STORIES	2 Stories
BUILDING STYLE	Architectural Colonial
ROOF	Gable, asphalt shingles
EXTERIOR	Predom. brick veneer
GARAGE	2 Car attached, large
BASEMENT TYPE	Full
BASEMENT CONDITION	Poor condition or no basement
QUALITY	Well-maintained
APPEARANCE TO NEIGHBORS	Equally attractive
ENCLOSED PORCH	Large screen
NUMBER OF ROOMS	11
NUMBER OF BEDROOMS	5
NUMBER OF BATHROOMS	2.50
HALF BATHS	1
THREE QUARTER BATHS	0
FULL BATHS	2
BATH ON FIRST FLOOR	Yes
NUMBER OF FIREPLACES	1
LIVING ROOM	Moderate size, average layout
DINING ROOM	Separate room
DEM/LIBRARY/STUDY	None
FAMILY ROOM	Adjoining kitchen, av. size
KITCHEN SCORE	5.10
SIZE	Large
TYPE	Pullman
WORK AREA	Dated
EATING SPACE	Breakfast nook
RECREATION ROOM	None
LAUNDRY AREA SCORE	1
LOCATION	Basement
TYPE	Exposed
HEATING SYSTEM SCORE	4
FUEL	Oil
TYPE	Old low pressure steam
ELECTRICAL SERVICE	125 amp.
WATER HEATER	40 gal., gas
TRAFFIC PATTERN	Good
SPECIAL FEATURES SCORE	7
LAND	30,100
IMPROVEMENTS	89,400
1982 ASSESSMENT	119,500
LAND	30,100
IMPROVEMENTS	89,400
1983 ASSESSMENT	119,500



October 27, 1983

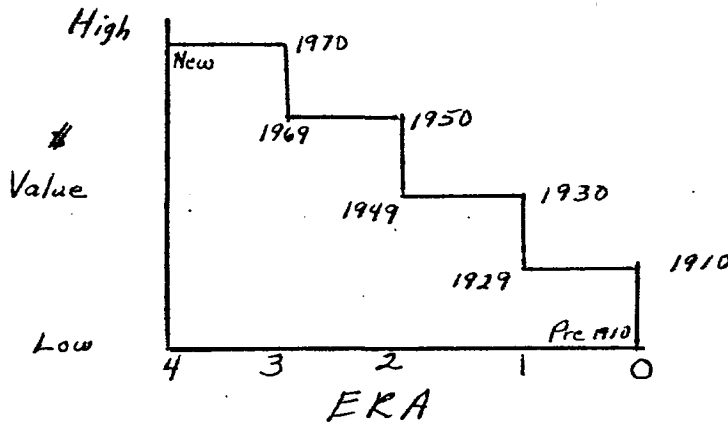
Addendum - Market Comp Lecture - Maple Bluff Valuation

Transformation of the Variable for Age

A. Discovery of Need to Transform Variable for Age of House

1. Had used variable #49 ERA (See Maple Bluff Single Family Residential Information Form) which grouped 20 years of age into a single variable.

Graph of the relationship of value and age variable:



2. Adjustments were based upon the difference in variable value for the subject and the comparable, multiplied by .02 of the comparable sale price.

3. Example:

	Year Built	ERA	Age/Years	Selling Price
Subject	1910	1	73	?
Comp. A	1949	2	34	\$100,000
Comp. B	1930	2	53	\$ 95,000

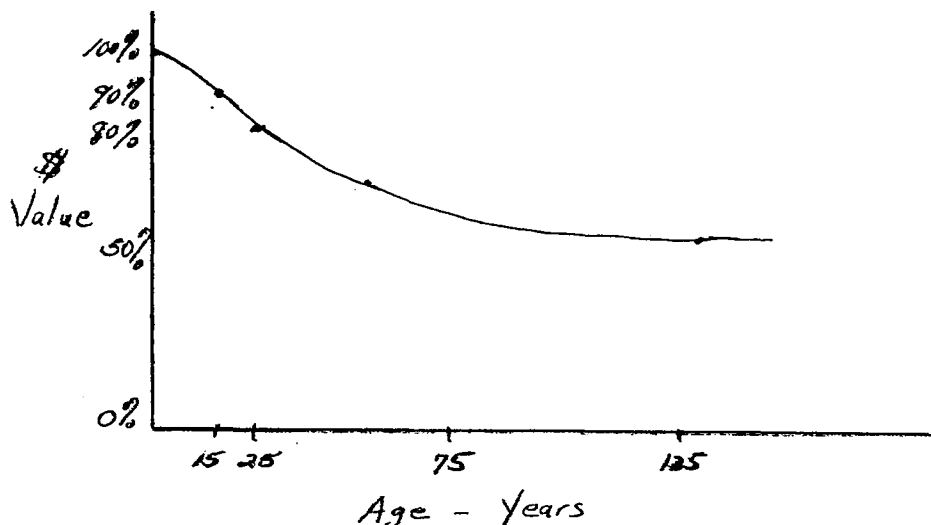
Using ERA variable, the adjustments would be as follows:

ERA		
SUBJECT	1	Adjustment Calculation $A_1 \times (X_{S_1} - X_{C_1})$
COMP. A	2	$[(.02 \times \$100,000) \times (1-2)] = \$2,000$
COMP. B	2	$[(.02 \times \$95,000) \times (1-2)] = \$1,900$

Thus, the \$ adjustments differ by only \$100 even though the two comps vary in age by 19 years and both are much newer than the subject.

B. Transformation of Age Variable to Better Reflect Relationship Between Value and Age of House

1. Graph of Relationship Desired



- Use regression to determine points on the curve which represent value of the age variable called effective age. The larger the variable, the newer the house. The resulting equation solves for the effective age of any house.
- Because of the nature of this variable, a type 3 adjustment is used to translate the variable into a dollar adjustment. In MKTCOMP a type 1 adjustment uses a dollar amount, and a type 2 adjustment is a

percentage of the selling price. A type 3 adjustment allows for the use of a separate calculation to solve for the percent of sale price to be used. In this case the equation is:

$$[(V_s/V_c - 1) \times .50] \times \text{Selling Price} = \$ \text{ adjustment}$$

where  $V_s$  = effective age of subject  
 $V_c$  = effective age of comparable

4. Example:

	Year Built	Age/Years	Effective Age Variable	Selling Price
Subject	1910	73	56.65	?
Comp A.	1949	34	75.22	\$100,000
Comp B.	1930	53	64.77	\$ 95,000

Using the Effective Age variable, the \$ adjustments would be as follows:

	ERA	Effective Age	
SUBJECT	1	56.65	Adjustment Calculation $[(V_s/V_c - 1) \times .50] \times \text{Selling Price}$ = Adjustment
COMP. A	2	75.22	$[(56.65/75.22 - 1) \times .50] \times \$100,000$ = \$12,300
COMP. B	2	64.77	$[(56.65/64.77 - 1) \times .50] \times \$95,000$ = \$6,000

Thus, the \$ adjustments are more realistic with the spread and magnitude of dollar adjustments more representative of the differences in ages among the houses.

## EXHIBIT 12 (Continued)

## A Composite Variable - Kitchen Score

## MKTCOMP - Maple Bluff

To capture the several price-sensitive factors in a kitchen, a composite variable is created. (See Variables 72 to 76 on Maple Bluff Residential Form). Upon inspection, the several attributes described in Variables 73 to 76 are scored and the equation shown in the description of Variable 72 is used to calculate the Kitchen score.

## Example:

The least desirable kitchen would be scored as follows:

Attribute	Description	Score
Size	Small	1.0
Type	Single wall	1.0
Work Area	Obsolete	.5
Eating Space	None	0

$$\text{Kitchen Score} = (1 \times 1 \times .5) + 0 = .50$$

The most desirable kitchen would be scored as follows:

Attribute	Description	Score
Size	Large	3.0
Type	L-shaped with island	5.0
Work Area	Modern	1.0
Eating Space	Breakfast nook	.6

$$\text{Kitchen Score} = (3 \times 5 \times 1.00) + .6 = 15.6$$

The difference in kitchen scores between the subject and its comparables are adjusted at \$850 per point score. The maximum adjustment is \$12,835, or 15.1 x \$850.

## THIRD MODULE

### CONTEMPORARY APPRAISAL THEORY AND THE INCOME APPROACH

Presented By

James A. Graaskamp, Ph.D., CRE, SREA  
University of Wisconsin, School of Business

#### FIRST HOUR

I. The basic premises of the contemporary approach stem from the fundamental belief that pricing is a behavioral science, that analysis should be inductive rather than deductive wherever possible, and that appraised values are intended to serve as a benchmark for some decision process.

A. A price is a social transaction and the behavior of the parties and configuration of the transaction reflects a consensus at some point in time between external market forces sufficiently strong to impose on the outcome and internal forces on the supply side sufficiently strong to pursue their own self-perceived interests.

Notice that the above does not presume:

1. Both demand and supply forces to have alternatives of equal indifference.
2. Negotiation abilities of equal force, or
3. Cash maximization as their sole criteria - all of which characterize the traditional approach.

B. The contemporary view sees appraisal as a limited and fictional case of feasibility analysis which, in turn, is a limited case in problem solving which, in turn, is part of a larger planning framework.

C. Appraisal as a fictional feasibility study is a model of a decision process and, therefore, like all models is constrained by the following elements:

1. What is the nature of the question?
  2. What quantity and quality of data may be available?
  3. What theory or hypothesis may edit and focus the available data as a tentative answer to the question?
  4. What techniques and data management can be used reliably by the analysts?
  5. What techniques and data management have credibility with the ultimate decision maker hiring the analyst?
  6. What techniques and data management are cost effective in terms of the dollar consequences of the decision?
- D. Functions of appraisal differ dramatically and lead to multiple definitions of value.
1. Validation (mortgage loans)
  2. Benchmarking performance (pension funds)
  3. Confrontation (legal cases)
  4. Counseling (investment decisions)

- II. In that light, the sequence of steps required of the contemporary/appraisal process referred to by Wisconsin students as RATGRAM is as follows:
- A. What is the issue for which the appraisal is sought as a benchmark?
  - B. What are the attributes of the property in terms of alternative courses of action for their productive use?
  - C. Given the alternatives, what is the most probable use?

- D. Given the most probable use, who is the most probable buyer in terms of class, motivation profile, or market position? (See Exhibit 1.)
- E. Given the most probable use and most probable buyer assumptions, there are three approaches to predicting most probable price:
  - 1. Inference from past transactions involving properties of similar potential and buyers of similar motivation.
  - 2. Failing adequate transaction data, it is then acceptable to simulate the pricing methods of the most probable buyer.
  - 3. Failing to find either similar properties or articulate buyers, the appraiser is then permitted to use normative methods which indicate what might happen if buyer and seller were as smart as the appraiser.
- F. With an initial estimate of value, it may then be modified for external conditions unique to the parties, the place, or the time.
- G. The adjusted value must then be tested to demonstrate that results at that price would be consistent with the minimum goals of all major parties to the transaction.
- H. Since the appraiser is predicting price under conditions of uncertainty and many different market terms, the appraisal conclusion must be expressed as a central tendency within a transaction zone which is qualified by financial terms and/or critical assumptions about unknowable facts.
  - 1. Although the Institute uses fair market value and most probable price interchangeably, that is a travesty on the work of modern theorists and a deliberate attempt to confuse or negate the implied criticism of traditional ways by contemporary analysts.

Critical Issues That Define Appraisal Process

Function of the Appraisal	Property Rights	Relevant Definition of Value	Allocation of Productivity	Buyer Motivation Presumed
Tax assessment	Fee simple private rights unencumbered	Cash market present value (As opposed to most probable selling price)	Present value income attributable to land and structures only	Purchase of economic productivity
Mortgage loan (nonparticipating)	Encumbered fee simple private rights plus additional rights pledged	Regulations - market value Underwriting - solvency price or liquidating value	Fixed income pledged from all sources less costs of creative management	Share of economic productivity contributed by capital
Mortgage loan (participatory)	Encumbered title plus nonvested interest in selected future revenues	Present value of all future cash flows	Variable income pledged plus share of reversionary interest	Share of economic productivity contributed by capital plus share in selected management returns plus positioning against devaluation due to changing conditions
Sale of an investment	Encumbered title plus vested entitlements plus going concern profit center opportunities	Most probable price above minimum acceptable alternative opportunity	Returns from land, structures, personalty, and selected entitlements	Increase in spendable cash Increase in liquidity value of estate Positioning to maximize probability of survival of benefits despite changing conditions
Purchase of Investments	Encumbered title plus positioning for access to entitlements	Most probable price within perceived peril point limit	Land, structure, personalty, and intangible assets less profit centers for management	Increase in spendable cash Increase in liquidity value of estate Positioning to maximize probability of survival of benefits despite changing conditions
Going concern purchase of a business	Encumbered title plus positioning for access to entitlements plus reduction in risk for business start-up plus control of monopolistic market position controls	Most probable sales price within perceived costs of creating an alternative	Land, structure, personalty, and intangible assets and good will plus artifactual profit centers for management	Increase in spendable cash Increase in liquidity value of estate Positioning to maximize probability of survival of benefits despite changing conditions



2. Contemporary theory recognizes explicitly the errors in forecasting, the role of financial terms, and the reality of bargaining position.

I. These general precepts are then expanded into an appraisal report outline of the general type included in Exhibit 2.

J. Upon review of the more detailed outline and the limited time that we have, I would like to demonstrate a manual market inference system, an automated market comparison system, an income simulation method, and a computer test model.

### III. Three Basic Methods of Appraisal

As you know, Ratcliff concludes that most appraisals are concerned with prediction of a future event, a transaction price. Since an appraisal method is a forecasting tool, forecasting is best done with some past experience. Failing that, the best method is simulation of the real estate market process.

A. Given reliable information on past market behavior, the preferred method of appraisal is to process the data, statistically if possible, to derive a prediction of future price behavior under given conditions and with means for estimating the reliability of the prediction.

1. Statistical prediction if possible.

2. Statistical rules for definition of a data set at the least.

B. Should market data be unavailable or inconclusive, the appraiser is forced to resort to the second method of appraisal, namely the construction of a real estate market model of factors which reflect his understanding of how buyers and sellers might behave.

1. The income approach and the cost approach are submodels of how an investor is supposed to behave.

## CONTEMPORARY REAL ESTATE APPRAISAL REPORT

## Letter of Transmittal

1. Brief statement of appraisal issue
2. Definition of value applied
3. Value conclusion (qualified by financing, terms of sale, and range of probable transaction zone as appropriate)
4. Sensitivity of conclusion to critical assumptions
5. Property observations or recommendations
6. Incorporation by reference of limiting assumptions and conditions

## Table of Contents

## List of Exhibits

## Digest of Facts, Assumptions, and Conclusions

1. Property type
2. Property location
3. Property ownership
4. Determinant physical attributes
5. Controlling legal-political attributes
6. Pivotal linkage attributes
7. Marketable dynamic attributes
8. Most probable use conclusion
9. Most probable buyer profile assumed
10. Initial probable price prediction and central tendency
11. Adjustment of preliminary value estimate for external factors or market position of parties
12. Testing of corrected probable price for consistency with most probable buyer objectives
13. Final value conclusion and range of error estimate as appropriate

## I. Appraisal Problem Assignment

- A. Statement of issue or circumstances for which appraisal is intended to serve as a decision benchmark and date of valuation
- B. Special problems implicit in property type or issue that affect appraisal methodology and definition of value
- C. Special assumptions or instructions that are provided by others
- D. Definition of value, which is the objective of appraisal analysis and disciplines appraisal process
  1. Selected definition and source
  2. Implicit conditions of the definition
  3. Assumptions required by relevant legal rulings
- E. Definition of legal interests to be appraised
  1. Legal description and source
  2. Permits, political approvals, and other public use entitlements
  3. Fixtures or personalty to be included with sale
  4. Specific assets or liabilities excluded as inconsistent with issue or premise of appraisal

**II. Property Analysis to Determine Alternative Uses****A. Site Analysis**

1. Physical (static) site attributes (size, shape, geology, slope, soil hydrology, etc.)
2. Special site improvements (wells, bulkheads, irrigation systems, parking surfaces with unique salvage or re-use characteristics, etc.)
3. Legal-political attributes (applicable federal, state and local zoning, covenants, easements, special assessments, or other land use codes and ordinances, etc.)
4. Linkages of site (key relationships to networks, populations, or activity centers that might generate need for subject property)
5. Dynamic attributes of site (perceptual responses of people to site in terms of anxiety, visibility, prestige, aesthetics, etc.)
6. Environmental attributes of site as related to off-site systems or impact areas.

**B. Improvement Analysis.**

1. Physical (static) attributes of improvements, cataloged by type, construction, layout, condition, structural flaws, etc.
2. Mechanical attributes (brief statement of heating, ventilating, air conditioning, electrical, plumbing, and fire or safety systems in terms of limitations on use or efficiency)
3. Special structural linkages to off-site elements (tunnels, bridges, adjoining structures, etc.)
4. Legal-political constraints on use of existing improvements (federal, state and local building codes, fire codes, conditional use procedures, neighborhood associations, and inspection liens of record for violations).
5. Dynamic attributes of existing improvements (impressions created by type, bulk, texture, previous uses, past history, or functional efficiency)
6. Current uses and tenancies of improvements, if any
7. Environmental impact attributes of improvements on environs

**E. Identification of Alternative Use Scenarios for Subject Property**

1. Marketing existing uses of property as is
2. Renovation of existing property and marketing improved space
3. Redirection of existing property to alternative tenancies and uses
4. Replacement of existing improvements or program with new uses

**III. Selection of Most Probable Use****A. Comparative Analysis of Alternative Uses**

1. Testing and ranking alternative-use strategies for legal-political compatibility
2. Testing alternative-use scenarios for fit to physical property attributes within reasonable cost to cure
3. Selection of scenarios that justify market research

**B. Analysis of Effective Demand for Selected Uses**

1. Search for rents and income potentials of scenario space-time products
2. Screen and rank market targets
3. Apply income-justified residual investment approach to rank economic power of alternative market scenarios
4. Evaluate marginal revenue, marginal investment risk trade-offs

**C. Summary Matrix for Selection of Most Probable Use Scenario**

1. Physical fit
2. Legal-political risk
3. Strength of market demand
4. Adequacy of available financing
5. Revenue and cost assumptions risk

**IV. Prediction of Price for Subject Property****A. Specification of Most Probable Buyer Type Implied by Most Probable Use**

1. Criteria motivations of alternative buyer types
2. Selection of most probable buyer type as basis for prediction of a sales transaction with logic for ranking of alternatives
3. Specification of essential site, improvement, financial, or key decision criteria of principal alternative buyer types

**B. Explanation of Appraisal Methodology for Prediction of Probable Purchase Price**

1. Preferred method: to infer buyer behavior from actual market transaction and market data available from sales by comparable buyers of acceptable alternative properties
2. In the absence of adequate market sales data, the alternative method selected for simulation of probable buyer decision process
3. If market influence of simulation is impossible, select normative model such as investment value, or cost to replace

**C. Search for Comparable Market Sales Transactions**

1. Unit of comparison
2. Method of comparison
3. Explanation of search parameters
4. Investigation of sale transaction circumstances
5. Evaluation for comparability
6. Definition of predominant terms of sale
7. Source of comparative adjustments

**D. Determination of Suitability of Existing Market Data for Inference of Value for Subject Property**

1. Where data is adequate, selection of market comparison method to estimate value
2. Where data is lacking or misleading, selection of alternative valuation method and reasoning
3. Conclusion leads to E or F

- E. Simulation of Probable Buyer Decision Process if Market Comparison Approach Is Inconclusive or Impossible
  - 1. Source and explanation of simulation model
  - 2. Schedules of simulation assumptions
  - 3. Range of alternative simulation value predictions (sensitivity analysis)
- (OR) F. Selection of Normative Model of Buyer Behavior
  - 1. Investment model
  - 2. Cost-to-replace model
  - 3. Nonquantitative decision models
- G. Computation of Most Probable Price and Standard Error of Prediction
- H. Correction of Preliminary Value Estimate for External Factors
  - 1. Identification of conditions relative to date of appraisal not present in market comparison assumptions
  - 2. Specification of political contingencies that might upset normal appraisal assumptions of substitution
  - 3. Identification of any violation of conditions in the definition of value by the appraisal methodology
  - 4. Indication of adjustment necessary to preliminary probable price estimate or
  - 5. Explicit statement that no adjustment is necessary
- I. Test of Most Probable Price or Value Conclusion by Means of:
  - 1. Comparison to values derived from selected alternative appraisal methodology
  - 2. Demonstration of achievement of objectives of most probable buyer minimum selection criteria
  - 3. Measurement of fit of financial cash requirements to market rents, lender ratios, or other relevant constraints
  - 4. Comparison to decision criteria appropriate to issue (financial ratios required by mortgage lender, comparative assessments of similar property for the tax appeal board, rates of return in alternative investments, construction prices for similar property, or whatever demonstrates consistency with statement of the issue)
- V. Appraisal Conclusion and Limiting Conditions
  - A. Definition of Value and Value Conclusion of the Report
  - B. Certification of Independent Appraisal Judgment
  - C. Statement of Limiting Conditions That Establish:
    - 1. Contributions of other professionals on which report relies
    - 2. Facts and forecasting under conditions of uncertainty
    - 3. Critical assumptions provided by the appraiser
    - 4. Assumptions provided by the client
    - 5. Controls on use of appraisal imposed by the appraiser

#### Appendices

Maps, data sets, only if referred to in the text. These data collections would slow down the reader if included as an exhibit and are secondary to the argument in the body of the report.

2. After-tax investment models are another submodel of market behavior, but while these may measure demand from the buyer's viewpoint, it may not measure the minimum price expected by the seller who also has a tax model to consider. In using the second approach, the appraiser must be very careful to indicate price on the supply side representing minimum expectations (Vs) of the seller.
- C. Should there be no sales and no way to verify how buyers would review the specific property (utility case - rate base or kilowatt production?), then the appraiser falls back to normative methods.
1. Normative means what the buyer would do if he were as smart as the appraiser and motivated only by a desire to maximize wealth.
  2. The traditional income approach or the cost approach are normative models unless it can be proven buyers behave accordingly.
  3. After-tax cash flow models are normative models until it can be shown how these models value property.
- D. Highest and best use or most probable use in order to identify most probable user and buyer, requires analysis and explicit recognition of possible uses which are:
1. Legal/political acceptability
  2. Physical/technical feasibility
  3. Effective demand and marketability
  4. Financial viability
  5. Community compatibility
- (See Exhibit 5.)

#### IV. New Issues and New Appraisal Techniques

It is generally recognized that the real estate market is dependent upon substantial amounts of credit to support effective demand so that real estate prices and perhaps values vary with the terms and supply of credit generally available in the marketplace. Indeed the old timers have seen the definition of fair market value gradually move away from the firm premise of cash to the seller to a somewhat more subjective condition of terms generally available in the market.

- A. The pressure of double digit inflation is eroding many of the appraisers' favorite simplifications of the market model:
1. The long-term fixed interest mortgage, amortized from property productivity is gone.
  2. The simple division of income between the mortgage and the equity component is smothered in participating mortgages, limited partnerships, convertible mortgages and seller financing.
  3. As the government had removed general subsidies to real estate finance such as regulation Q, it has made greater use of specific interest subsidies to selected special groups.
  4. Real estate markets must be defined not only in terms of use, age, income, but also access to capital.
  5. Moreover, most properties exist in a 3-tier market, utility to house to activity, commodity and money speculation, and as part of a going concern.
  6. The 3-tier market can be further subdivided by the nature of permits or other entitlements that are site specific and define risk of a vested or non-vested opportunity.

- B. Volatile money market conditions and the widespread use of creative financing leave the appraiser in considerable difficulty in defining typical market terms, cash equivalent prices or the relationship of fair market value to transaction price. Does the client want fair market price, most probable price, going concern value, contributory value, investment value, or liquidating value in event of delinquency and foreclosure?
- C. The impact of these elements is significantly different for problems involving:
  - 1. Income investment properties
  - 2. Economic development properties
  - 3. Multi-family residential properties
  - 4. Single family residential properties
- D. The impact of financing in each situation requires that we go back to basics. The appraiser or his client must define:
  - 1. What is the function of the appraisal?
  - 2. Which rights are to be appraised? (Those that run with the establishment on the site, with the ownership position, or with fee simple title.)
  - 3. Which definition of value is appropriate?
  - 4. How is productivity allocated to the agents of production?
- E. Reference to Exhibit 2
- F. Reference to definition of fair market value in Exhibit 3 and compare to most probable price in Exhibit 4.



## EXHIBIT 3

(\* The most probable price - new edition, Institute)

FAIR MARKET VALUE - The highest price in terms of money which a property will bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus.

Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

1. Buyer and seller are typically motivated.
2. Both parties are well informed or well advised, and each acting in what he considers his own best interest.
3. A reasonable time is allowed for exposure in the open market.
4. Payment is made in cash or its equivalent.
5. Financing, if any, is on terms generally available in the community at the specified date and typical for the property type in its locale.
6. The price represents a normal consideration for the property sold unaffected by special financing amounts and/or terms, services, fees, costs, or credits incurred in the transaction.

Source: P. 137, Real Estate Appraisal Terminology,  
Editor Byrl Boyce.

- \* Not to be confused with most probable price in contemporary appraisal, which does not reflect an assumption of a competitive market with alternative, which does not require ignoring of public bargaining position of the party, and which does not require cash to the seller if the market cannot have a transaction without seller financing.

## EXHIBIT 4

The most probable price is that selling price which is most likely to emerge from a transaction involving the subject property if it were to be exposed for sale in the current market for a reasonable time at terms of sale which are currently predominant for properties of the subject type.

Source: P. 8, The Appraisal of 25 N. Pinckney, Editor James A. Graaskamp.

## FEASIBILITY OF ALTERNATIVE USES

	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>	<u>Scenario 4</u>	<u>Scenario 5</u>	<u>Scenario 6</u>
<u>Feasibility Factor</u>	<u>Return to Former Use</u>	<u>Purchase by Welfare Agency</u>	<u>Conversion to Class B/C Office</u>	<u>Conversion to Apartments with Office on 1st Floor</u>	<u>Conversion to Apartments with Existing Bar</u>	<u>Demolition and Sale of Site</u>
Market Demand Risks	Demand very elastic relative to price unless room rates subsidized by welfare agencies	Welfare agencies lack capital resources to purchase and remodel facilities, given the absence of government funding	Office market becoming more price sensitive; would not accept neighborhood and lack of parking unless rents were lower than necessary to support remodeling	Strong demand for spacious two bedroom units in CBD area	Though there is a strong demand for affordable downtown housing, consumer survey shows tenant reluctance to live above noisy/potentially malodorous bar-restaurant	Soft market for vacant sites which cannot be assembled into larger plot-tage; parking revenues from 20 spaces inadequate to carry clearance costs
Legal/Political Acceptability	Inconsistent with long term City goals for Olin Place	Mixed acceptability as interim use as housing for transient males by some groups; favored by welfare advocates and disfavored by local residents	Neighborhood resistance to increased demand for street parking	Preferred use, given need for downtown housing and political statements by alderpersons for reduction of bar business in residential neighborhoods	Preferred use for housing is compromised by existing bar management agreement	Inconsistent with constituency favoring landmark designation
Technical Construction Problems and Capital Cost Risks	Failure to repair within one year may have jeopardized grandfathered non-conforming building conditions. Otherwise this use has lowest construction risks of Scenarios 1 through 5	Capital costs of renovation to state standards excessive for short term use	Variance needed for parking requirement of 1 stall per 300 SF to 1 stall per 2,500 SF of office space	Spacious apartments with views provide favorable rent/cost per SF ratio--housing code creates more remodeling risk than commercial code	Apartment mix cheapened by retaining existing bar operation--smaller units require more plumbing and bring less favorable rent/cost per SF ratio	None
Relative Investment Power Based Upon Revenue Generation Potential	\$192,765	\$120,380	\$80,331	\$103,220	(\$10,513)	\$13,778
Special Income Tax Advantages or Public Subsidies Available	None	None	Rehabilitation tax credit of 20% for older commercial building conversion plus possible industrial bond financing	Possible historic landmark status for 25% rehabilitation tax credit plus tax incremental financing (TIF) assistance	Possible historic landmark status for 25% rehabilitation tax credit. TIF less likely because increase in tax is smaller	None
Real Estate Tax Consequences to City	Modest increase in assessed value	Loss of \$194,300 tax base with tax-exempt agency as owner	Real estate tax base would be multiplied approximately 3 times the present assessment	Real estate tax base would be multiplied approximately 3 1/2 times the present assessment	Real estate tax base would be multiplied approximately 2 1/2 times the present assessment	Loss of approximately \$140,000 of tax base

- V. Traditional techniques of market comparison and capitalized income lack reliable data or fail to represent market behavior, leading to greater reliance on discounted cash flows for large income properties.
- A. Sales prices are engineered by accountants to some degree to shift asset values among various classifications for land, structure, personalty, intangibles, capital gains and losses and ordinary gains and losses, making market comparison anything but objective (not to mention adjustments for non-market financing discussed in second day).
  - B. Similarly, the income approach has great difficulty in applying the truism that income value is the present value of income plus the present value of reversion.
    - 1. There is the problem of defining net operating income in terms of what is attributable to the real estate (aside from financing effect on cash throw off).
    - 2. There is the problem of defining the net reversion to equity in an uncertain future (aside from financing effect on mortgage balance).
    - 3. There is the problem of selecting a conversion process which reduces income cash flows and reversionary cash flows to a single present value.
  - C. Neither revenue, nor expenses, nor debt service are constant over time anymore, so that NOI/OAR is no longer a useful valuation model. Instead rents, vacancies, expenses, and financing must be staged using a spread sheet for both income and the reversion. Lenders may share in appreciation and owner and lender may share the risk of variable interest and the first principal payment.
  - D. The problem of defining real property as tangible or intangible.
    - 1. Property refers to things and objects capable of ownership.

2. Real property refers to the legal rights, interests, and benefits inherent in the ownership of real estate.
  3. What is inherent?
  4. Is the residual claim the right to receive cash flow from income property subject to any prior claims?
  5. How is cash flow allocated among land, labor, capital, and management...and public licenses?
- E. The definition of economic rent attributable to the real estate:
1. Is income attributable to entitlements that go with fee simple title to the land and are point specific or to transportable permits?
    - a. For example--does liquor license go with the building? Is permit to build or maintain a dam assignable? Does right to management fee and brokerage fee go with general partnership or property?
  2. Is the real estate income from retailing of space or from wholesaling of space?
    - a. Parking ramp lease versus parking space by the hour, observation deck versus ticket, condominium conversion fee versus apartment project investment.
  3. Is the income for extraordinary services or intangible assets rather than customary?
    - a. Maid service versus janitorial, shopping center premium for proximity or for joint merchandising and risk management.
  4. Ancillary to rather than integral with the project.
    - a. Can services be acquired off premises such as janitorial or utilities?

5. IRS classification as 1250 property (real) or 1231 property (personalty) and Section 453, 453A and B, or Section 38 (tangible) or Section 45 (intangible).
  6. Is income attributable to governmental agencies in exchange for contractual entitlements of control or use to the public interest for the term of the contract?
- E. Problem of defining or forecasting a reversion:
1. Pricing real estate for utilitarian purpose, to buy access to service sales, or speculate in long term demand/supply commodity relationships or long term commodity/money ratios.
  2. Can the appraiser prove presence of necessary conditions for appreciation and amount of depreciation?
    - a. Rising net income
    - b. Falling interest rates
    - c. Falling investor expectations
  3. When is appreciation speculative, non-vested, and excluded from fair market value?
  4. Can the appraiser simulate alternative speculative gains for most probable price?
  5. When a premium is paid anticipating syndication of condominium conversion, should there be an adjustment for purchase of a business opportunity? Does fair market value include management fees for conversion?
- F. Referring back to functions and the accounting/appraisal interface, consider that accounting theory distinguishes values according to the following in order to fit the function of the accounting task:
1. Exit value assuming completion of normal business cycle in an orderly fashion (benchmarking).

2. Exit value assuming abrupt liquidation (construction loan validation).
3. Replacement value with asset of current technology.
4. Reproduction value of asset at original state of technology.
5. Market value in an organized market for tangible goods.
6. Current value as original cost indexed for dollar devaluation.
7. Discounted value of future receipts at interest factor.
8. Value of asset not yet charged to consumption or production.

- VI. Case Study of an appraisal of a 50-year old high rise office building in the CBD with vacancy problems, utility problems, and management problems. (See Exhibits 6 through 21.)
- A. Revenues reflected loss of a major tenant (State of Wisconsin), lack of demand for retail space on the first floor, a soft market for B-class space, and a reluctance of management and tenants to use pass-throughs for operating costs.
  - B. It was necessary to do a spread sheet indicating a gradual reduction of vacancy loss, a gradual updating of existing leases with pass-through clauses, and investment in critical energy conservation.
  - C. Resale price is tied to projected net income and gross with a debt cover ratio and a cash-on-cash yield. Loan-to-value ratio is irrelevant. (See The Appraisal Journal, January 1981, "DCR/RE Cap Rate Tables for Today's Financing," p. 15.)

EXHIBIT 6  
CASE STUDY - EXHIBITS 6-21 - SEMINAR

LIST OF EXHIBITS

	Page
1 Location of Subject Site Relative to the Capitol Square. . . . .	
2 Subject Site in Original Madison Plat. . . . .	
3 Site Plan of Subject Property. . . . .	
4 Proposed Capitol Concourse Plan. . . . .	
5 Proposed Parking for Concourse Plan. . . . .	
6 Traffic Patterns and Public Parking Upon Completion of Capitol Concourse. . . . .	
7 View from the East Main Office Entrance of the Subject Property . . . . .	
8 Photographs of Subject Property. . . . .	
9 Location of First Floor Retail Vacancies on the Capitol Square . . . . .	
10 First Floor Retail Vacancies on the Square Existing or Known to be Available as of January 1, 1980. . . . .	
11 Madison Downtown Office Space as of January 1, 1980. . . . .	
12 Expression of State's Interest in Post Office Building-- Wisconsin State Journal Article. . . . .	
13 Location of Comparable Sales on or Near Capitol Square . . . . .	
14 Comparable #1 - 30 West Mifflin. . . . .	
15 Comparable #2 - 50 East Mifflin. . . . .	
16 Comparable #3 - 16 North Carroll . . . . .	
17 Comparable #4 - 123 West Washington. . . . .	
18 Comparable #5 - 102 and 110 North Hamilton . . . . .	
19 Comparable #6 - 212 East Washington. . . . .	
20 Comparable #7 - 2 West Mifflin . . . . .	
21 Scale for Scoring Comparables on Important Investor Considerations . . . . .	9
22 Weighted Matrix for Comparable Properties. . . . .	10
23 Calculation of Most Probable Price Using Mean Price Per Point Equation Method. . . . .	11



## EXHIBIT 6 (Continued)

SCALE FOR SCORING COMPARABLES ON IMPORTANT INVESTOR CONSIDERATIONS  
FOR OFFICE/RETAIL SPACE IN MADISON C-4 ZONE

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Parking 25%	<p>5 = Ample private parking on site or available on contract within the same block.</p> <p>3 = Limited parking on premises</p> <p>0 = Little or no surface parking on premises.</p>
Location 20%	<p>5 = In the blocks of East and West Mifflin St. or North and South Carroll St., across from the Capitol Square</p> <p>3 = In the blocks of North and South Pinckney St., across from the Capitol Square, or in the 100 block of West Washington, or adjacent to General Executive Facilities.</p> <p>1 = Off of the Capitol Square</p>
First Floor Retail Lease in Place at Time of Purchase 15%	<p>5 = Strong lease in place.</p> <p>3 = Strong lease in place for part of first floor.</p> <p>0 = Lease expires in less than 6 months or vacant.</p>
Need for Renovation of Office Space at Time of Purchase 15%	<p>5 = No renovation required.</p> <p>3 = Modest renovation required.</p> <p>1 = Intensive renovation required.</p>
Visual Quality of Office Entrance 10%	<p>5 = Excellent design and location.</p> <p>3 = Indifferent design and/or location.</p> <p>1 = Poorly defined and/or adjacent to incompatible uses.</p>
Vacancies in Existing Office Space at Time of Purchase 15%	<p>5 = Less than 10% of net rentable area (NRA).</p> <p>3 = More than 10% of NRA.</p> <p>0 = Vacant</p>

WEIGHTED MATRIX FOR COMPARABLE PROPERTIES

FEATURE/ WEIGHT	Rating/Weighted Rating							Subject
	#1 30 W. Hifflin	#2 50 E. Hifflin	#3 16 N. Carroll	#4 123 W. Washington	#5 102 N. Hamilton	#6 212 E. Washington	110 E. Main	
Parking 25%	5/1.25	3/.75	0/0	0/0	3/.75	3/.75	3/.75	
Location 20%	5/1.00	5/1.00	5/1.00	3/.60	1/.20	3/.60	3/.60	
First Floor Retail Lease In Place 15%	5/.75	5/.75	0/0	3/.45	3/.45	0/0	1/.15	
Need for Renovation 15%	5/.75	1/.15	3/.45	5/.75	1/.15	1/.15	3/.45	
Visual Quality of Office Entrance 10%	5/.50	3/.30	3/.30	5/.50	3/.30	3/.30	1/.10	
Vacancies In Existing Office Space 15%	5/.75	0/0	5/.75	5/.75	0/0	0/0	1/.15	
<b>Total Weighted Score</b>	<b>5.00</b>	<b>2.95</b>	<b>2.50</b>	<b>3.05</b>	<b>1.85</b>	<b>1.80</b>	<b>2.20</b>	
Selling Price	\$2,555,500	\$850,000	\$615,270	\$2,896,000	\$330,000	\$472,000	X	
Total Net Rentable Area (NRA)	65,000 sq. ft.	38,500 sq. ft.	35,725 sq. ft.	138,000 sq. ft.	28,000 sq. ft.	38,000 sq. ft.	74,000 sq. ft.	
Price Per Square Foot (NRA)	\$39.30	\$22.10	\$17.20	\$21.00	\$11.80	\$12.40		
Price Per Square Foot of NRA <u>Total Weighted Score</u>	7.86	7.49	6.88	6.89	6.38	6.89		

EXHIBIT 7

## EXHIBIT 8

CALCULATION OF MOST PROBABLE PRICE USING  
MEAN PRICE PER POINT EQUATION METHOD  
(With Standardized Weighted Point Scores)

Comparable Property	Selling Price per NRA	Weighted Point Score	Price per NRA Weighted Point Score (x)
1	\$39.30	5.00	7.86
2	22.10	3.45	7.49
3	17.20	2.50	6.88
4	21.00	3.05	6.89
5	11.80	1.85	6.38
6	12.40	1.80	<u>6.89</u>
		TOTAL	42.39

$$\text{Central Tendency (Mean = } \bar{x}) = \frac{\sum x}{n} = \frac{42.39}{6} = 7.07$$

$$\text{Dispersion (Standard deviation = s)} = \sqrt{\frac{\sum (x-\bar{x})^2}{n-1}} = \sqrt{\frac{1.38}{5}} = .525$$

where:

x	$\bar{x}$	$(x-\bar{x})$	$(x-\bar{x})^2$	n	n-1
7.86	7.07	.79	.62	6	5
7.49	7.07	.42	.18		
6.88	7.07	-.19	.04		
6.89	7.07	-.18	.03		
6.38	7.07	-.69	.48		
6.89	7.07	-.18	.03		
			<u>1.38</u>		

$$\text{Value Range: } \bar{x} \pm s = 7.07 \pm .53$$

Estimate of Value of Subject Property =

$$\text{NRA of subject} * \text{Weighted point score of subject} * \\ (74,000 \text{ S.F.}) \quad (2.2)$$

$$[\text{Sample mean of price per NRA per total} \\ \text{weighted score} \pm (\text{Dispersion} * t \text{ value})] \\ [7.07 \pm (.53 * t \text{ value})]$$

	Confidence Level	
	68% (t = 1.000)	@ n-1 = 5; 90% (t = 2.015)
High Estimate: <sup>1</sup>	\$1,240,000	\$1,320,000
Central Tendency:	1,150,000	1,150,000
Low Estimate:	1,060,000	980,000

<sup>1</sup>All value estimates are rounded.

Schedule of Rental Revenues<sup>1</sup> for the Period of April 30, 1980 Through April 29, 1985

Occupancy as of April 30, 1980	Space Sq. Ft.	Annual Rent per Sq. Ft. <sup>2</sup>	Lease Terms as of 4/30/80 <sup>3</sup>	Annualized Gross Rental Revenues				
				4/30/80- 4/29/81	4/30/81- 4/29/82	4/30/82- 4/29/83	4/30/83- 4/29/84	4/30/84- 4/29/85
<b>Lower Level &amp; Roof</b>								
B Level Vault-Vacant	700	3.00	--	\$ 2,100	\$ 2,100	\$ 2,270	\$ 2,270	\$ 2,450
B Level-Showroom & Office	4000	3.00	--	12,000	12,000	12,960	12,960	14,000
A Level-Storage	400	4.00	6/30/80	1,600	2,400	2,600	2,800	3,000
Honeywell Phone Box	--	--	--	600	600	600	650	650
<b>Total-Lower Level</b>	<b>5100</b>			<b>\$16,300</b>	<b>\$17,100</b>	<b>\$18,430</b>	<b>\$18,680</b>	<b>\$20,100</b>
<b>First Floor</b>								
Chez Vous-112	454	4.80	10/1/76 - 9/30/81	\$ 2,180	\$ 2,290	\$ 2,360	\$ 2,360	\$ 2,360
Chez Vous-114	1000	4.80	10/1/76 - 9/30/81	4,810	5,030	5,200	5,200	5,200
North Entry	2000	9.00	--	18,000	19,500	21,000	22,500	24,000
South Entry-Leaf & Ladle <sup>4</sup>	3500	9.00	1/1/80 - 12/30/84	31,500	33,130	33,950	36,670	39,600
<b>Total-First Floor</b>	<b>6954</b>			<b>\$56,490</b>	<b>\$59,950</b>	<b>\$62,510</b>	<b>\$66,730</b>	<b>\$71,160</b>
<b>Second Floor</b>								
201 Vacant	150	6.50	--	\$ 970	\$ 970	\$ 1,050	\$ 1,050	\$ 1,140
202 State <sup>5</sup>	600	6.70	7/1/79 - 6/30/80	4,020	4,320	4,320	4,670	4,670
203-4 Vacant <sup>5</sup>	543	6.20	9/1/78 - 8/31/79	3,370	3,640	3,640	3,640	3,930
205-6 State	506	7.00	3/1/78 - 5/31/80	3,540	3,820	3,820	4,120	4,120
207-8 Homecrafts	386	7.20	1/1/79 - 12/31/81	2,780	2,850	3,000	3,000	3,080
209-10 State <sup>5</sup>	451	6.25	11/1/79 - 5/31/80	2,820	3,040	3,040	3,280	3,280
211 Dr. Reyez	219	7.00	--	1,600	1,730	1,730	1,870	1,870
212-14 Dr. Wierwill	700	6.50	4/1/78 - 3/31/81	4,570	4,900	4,900	4,900	5,210
215 Vacant	415	6.75	7/1/78 - 6/30/79	2,800	3,020	3,020	3,270	3,270
216 UPI	500	7.50	5/1/80 - 4/30/81	3,750	4,050	4,050	4,370	4,370
218-19 Rape Crisis Center	816	7.00	1/1/80 - 12/31/81	5,840	6,120	6,260	6,530	6,690
220-21 State <sup>5</sup>	1400	6.25	12/1/79 - 5/31/80	8,750	9,450	9,450	10,200	10,200
<b>Total-Second Floor</b>	<b>6686</b>			<b>\$44,810</b>	<b>\$47,910</b>	<b>\$48,280</b>	<b>\$50,900</b>	<b>\$51,830</b>

EXHIBIT 9

Schedule of Rental Revenues<sup>1</sup> for the Period of April 30, 1980 Through April 29, 1985

Occupancy as of April 30, 1980	Space Sq. Ft.	Annual Rent per Sq. Ft. <sup>2</sup>	Lease Terms as of 4/30/80 <sup>3</sup>	Annualized Gross Rental Revenues				
				4/30/80- 4/29/81	4/30/81- 4/29/82	4/30/82- 4/29/83	4/30/83- 4/29/84	4/30/84- 4/29/85
<b>Third Floor</b>								
301 Vacant	150	5.75	--	\$ 860	\$ 860	\$ 930	\$ 930	\$ 1,000
302-3 State <sup>5</sup>	1179	5.75	--	6,780	7,320	7,320	7,900	7,900
304 State <sup>5</sup>	230	6.70	--	1,540	1,660	1,660	1,800	1,800
305-B State <sup>5</sup>	942	6.70	--	6,300	6,800	6,800	7,360	7,360
309 The Journal Co.	232	7.20	9/1/79 - 8/31/80	1,810	1,880	1,970	2,030	2,120
310-11 State <sup>5</sup>	456	6.70	--	3,050	3,300	3,300	3,560	3,560
312 Vacant	234	5.75	--	1,340	1,450	1,450	1,570	1,570
313-14 Dr. R. Meng	482	7.20	6/1/79 - 5/31/80	3,490	3,730	3,750	4,000	4,030
315 Vacant	731	6.70	10/1/79 - 9/30/80	5,000	5,000	5,310	5,480	5,630
316-19 Wisc. Builders Assoc.	1091	7.00	1/1/80 - 12/31/80	7,810	8,180	8,360	8,730	8,940
320-24 Vacant	1363	7.00	--	9,540	10,300	10,300	11,130	11,130
<b>Total-Third Floor</b>	<b>7090</b>			<b>\$47,520</b>	<b>\$50,560</b>	<b>\$51,150</b>	<b>\$54,490</b>	<b>\$55,040</b>
<b>Fourth Floor</b>								
401 Vacant	150	6.40	--	\$ 960	\$ 960	\$ 1,040	\$ 1,040	\$ 1,120
402 Furst, Carlson Inc.	648	6.40	5/1/79 - 4/30/80	4,350	4,370	4,700	4,730	5,090
403-11 State	2147	6.75	1/1/80 - 12/31/81	14,500	14,880	15,670	16,100	16,960
412 Vacant	202	6.40	--	1,290	1,290	1,400	1,400	1,500
413-14 Wisconsin Alliance of Cities	679	6.80	--	4,980	5,020	5,420	5,420	5,850
415 State <sup>5</sup>	259	7.00	3/1/79 - 2/28/81	1,830	1,940	1,970	2,100	2,130
416-19 State <sup>5</sup>	1370	6.00	vacated 6/30/80	8,220	8,880	8,880	9,590	9,590
420-20a State <sup>5</sup>	560	6.70	vacated 6/30/80	3,750	3,750	4,050	4,050	4,370
421-22 State	300	6.70	vacated 6/30/80	2,010	2,010	2,170	2,170	2,340
423-24 Ed Konkol	340	6.60	9/1/79 - 8/31/80	2,240	2,240	2,420	2,420	2,620
<b>Total-Fourth Floor</b>	<b>8655</b>			<b>\$44,130</b>	<b>\$45,340</b>	<b>\$47,720</b>	<b>\$49,020</b>	<b>\$51,570</b>

EXHIBIT 9 (Continued)

Schedule of Rental Revenues<sup>1</sup> for the Period of April 30, 1980 Through April 29, 1985

Occupancy as of April 30, 1980	Space Sq. Ft.	Annual Rent per Sq. Ft. <sup>2</sup>	Lease Terms as of 4/30/80 <sup>3</sup>	Annualized Gross Rental Revenues				
				4/30/80- 4/29/81	4/30/81- 4/29/82	4/30/82- 4/29/83	4/30/83- 4/29/84	4/30/84- 4/29/85
<u>Fifth Floor</u>								
501 E. C. Barton	150	7.60	--	\$ 1,240	\$ 1,270	\$ 1,270	\$ 1,380	\$ 1,380
502 Vacant	842	7.50	--	6,310	6,820	6,820	7,360	7,360
503-5 Vacant	810	7.50	--	6,070	6,070	6,440	6,800	6,800
506-19 State	3922	6.25	11/1/79 - 10/31/83	24,500	24,500	24,500	30,590	31,770
520 State-Bd. of Aging	555	6.70	7/1/79 - 6/30/81	3,950	4,000	4,270	4,330	4,940
521-22 Dr. Coryell	339	7.20	7/1/79 - 6/30/80	2,440	2,690	2,740	2,920	2,950
523-24 Green Bay Press Gazette	337	7.60	9/1/79 - 8/31/82	2,560	2,690	2,760	2,760	2,760
Total-Fifth Floor	<u>6955</u>			<u>\$47,070</u>	<u>\$48,040</u>	<u>\$48,800</u>	<u>\$56,140</u>	<u>\$57,960</u>
<u>Sixth Floor</u>								
601 Vacant	150	6.70	--	\$ 1,000	\$ 1,000	\$ 1,080	\$ 1,080	\$ 1,170
602-4 State <sup>5</sup>	1473	6.00	vacated 6/30/80	8,840	9,540	9,540	10,300	10,300
605 Vacant	204	6.40	--	1,300	1,300	1,410	1,410	1,520
			to 6/30/80					
606-10 State	1000	6.70	then no. - mo.	7,370	7,500	7,500	8,100	8,100
611 The EvJue Foundation	286	7.00	vacated 11/30/80	2,000	2,000	2,160	2,160	2,330
612-14 State	647	7.50	11/1/79 - 10/31/83	4,850	4,850	4,850	5,080	5,240
615 Tenney Bldg.	344	7.00	--	2,400	2,400	2,600	2,600	2,800
616 John Barsness	850	6.00	3/1/79 - 2/28/81	5,170	5,520	5,590	5,950	6,020
617 Bill Ward	250	6.70	vacated 5/31/80	1,940	2,120	2,120	2,300	2,300
618-19 State	494	8.00	vacated 5/31/79	3,950	3,950	4,270	4,270	4,610
620-24 Vacant	1262	6.70	--	8,450	9,130	9,130	9,860	9,860
Total-Sixth Floor	<u>6960</u>			<u>\$47,270</u>	<u>\$49,310</u>	<u>\$50,250</u>	<u>\$53,110</u>	<u>\$54,250</u>
<u>Seventh Floor</u>								
701 Lawton & Cates	150	5.75	6/1/79 - 5/31/83	\$ 930	\$ 970	\$ 1,100	\$ 1,050	\$ 1,090
702-19 Lawton & Cates	5417	5.75	6/1/79 - 5/31/83	33,600	35,100	36,450	37,850	39,160
720-24 Vacant	1106	7.00	--	7,740	7,740	8,360	8,360	9,030
Total-Seventh Floor	<u>6673</u>			<u>\$42,270</u>	<u>\$43,810</u>	<u>\$45,910</u>	<u>\$47,260</u>	<u>\$49,280</u>

EXHIBIT 9 (Continued)

Schedule of Rental Revenues<sup>1</sup> for the Period of April 30, 1980 Through April 29, 1985

Occupancy as of April 30, 1980	Space Sq. Ft.	Annual Rent per Sq. Ft. <sup>2</sup>	Lease Terms, as of 4/30/80 <sup>3</sup>	Annualized Gross Rental Revenues				
				4/30/80- 4/29/81	4/30/81- 4/29/82	4/30/82- 4/29/83	4/30/83- 4/29/84	4/30/84- 4/29/85
<b>Eighth Floor</b>								
801 Wisconsin Radio News	150	7.00	to 6/30/80	\$ 1,050	\$ 1,050	\$ 1,130	\$ 1,130	\$ 1,220
802-5 State	1536	7.55	to 10/31/83	11,600	11,600	11,600	12,060	12,520
806-7 Dr. Mannis	470	7.50	9/1/79 - 8/31/80	3,040	4,000	4,000	4,210	4,320
808-22 State	4580	6.00	7/1/79 - 6/30/80	27,480	36,620	37,100	37,100	39,580
823-24 Dr. Boyle	319	7.60	9/1/79 - 8/31/80	2,780	2,880	3,040	3,120	3,120
<b>Total-Eighth Floor</b>	<b>7075</b>			<b>\$48,750</b>	<b>\$56,150</b>	<b>\$56,870</b>	<b>\$57,620</b>	<b>\$60,760</b>
<b>Ninth Floor</b>								
901 Hillman & Robertson	150	8.00	1/1/80 - 12/31/80	\$ 1,230	\$ 1,300	\$ 1,340	\$ 1,400	\$ 1,400
902 Wisc. Ins. Alliance	864	7.00	6/1/79 - 5/31/80	6,400	6,480	6,910	7,000	7,000
903-6 Mulcahy & Wherry	980	8.00	1/1/79 - 12/31/81	8,070	8,530	8,750	9,210	9,210
907 Robert Gehling	225	8.00	4/1/80 - 3/31/81	1,810	1,960	1,980	2,110	2,110
909-10 Larry Hall	700	6.00	6/1/79 - 5/31/80	4,520	4,550	4,870	4,900	4,900
911 Dr. Schmitz	248	7.75	1/1/79 - 12/31/80	1,920	1,970	2,060	2,140	2,230
912-19 Devine Insurance	2580	7.00	4/1/80 - 3/31/83	18,060	18,060	18,180	19,350	19,350
921 State	575	7.00	vacated 7/1/80	4,020	4,350	4,350	4,700	4,700
922-23 Judicial Commission	355	6.50	5/1/79 - 4/30/81	2,300	2,500	2,500	2,700	2,700
924-25 Dr. Rundell	319	7.20	6/1/79 - 5/31/80	2,650	2,680	2,860	2,880	2,880
<b>Total-Ninth Floor</b>	<b>7016</b>			<b>\$50,980</b>	<b>\$52,380</b>	<b>\$53,800</b>	<b>\$56,390</b>	<b>\$56,480</b>
<b>Tenth Floor</b>								
1001 Victor Lind	150	6.80	11/1/79 - 10/31/80	\$ 1,050	\$ 1,200	\$ 1,250	\$ 1,300	\$ 1,350
1002 Wisc. Assoc. of Indep. Colleges	864	6.50	1/1/80 - 12/31/80	5,760	6,050	6,190	6,480	6,650
1003-4 Wisc. Cannors & Freezers	756	8.00	5/1/79 - 4/30/80	6,050	6,050	6,530	6,530	7,050
1005-B Noelter Co.	911	6.80	12/1/79 - 11/30/80	6,370	6,650	6,880	7,200	7,400
1009-10 Vacant	455	6.50	--	2,950	3,190	3,190	3,450	3,450
1011-13 Dr. Doll	727	6.65	6/1/79 - 5/31/80	5,230	5,270	5,640	5,670	6,100
1014 Vacant	229	6.25	--	1,430	1,430	1,540	1,540	1,670
1015-18 State	1616	7.50	11/1/79 - 10/31/83	12,120	12,120	12,120	12,600	13,090
1019-21 Vacant	680	6.70	vacated 2/29/80	5,380	5,440	5,870	5,910	6,350
1022 Herb Walsh	171	8.00	12/1/79 - 11/30/80	1,420	1,490	1,490	1,540	1,600
1023-24 Dane Co. Advocate for Battered Women	331	7.20	8/1/79 - 7/31/80	2,610	2,640	2,840	2,900	3,070
<b>Total-Tenth Floor</b>	<b>6890</b>			<b>\$50,370</b>	<b>\$51,570</b>	<b>\$53,540</b>	<b>\$55,120</b>	<b>\$57,780</b>
<b>Annual Totals for</b>	<b>74,054 sq. ft.</b>			<b>\$493,960</b>	<b>\$522,120</b>	<b>\$537,260</b>	<b>\$565,460</b>	<b>\$586,210</b>

EXHIBIT 9 (Continued)

Notes to Schedule of Rental Revenues for the  
Period of April 30, 1980 Through April 29, 1985

- <sup>1</sup>The annualized gross rental revenue for the period from April 30, 1980 through April 29, 1981 is consistent with the actual lease terms, if at market rents, as of April 30, 1980. Increases in rents are assumed to take place according to lease terms and conditions; an increase of 8 percent is used at lease renewal dates. This factor was taken from a survey of office rent increases in Class B buildings on and near the Capitol Square in Madison and is the current rate used by the Tenney Building manager.
- <sup>2</sup>The annual rental market rate is given as of April 30, 1980. Only one tenant in Rooms 909-10 is considered to be below market rent at \$4.73/square foot; therefore the rent for this space is calculated at a market rate of \$6.00/square foot. Market rents are also imputed to spaces used by the building owner.
- <sup>3</sup>Of the 87 rental space units in the Tenney Building as of April 30, 1980, there are 62 leases in place, but 54 of those terminate between 1980 and 1982. Only eight have leases that extend beyond April 30, 1982.
- <sup>4</sup>The Leaf and Ladle Restaurant began its lease of 3500 sq. ft. of the first floor retail space on January 1, 1980. The restaurant had closed its door by October 1, 1980, and the remodeled space is once again on the market. The rental rate of \$9.00 with an annual escalator of 8% per year commencing in the second year is considered comparable for the area. A most probable investor might consider an escalator based upon a percentage of gross sales to encourage rental of this space if restaurant use is most likely; the projected revenues probably would not increase as rapidly as forecast.
- <sup>5</sup>The state has given notice that it will vacate these spaces by June 30, 1980.



Schedule of Vacancies by Floor and by Lease Terms for  
the Period of April 30, 1980 Through April 29, 1985

	Space Sq. Ft. <sup>2</sup>	% Vacant	Annual Rental Rate Per. Sq. Ft.	# of Months Vacant	Projection Period				
					4/30/80- 4/29/81	4/30/81- 4/29/82	4/30/82- 4/29/83	4/30/83- 4/29/84	4/30/84- 4/29/85
<b>Lower Level &amp; Roof <sup>1</sup></b>									
B level - Vault	700	100	3.00	12	\$ 2,100				
	700	100	3.00	12		\$ 2,100			
	700	100	3.25	12			\$ 2,270		
	700	50	3.25	6				\$ 1,140	
	700	50	3.50	6					\$ 1,140
<b>B Level</b>									
Showroom and Office	4,000	100	3.00	12	12,000				
	4,000	100	3.00	6		6,000			
	4,000	50	3.25	6			3,250		
	4,000	50	3.25	6				3,250	
	4,000	50	3.50	3					1,750
A Level - Storage	400	100	7.00	6				1,400	
	400	100	7.50	9					2,250
<b>Total - Lower Level</b>					<b>\$14,100</b>	<b>\$ 8,100</b>	<b>\$ 5,520</b>	<b>\$ 5,790</b>	<b>\$ 5,140</b>
<b>First Floor</b>									
112 East Main	454	100	5.20	8		\$ 1,570			
	454	100	5.20	12			\$ 2,360		
	454	100	5.20	4				\$ 780	
114 East Main	1,000	100	5.20	8		3,480			
	1,000	50	5.20	12			2,600		
	1,000	50	5.20	4				860	
Leaf & Ladle	3,500	100	9.00	7	18,370				
	3,500	100	9.50	3		8,310			
	3,500	100	10.50	3				9,190	
	3,500	100	11.30	3					\$ 9,890
North Entry	2,000	100	9.00	9	13,500				
<b>Total - First Floor</b>					<b>\$31,870</b>	<b>\$13,360</b>	<b>\$ 4,960</b>	<b>\$10,830</b>	<b>\$ 9,890</b>

Schedule of Vacancies by Floor and by Lease Terms for  
the Period of April 30, 1980 Through April 29, 1985

	Space Sq. Ft. <sup>2</sup>	% Vacant	Annual Rental Rate Per Sq. Ft.	# of Months Vacant	Projection Period				
					4/30/80- 4/29/81	4/30/81- 4/29/82	4/30/82- 4/29/83	4/30/83- 4/29/84	4/30/84- 4/29/85
<u>Second Floor</u> <sup>3</sup>									
201	150	100	6.50	12	\$ 900				
	150	100	6.50	12		\$ 900			
	150	100	7.00	12			\$ 1,050		
	150	100	7.00	12				\$ 1,050	
	150	100	7.60	12					\$ 1,140
202	600	100	6.70	6	2,010				
	600	50	7.20	12		2,160			
	600	50	7.20	12			2,160		
	600	50	7.80	6				1,170	
	600	50	7.80	3					580
203-4	543	100	6.20	12	3,370				
	543	50	6.70	12		1,820			
	543	50	6.70	12			1,820		
	543	50	6.70	9				1,360	
205-6	506	100	7.00	6	1,770				
	506	50	7.50	12		1,900			
	506	50	7.50	12			1,900		
	506	50	8.15	9				1,550	
	506	50	8.15	6					1,030
209-10	451	100	6.25	6	1,410				
	451	50	6.75	12		1,520			
	451	50	6.75	12			1,520		
	451	50	7.30	9				1,230	
215	415	100	6.75	12	2,800				
	415	100	7.30	6		1,510			
	415	100	7.30	3			760		
218-19	816	100	8.00	8				4,370	
	816	100	8.20	12					6,690
220-21	1,400	100	6.25	6	4,370				
	1,400	50	6.75	12		4,720			
	1,400	50	6.75	6			2,360		
	1,400	50	7.30	6				2,560	
Total - Second Floor					\$16,630	\$14,530	\$11,570	\$13,290	\$ 9,440

EXHIBIT 10 (Continued)

Schedule of Vacancies by Floor and by Lease Terms for  
the Period of April 30, 1980 Through April 29, 1985

	Space Sq. Ft. <sup>2</sup>	% Vacant	Annual Rental Rate Per Sq. Ft.	# of Months Vacant	Projection Period				
					4/30/80- 4/29/81	4/30/81- 4/29/82	4/30/82- 4/29/83	4/30/83- 4/29/84	4/30/84- 4/29/85
<u>Third Floor</u> <sup>3</sup>									
301	150	100	5.75	12	\$ 860				
	150	100	5.75	12		\$ 860			
	150	100	6.20	12			\$ 930		
	150	100	6.20	12				\$ 930	
	150	100	6.70	12					\$ 1,000
302-3	1,179	100	5.75	6	3,390				
	1,179	50	6.20	12		3,650			
	1,179	50	6.20	12			3,650		
	1,179	50	6.70	6				3,950	
304	230	100	6.70	6	770				
	230	100	7.20	12		1,660			
	230	100	7.80	6					900
305-8	942	100	6.70	6	3,150				
	942	50	7.20	12		3,390			
	942	50	7.20	12			3,390		
	942	50	7.80	3					1,830
310-11	456	100	6.70	6	1,530				
	456	50	7.20	12		1,640			
	456	50	7.20	12			1,640		
312	234	100	5.75	12	1,340				
	234	100	6.20	12		1,450			
	234	100	6.20	12			1,450		
	234	100	6.70	12				1,570	
	234	100	6.70	12					1,570
315	731	100	6.70	4	1,610				
320-24	1,363	100	7.00	12	9,540				
	1,363	100	7.60	6		5,150			
<b>Total - Third Floor</b>					<u>\$22,190</u>	<u>\$17,800</u>	<u>\$11,060</u>	<u>\$ 6,450</u>	<u>\$ 5,300</u>

EXHIBIT 10 (Continued)

Schedule of Vacancies by Floor and by Lease Terms for  
the Period of April 30, 1980 Through April 29, 1985

	Space Sq. Ft. <sup>2</sup>	% Vacant	Annual Rental Rate Per Sq. Ft.	# of Months Vacant	Projection Period					
					4/30/80- 4/29/81	4/30/81- 4/29/82	4/30/82- 4/29/83	4/30/83- 4/29/84	4/30/84- 4/29/85	
<u>Fourth Floor</u>										
401	150	100	6.40	12	\$ 960					
	150	100	6.40	12		\$ 960				
	150	100	6.90	12			\$ 1,040			
	150	100	6.90	12				\$ 1,040		
	150	100	7.45	12					\$ 1,120	
412	202	100	6.40	12	1,290					
	202	100	6.40	12		1,290				
	202	100	6.90	12			1,400			
	202	100	6.90	12				1,400		
	202	100	7.40	12					1,500	
416-19	1,370	100	6.00	6	4,110					
	1,370	50	6.50	12		4,450				
	1,370	50	6.50	12			4,450			
	1,370	50	7.00	12				4,800		
	1,370	50	7.00	6					2,400	
420-20a	560	100	6.70	6	1,880					
	560	50	6.70	12		1,870				
	560	50	7.20	9			1,520			
<b>Total - Fourth Floor</b>					<b>\$ 8,240</b>	<b>\$ 8,570</b>	<b>\$ 8,410</b>	<b>\$ 7,240</b>	<b>\$ 5,020</b>	
<u>Fifth Floor</u>										
502	842	100	7.50	12	\$ 6,310					
	842	50	8.00	12		\$ 3,410				
	842	50	8.00	12			\$ 3,410			
	842	50	8.75	6				\$ 3,410		
520	555	100	7.70	6			2,130			
	555	50	7.80	12				2,160		
	555	50	8.90	9					\$ 1,850	
<b>Total - Fifth Floor</b>					<b>\$ 6,310</b>	<b>\$ 3,410</b>	<b>\$ 5,540</b>	<b>\$ 5,570</b>	<b>\$ 1,850</b>	

EXHIBIT 10 (Continued)

Schedule of Vacancies by Floor and by Lease Terms for  
the Period of April 30, 1980 Through April 29, 1985

	Space Sq. Ft. <sup>2</sup>	% Vacant	Annual Rental Rate Per Sq. Ft.	# of Months Vacant	Projection Period				
					4/30/80- 4/29/81	4/30/81- 4/29/82	4/30/82- 4/29/83	4/30/83- 4/29/84	4/30/84- 4/29/85
<u>Sixth Floor</u>									
601	150	100	6.70	12	\$ 1,000				
	150	100	6.70	12		\$ 1,000			
	150	100	7.20	9			\$ 810		
602-4	1,473	100	6.00	6	4,420				
	1,473	50	6.50	12		4,770			
	1,473	50	6.50	12			4,770		
	1,473	50	7.00	9				\$ 3,870	
	1,473	50	7.00	6					\$ 2,580
605	204	100	6.40	12	1,300				
	204	100	6.40	12		1,300			
	204	100	6.90	12			1,410		
	204	100	6.90	9				1,060	
617	250	100	7.75	4	640				
620-24	1,262	100	6.70	12	8,450				
	1,262	100	7.20	6		4,540			
	1,262	100	7.20	6			4,540		
	1,262	50	7.80	9				3,690	
<b>Total - Sixth Floor</b>					\$15,810	\$11,610	\$11,530	\$ 8,620	\$ 2,580
<u>Seventh Floor</u>									
No Vacancies Projected									
<u>Eighth Floor</u>									
801	150	100	7.00	10	\$ 880				
	150	100	7.00	12		\$ 1,050			
	150	100	7.50	6			\$ 560		
<b>Total - Eighth Floor</b>					\$ 880	\$ 1,050	\$ 560	0	0

EXHIBIT 10 (Continued)

Schedule of Vacancies by Floor and by Lease Terms for  
the Period of April 30, 1980 Through April 29, 1985

	Space Sq. Ft. <sup>2</sup>	% Vacant	Annual Rental Rate Per Sq. Ft.	/ of Months Vacant	Projection Period				
					4/30/80- 4/29/81	4/30/81- 4/29/82	4/30/82- 4/29/83	4/30/83- 4/29/84	4/30/84- 4/29/85
<u>Ninth Floor</u>									
909-10	700	100	6.50	6		\$ 2,280			
	700	100	7.00	6			\$ 2,440		
922-23	355	100	7.00	12			2,500		
	355	100	7.60	6				\$ 1,350	
<b>Total - Ninth Floor</b>					0	\$ 2,280	\$ 4,940	\$ 1,350	0
<u>Tenth Floor</u>									
1009-10	455	100	6.50	12	\$ 2,950				
	455	100	7.00	12		\$ 3,190			
	455	100	7.00	9			\$ 2,390		
1014	229	100	6.25	12	1,430				
	229	100	6.25	12		1,430			
	229	100	6.70	6				770	
1019-20	680	100	6.70	1	380				
<b>Total - Tenth Floor</b>					\$ 4,760	\$ 4,620	\$ 2,390	\$ 770	0
<b>TENNEY BUILDING TOTALS<sup>4</sup></b>					<u>\$ 120,790</u>	<u>\$ 85,330</u>	<u>\$ 66,480</u>	<u>\$ 59,910</u>	<u>\$ 39,220</u>

EXHIBIT 10 (Continued):

Notes to Schedule of Vacancies by Floor and by Lease Terms  
For the Period of April 30, 1980 Through April 29, 1985

- <sup>1</sup>The lower level space has a continued record of vacancy; it is assumed that until the space is made more marketable by remodeling, rents will not keep pace with the market. Uses other than a showroom for the 4000 sq. ft. will need to be explored; subdividing the larger space for office space and/or storage space are possibilities.
- <sup>2</sup>It is assumed that the smaller office spaces from 200-500 square feet will experience less overall vacancy than the larger spaces. There appears to be a trend toward several small independent businessmen sharing a common secretarial staff; some of the larger vacant suites could be remodeled for this type of use.
- <sup>3</sup>The second and third floors have the greatest amount of vacancy due to the exodus of State tenants. By the end of June, 1980, the State's move alone will cause 44% of the second floor vacancies; the third floor will experience a vacancy rate of 39.5% due to loss of State tenants; the State related vacancy rates on the fourth and sixth floors will be 29% and 21% respectively. A most probable buyer will have to anticipate a large capital investment in 1980 to remodel and refurbish the Building to make it competitive in the Class B office market that already has a large supply of space available on and near the Square.
- <sup>4</sup>Vacancies are assumed to gradually decrease between 1981 and 1983; a most probable buyer will institute a vigorous marketing program which will involve research of space needs in the area and remodeling which will be targeted to those needs.

Schedule of Projected Revenues and Expenses From  
April 30, 1980 Through April 29, 1985

	4/30/80- 4/29/81	4/30/81- 4/29/82	4/30/82- 4/29/83	4/30/83- 4/29/84	4/30/84- 4/29/85
<b>Revenues:</b>					
Gross Income	\$493,960	\$522,120	\$537,260	\$565,460	\$586,210
Less: Vacancies	(120,790) (24.5%)	(85,330) (16.3%)	(66,480) (12.4%)	(59,910) (10.6%)	(39,220) (6.7%)
Effective Gross	<u>373,170</u>	<u>436,790</u>	<u>470,780</u>	<u>505,550</u>	<u>546,990</u>
Parking Rentals	<u>12,960</u>	<u>12,960</u>	<u>12,960</u>	<u>14,000</u>	<u>14,000</u>
<b>Total Revenues</b>	<b>\$386,130</b>	<b>\$449,750</b>	<b>\$483,740</b>	<b>\$519,550</b>	<b>\$560,990</b>
<b>Expenses:</b>					
Accounting & Legal	4,200	4,640	5,120	5,650	6,240
Building Security <sup>2</sup>	21,840	24,100	26,620	29,390	32,440
Insurance	7,000	7,730	8,530	9,420	10,400
Maintenance <sup>3</sup>	28,850	31,850	35,160	38,820	42,860
Wage & Salaries	60,000	66,240	73,130	80,730	89,130
Payroll Taxes	11,500	12,700	14,020	15,470	17,080
Repairs	14,880	16,430	18,130	20,020	22,100
Telephone <sup>4</sup>	1,600	1,770	1,950	2,150	2,380
Utilities	90,600	101,470	107,560	114,380	122,020
Office Expenses <sup>5</sup>	7,040	7,520	8,250	8,840	9,690
Management <sup>6</sup>	22,390	26,320	27,540	30,280	32,570
Concourse Special Assessment	<u>2,360</u>	<u>2,410</u>	<u>2,630</u>	<u>2,550</u>	<u>2,480</u>
<b>Total Operating Expenses Before R.E. Taxes<sup>7</sup></b>	<b><u>(\$272,260)</u></b>	<b><u>(\$303,180)</u></b>	<b><u>(\$328,640)</u></b>	<b><u>(\$357,700)</u></b>	<b><u>(\$389,390)</u></b>
<b>Net Operating Income Before R.E. Taxes</b>	<b>\$113,870</b>	<b>\$146,570</b>	<b>\$155,100</b>	<b>\$161,850</b>	<b>\$171,600</b>
<b>Real Estate Taxes<sup>8</sup></b>	<b><u>(26,680)</u></b>	<b><u>(28,000)</u></b>	<b><u>(29,400)</u></b>	<b><u>(30,880)</u></b>	<b><u>(32,420)</u></b>
<b>Net Operating Income</b>	<b>\$ 87,190</b>	<b>\$118,570</b>	<b>\$125,700</b>	<b>\$130,970</b>	<b>\$139,180</b>

EXHIBIT 10 (Continued)



Notes to Schedule of Projected Revenues and Expenses  
From April 30, 1980 Through April 29, 1985

<sup>1</sup>Expenses

In general, expenses are projected to increase according to the average annual change of 10.4% in the All Item Consumer Price Index over the past five years. (See amended Exhibit 27).

<sup>2</sup>Building Security

Security personnel is hired from 10 P.M. to 6 A.M. on weekdays with 24 hour coverage on the weekends. The building is open to the public from 6 A.M. to 6 P.M. each weekday. The continuing problems created by the presence of bars and adult entertainment places across the street make this security protection mandatory.

<sup>3</sup>Maintenance

This account includes an elevator maintenance contract at \$9,060 a year.

<sup>4</sup>Utilities

At present the Tenney Building consumes approximately 55,000 to 70,000 gallons of No. 2 fuel oil per year depending upon the weather. The cost of fuel has increased as follows:

January 12, 1979	.43/gallon
October 1, 1979	.77/gallon
February 1, 1980	.95/gallon

In thirteen months the cost has risen 121%. Though the Tenney Building is converting to natural gas on its primary boiler, the cost of natural gas is also volatile. Over the past five years natural gas has had an average annual increase of 17.6% for the commercial time-of-use consumer, according to Milton Spiros, Madison Gas & Electric Co.

The installation of combination storm windows throughout the building should help to conserve fuel costs. To stabilize utility costs it is assumed management will place energy cost escalators in renewed leases; therefore in the pro forma income statement utility costs are escalated at 12 percent annually with 50 percent of the increase passed through to the tenant after year 2.

<sup>5</sup>Office expenses include rental of space in the Tenney Building for management operations.

<sup>6</sup>Management costs are computed as 6% of effective gross office revenue with 4% allowed for management and 2% for leasing commissions for space turnover.

Notes to Schedule of Projected Revenues and Expenses  
From April 30, 1980 Through April 29, 1985

<sup>7</sup>Total operating expenses are calculated before including real estate taxes for ease in using the MRCAP discounted cash flow program.

<sup>8</sup>Real estate taxes are calculated as 5.4% of gross revenues in the first year and increased at 5% per annum thereafter. These calculations are based on the following fact and assumptions:

1. The assessed value as of 1/1/80 is \$1,200,000.
2. The mill rate is assumed to increase slightly (approximately 1%) after several years of decrease.
3. Taxes will continue to increase due to inflated city budgets and decreasing state aids.

## EXHIBIT 10 (Continued)

## 4. Conversion of Net Income to Present Value

The MRCAP program from the National EDUCARE library of programs, previously described, is used to convert net income to a present value after taxes as of April 30, 1980, for the Tenney Building at the end of a five-year holding period.

C. Assumptions Used in MRCAP

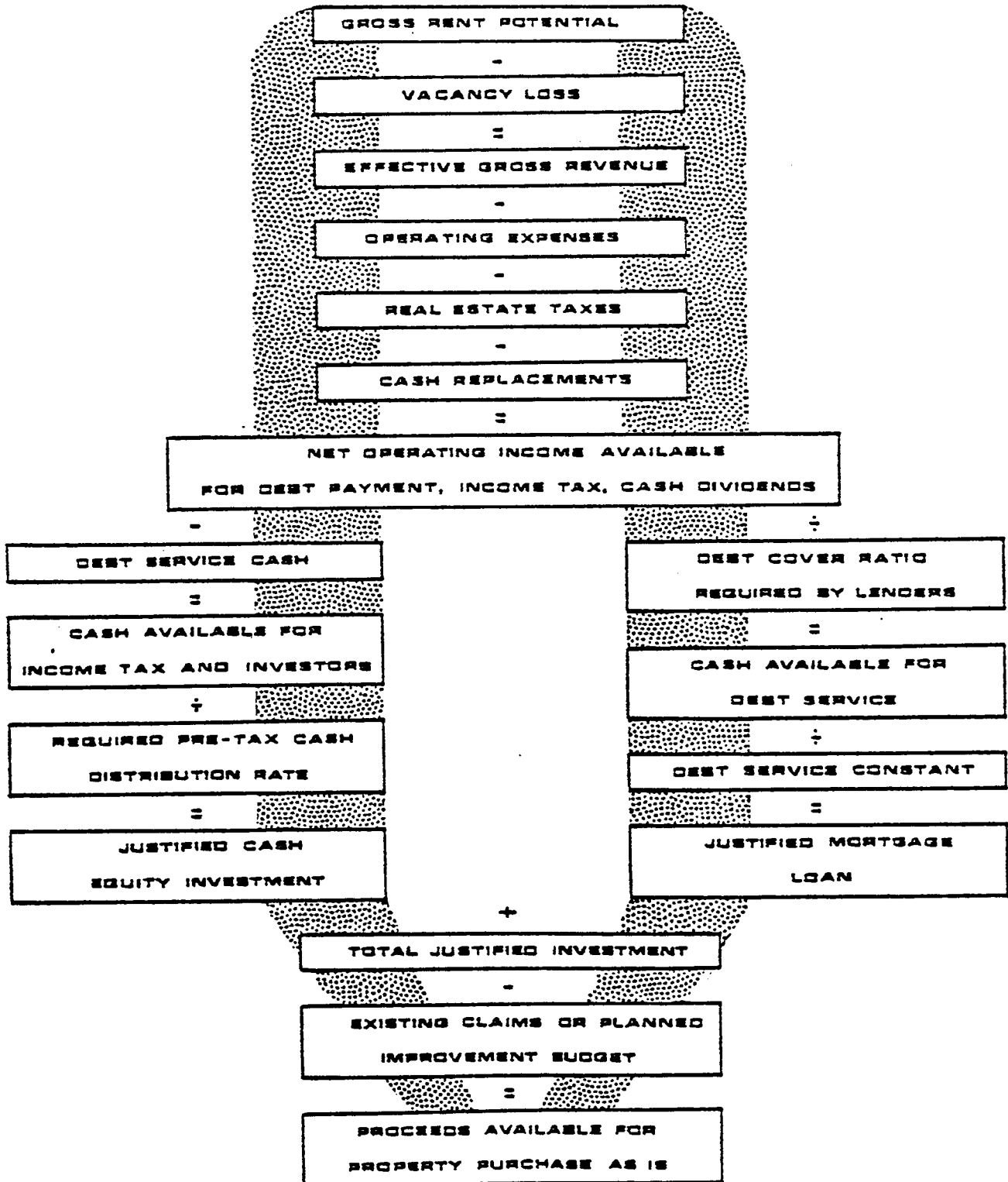
The MRCAP discounted cash flow program can solve for a justified project value by specifying the ratio of net income to debt service acceptable to an institutional mortgage lender. Given the interest rate and term available as of April 30, 1980, the program will solve for the justified amount of mortgage and for justified cash equity, assuming typical before-tax cash-on-cash investor requirements for office buildings, with potential for inflation sensitive rents. Exhibit 28 is a simplified flow chart depicting the steps in solving for the justified project budget.

On April 30, 1980, prudent lenders will require a minimum debt cover ratio of 1.3 and equity investors expect no less than 6 percent cash-on-cash.

## 1. Inputs into MRCAP Program

- a. Debt cover ratio = 1.3
- b. Before tax cash-on-cash requirements = 6%
- c. Project holding period = 5 years

# REVENUE JUSTIFIED CAPITAL BUDGET DEBT COVER RATIO APPROACH



- d. Real estate taxes = historical pattern suggests real estate taxes at 5.4 percent of first year's gross with an annual inflation factor of 5 $\frac{1}{2}$  (see assumptions discussed below)
- e. Discount rate = 13% (present value factor used to discount cash flow)
- f. Reinvestment rate = 6% after tax rate applied to after tax cash flow
- g. Resale price = 10 times net operating income in year of sale
- h. Resale cost rate = 4%
- i. Working capital reserves from equity to cover one month's expenses = \$30,000
- j. Investor marginal income tax rate = 50%
- k. Land = \$340,000, as of most recent appraisal for IRS
- l. Buildings = 60% of total improvement value
- m. Mechanicals and site improvements = 40% of total improvement value
- n. Elevators = remaining book value of \$73,000
- o. Improvements for Energy Conservation = a total of \$54,000 which includes \$43,000 for storm windows and \$11,000 for natural gas conversion unit.
- p. Tenant Improvements = \$50,000 for carpeting and partitions as needed to upgrade vacant office space
- q. Investment Credit Dummy = to allow for tax benefit of investment credit in first year for capital improvement for energy conservation
- r. Mortgage = principal amount determined by debt cover ratio; interest rate a minimum of 12% with a 20-year term, paid monthly, on the first mortgage and 13% interest and an 8-year term for the second mortgage

## EXHIBIT 11 (Continued)

## 2. Real Estate Tax Assumptions

Real estate taxes are a function of assessed value (or fair market value when assessed value is 100 percent of market value) and the net mill rate; therefore, real estate taxes are estimated as a function of gross rental income. During the past two years, real estate taxes have been between 5 percent and 6 percent of the Building's potential gross rental income. As a result of tests of several values between 5 percent and 6 percent, it is determined that 5.4 percent of gross rental revenues best represents the historical pattern of the Building's real estate taxes. MRCAP is programmed to use 5.4 percent of the first year's gross rental income to compute the first year's real estate taxes and then provides for a growth factor of 5 percent to increase the taxes each year thereafter.

D. Analysis of Test Results

Four runs of the MRCAP program were done using different assumptions about the amount of real estate taxes that would be paid on the subject property. Taxes and net mill rates for the past three years on the subject property have been:

<u>Year</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
<u>Real Estate Taxes</u>	\$33,118.75	\$29,951.95	\$25,340.93
<u>Net Mill Rate</u>	.026495	.024153	.022036

Real estate taxes estimated at various percentages of the first year's projected gross and inflated 5 percent a year gave these results in the MRCAP runs:

<u>Percentage of First Year's Gross Rental Revenue</u>	<u>Real Estate Taxes</u>				
	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
5.0	\$24,698	\$25,933	\$27,230	\$28,591	\$30,021
5.4	\$26,674	\$28,008	\$29,408	\$30,878	\$32,422
5.8	\$28,650	\$30,082	\$31,586	\$33,166	\$34,824
6.0	\$29,638	\$31,119	\$32,675	\$34,309	\$36,025

The real estate taxes estimated at 5.4 percent of the first year's gross rent best approximates the shift from a decreasing to an increasing net mill rate that can now be expected due to an anticipated decrease in state aids to cities. Rising costs of local government can be expected to be borne by the local taxpayer.

The input and output for the MRCAP program using real estate taxes estimated at 5.4 percent of gross rental revenue are found in Exhibit 29.

If taxes are a conservative 5.4 percent of gross rental revenue, MRCAP substantiates the fair market value of \$1,150,000 estimated by the market comparison approach to value.

EXHIBIT 12

MRCAP INPUT AND OUTPUT--  
 JUSTIFIED CAPITAL BUDGET WITH  
 REAL ESTATE TAXES AT 5.4% OF  
 FIRST YEAR'S GROSS RENT

MRCAP 09:49CST 12/20/80

ENTER INPUT FILE NAME?TENNEY

THE PROGRAM MRCAP IS THE PROPERTY OF  
 MICHAEL L. ROBBINS  
 C/O REAL ESTATE DYNAMICS INC.  
 4701 WINNEQUAH RD.  
 MONONA, WISC.

USER NO. 66

(608)-221-1120

NO REPRESENTATION IS MADE THAT THE ASSUMPTIONS OR  
 COMPUTATIONAL FORMAT USED IN THIS PROJECTION WILL  
 BE ACCEPTABLE TO TAXING AUTHORITIES.

\*\$10.00 LIB CHG APPLIED

R E P O R T    S E C T I O N    N U M B E R    1                      P A G E    1  
 =====

* GROSS RENT	\$ 554378.	* RATE OF GROWTH OF GROSS RENT	0.0432
* EXPENSES	\$ 330234.	* RATE OF GROWTH OF EXPENSES	0.0936
* R E TAXES	\$ 29478.	* RATE OF GROWTH OF R E TAXES	0.0500
INCOME TAX RATE	0.5000	PROJECT VALUE GROWTH OF	2.0000
* VACANCY RATE	0.1375	WORKING CAPITAL LOAN RATE	0.1400
EQUITY DISCOUNT	0.1300	EXTRAORDINARY EXPENSES	\$ 0.
RESALE COST	0.0400	REINVESTMENT RATE	0.0600
WKG CAPITAL RS	\$ 30000.	CAPITAL RESER INTEREST RATE	0.
INITIAL COST	\$ 1091502.	INITIAL EQUITY REQUIRED	\$ 486009.

ALL \*% VALUES ARE AVERAGE AMOUNTS FOR HOLDING PERIOD. OF 5 YRS.

INITIAL COST DERIVED THROUGH BACKDOOR TYPE 3 USING 2 MORTGAGES



P R O F O R M A  
 I N V E S T M E N T A N A L Y S I S O F  
 B U I L D I N G  
 F O R

R E P O R T    S E C T I O N    N U M B E R    2  
 =====

PAGE 1

C O M P O N E N T    S U M M A R Y

TITLE	PCT. DEPR	BEGIN USE	USEFUL LIFE	DEPR METHOD		COST	SCH
LAND	0.	1	25.	0	\$	340000.	0
BUILDING	0.80	1	29.	2	\$	338221.	0
HVAC	0.90	1	9.	2	\$	225481.	0
ELEVATORS	0.90	1	4.	2	\$	73000.	0
ENERGY CONSERVATION	0.90	1	5.	2	\$	54000.	0
TENANT IMPROVEMENTS	0.90	1	10.	4	\$	50000.	0
INVESTMENT CREDIT GU	1.00	1	1.	2	\$	10800.	0

M O R T G A G E    S U M M A R Y

TITLE	INTR RATE	BEGIN YR.	END YR.	TERM		ORIG BALC	PCT VALUE
FIRST MORTGAGE	0.1200	1	20	20	\$	531493.	0.487
SECOND MORTGAGE	0.1300	1	3	3	\$	104000.	0.095

P R O F O R M A  
 INVESTMENT ANALYSIS OF  
 BUILDING  
 FOR

REPORT SECTION NUMBER 5

PAGE 1

CASH FLOW ANALYSIS

	1980	1981	1982	1983	1984
1 GROSS INCOME	506920.	535080.	550220.	579460.	600210.
2 LESS VACANCY	120790.	85350.	63480.	59910.	59820.
3 LESS REAL ESTATE TAXES	26674.	28008.	29408.	30678.	32422.
4 LESS EXPENSES	272260.	303180.	328640.	357700.	389390.
5 NET INCOME	87196.	118562.	125692.	130972.	139178.
6 LESS DEPRECIATION	76323.	64398.	63442.	62629.	45513.
7 LESS INTEREST	76472.	74515.	72298.	69785.	66938.
8 TAXABLE INCOME	-65599.	-20351.	-10048.	-1443.	26726.
9 PLUS DEPRECIATION	76323.	64398.	63442.	62629.	45513.
10 LESS PRINCIPAL PAYMENTS	14730.	16687.	18904.	21417.	24263.
11 CASH THROW-OFF	-4006.	27361.	34490.	39770.	47976.
12 LESS TAXES	0.	0.	0.	0.	13363.
13 LESS RESERVES	0.	0.	0.	0.	0.
14 CASH FROM OPERATIONS	0.	27361.	34490.	39770.	34613.
15 WORKING CAPITAL LOAN	0.	0.	0.	0.	0.
16 DISTRIBUTABLE CASH AFR TAX	0.	27361.	34490.	39770.	34613.
17 TAX SAVING ON OTHER INCOME	32799.	10175.	5024.	721.	0.
18 SPENDABLE CASH AFTER TAX	32799.	37536.	39514.	40491.	34613.

## EXHIBIT 12 (Continued)

## MARKET VALUE &amp; REVERSION

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## CASH FLOW ANALYSIS

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	1980	1981	1982	1983	1984
19 END OF YEAR MARKET VALUE	871962.	1185625.	1256921.	1309717.	1391778.
20 LESS RESALE COST	34878.	47425.	50277.	52389.	55671.
21 LESS LOAN BALANCES	620764.	604077.	585173.	563756.	539493.
22 PLUS CUM. CASH RESERVES	25994.	25994.	25994.	25994.	25994.
23 BEFORE TAX NET WORTH	242314.	560117.	647466.	719566.	822608.
24 CAPITAL GAIN (IF SOLD)	-161096.	182544.	313511.	426719.	551596.
25 CAPITAL GAINS TAX	-36219.	36509.	62702.	85344.	110319.
26 MINIMUM PREF. TAX	0.	0.	0.	0.	0.
27 INCOME TAX ON EXCESS DEP.	1500.	2438.	2897.	2950.	2657.
28 TOTAL TAX ON SALE	-16610.	38946.	65599.	88294.	112977.
29 AFTER TAX NET WORTH	258924.	521171.	581867.	631273.	709632.

## BEFORE TAX RATIO ANALYSIS

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## CASH FLOW ANALYSIS

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	1980	1981	1982	1983	1984
30 RETURN ON NET WORTH B/4 TAX	-0.5014	1.4245	0.2175	0.1728	0.2099
31 CHANGE IN NET WORTH B/4 TAX	-243696.	317803.	87349.	72100.	103042.
32 ORIG EQUITY CASH RTNB/4 TAX	-0.0082	0.0563	0.0710	0.0818	0.0987
33 ORIG EQUITY PAYBACK B/4 TAX	0.0000	0.0563	0.1273	0.2091	0.2903
34 B/4 TAX PRESENT VALUE	846386.	1092030.	1126006.	1142995.	1174189.

## AFTER TAX RATIO ANALYSIS

=====

## CASH FLOW ANALYSIS

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	1980	1981	1982	1983	1984
35 RETURN ON NET WORTH AFR TAX	-0.3998	1.1578	0.1923	0.1545	0.1796
36 CHANGE IN NET WORTH AFR TAX	-227086.	262248.	60696.	49406.	78359.
37 ORIG EQUITY CASH RTNAFR TAX	0.0675	0.0772	0.0813	0.0833	0.0712
38 ORIG EQUITY PAYBACK AFR TAX	0.0675	0.1447	0.2260	0.3093	0.3806
39 AFTER TAX PRESENT VALUE	893655.	1102039.	1124561.	1133307.	<u>1150082.</u>

## CASH FLOW ANALYSIS

=====

	1980	1981	1982	1983	1984
40 NET INCOME-MARKET VALUE RTD	0.1000	0.1000	0.1000	0.1000	0.1000
41 LENDER BONUS INTEREST RATE	0.0000	0.0000	0.0000	0.0000	0.0000
42 DEFAULT RATIO	0.7696	0.7394	0.3165	0.3260	0.3517

## INPUT FILE

09:48CST 12/20/80

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 300 201.3..40..90.2  
 310 202.3,1,9.0  
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 380 200.6,TENANT IMPROVEMENTS  
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 400 202.6,1,10.0  
 410 200.7,INVESTMENT CREDIT DUMMY  
 420 201.7,10800.1.0.2  
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 480 300.2,SECOND MORTGAGE  
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 500 302.2,12,1.8.0  
 510 303.2.0.0.0,0  
 520 400.9  
 530 403.99.1,2,3,4,5  
 540 999.99

- D. Our firm makes heavy use of the backdoor approach on MRCAP for valuation. (See Exhibit 6.)

- VII. Because the client of the appraiser faces unique liabilities in the United States as a pension fund trustee (Employees Retirement Securities Act) or as a party to a partial sale of a real estate interest under the Securities Act of 1983, appraisal assignments are becoming the subject of highly detailed contract negotiations. These contracts specify appraisal content and method.
  - A. Example of contract with specified format for information contained (PMI Exhibit 13).
  - B. Example of contract controlling methods and assumptions (FARA Exhibit 14).
  - C. Appraisal reform is occurring because customers contract for it rather than because of leadership from the professional society.
  - D. After-tax cash flow models predominate for pension fund work where each lease is detailed (see Exhibit 15).
  - E. For example of application of income approach to best use decision, see example in Exhibit 16 for reuse of vacant tower structure.
  - F. Tower structure appraisal provided in Exhibit 17.
  - G. Creative financing of investment syndications or mortgage loan defaults leads to extensive discounting of nominal price to arrive at cash equivalent price presumed at fair market value.
    - 1. See Exhibit 18 for cash price of seller finance sale.
    - 2. See Exhibits 19 and 20 for examples of bank resale of distressed property.



**First Asset  
Realty  
Advisors**

First Bank Place  
Minneapolis, MN 55480

APPRAISAL ENGAGEMENT LETTER

TO:

RE: Property Identification

Dear \_\_\_\_\_:

On behalf of First Asset Realty Advisors (FARA), we would like to engage your services for the appraisal of the above property to determine the fair market value of the legal interests owned by a Commingled Fund as of (date of appraisal). To that end and before accepting the assignment, the appraiser should consider the following requirements as to definition and procedure:

1. Fair market value shall be defined as the most probable price at which the property would sell to a knowledgeable buyer on a given date if placed on the market for a reasonable length of time by a well informed seller assuming:
  - a. Cash to the seller or cash plus debt owed or assumed by the buyer, where appropriate.
  - b. Fee title will be encumbered by leases in place and possible other covenants. Appraiser must indicate remaining market value of these other leasehold or non-possessory interests.
  - c. The appropriate exposure on the market has occurred prior to the date of sale.
  
2. Fee title may be encumbered by leases, mortgages, as well as possible conditional use permits and private covenants. FARA is obligated to provide access to all of the appropriate documents at the office of \_\_\_\_\_ located at \_\_\_\_\_ during normal business hours. The appraiser is expected to read the leases, mortgage instruments and other encumbrances and relate to them appropriately. If existing debt is assumable by another buyer, then the appraiser can value the sale as cash to the seller with the buyer accepting the mortgage(s) already in place if that would be consistent with the most probable buyer's self interest. Otherwise the trustees of the Commingled Fund management (FARA) are interested in a value which is the most probable cash price to the seller and with the buyer accepting the existing encumbrances in terms of leases and covenants, etc.

## EXHIBIT 14 (Continued)

-2-

3. When using the market comparison approach, the appraiser must document each comparable sale as to grantor, grantee, public record, plot plan and photograph as well as basic details of construction and existing encumbrances, terms of sale, and seller motivation. Buyer motivation is profiled as an assumption by the appraiser. All calculations necessary to adjust engineered prices to cash equivalencies must be documented and explained as well as any and all adjustments to relate the comparable price to the subject property must be itemized and explained so that the reader can repeat the mathematical adjustments.
4. The income approach must use discounted cash flow from a ten-year forecast (and your own forecast, if different) in which all the property's existing leases are detailed individually. The rationale for roll-over vacancies, absorptions, and expense projections must be itemized with a series of footnotes in the manner of a fully detailed accounting income and balance sheet statement. Income projections should account for current market lease rates with explanations of all assumptions used. Normalized income methods including investment bond, Ellwood or net income multipliers are not acceptable.
5. The appraiser must document his opinion as to the appropriate discount rate applied to each segment of the cash throw-off and after tax cash flow as appropriate, together with financing terms assumed.
6. A cost approach based upon a responsible service or professional should be supplied with the initial appraisal. If it is not used in the final valuation, then a discussion on why it is not used is required. The appraiser is expected to carefully inspect the property and report his own independent views on the quality of maintenance, deferred maintenance, and tenant housekeeping.
7. The appraiser is regarded as the eyes and property inspector of FARA. To put the property in context, the appraiser must supply a separate market analysis section to include current market conditions, an evaluation of projects which are competitive alternatives in the market area of the appraiser, an indication of rent structures, vacancy and absorption rates, and in the case of a new building, some indication as to rentup success and source of tenants. Wherever possible, the appraiser is to indicate the ownership and character of investment position in competitive properties and the property management or leasing term involved with each. The appraiser should include in his market analysis section an evaluation of the future projected market conditions over the ten-year holding period.

Following the initial appraisal at the time of acquisition, the appraiser will be asked to submit a letter of review 180 days after the date of the original appraisal indicating if he would modify any of his critical

-3-

assumptions at that time and, if so, indicating how this might affect his original value estimate as a specific dollar adjustment, up or down.

At the end of 360 days, the appraiser would be expected to perform a thorough review of his original appraisal, specifically focusing on the market approach (item 3), adjustments indicated for the income approach (items 4 and 5), and additions and amendments to market data (item 7). Aside from the specific instructions provided in paragraphs 1-7 above, it is anticipated that all work will be done according to the standards of the American Institute of Real Estate Appraisers, and it is further understood that the client for whom the appraisal is done for purposes of professional accountability is both First Asset Realty Advisors, Inc., and its operations agent, The Center Companies of Minneapolis, Minnesota. Purpose of the appraisal is to meet the asset valuation requirements of an open-ended, commingled real estate fund suitable for investment by pension fund programs subject to ERISA.

Please return both copies of this letter together with an indication of your fee for the appraisal services above by           (date)           with a separate quote for the initial appraisal, the 180 day review, and a 360 day reappraisal and an estimate of the date the appraisal will be completed. If this is your first assignment for FARA, please include a sample of your work, preferably of a similar property, in which you have provided for the necessary cash flow projections.

Yours very truly,



Rent Roll and Lease Summaries  
June 30, 1982

Space No.	Tenant	No. of Twin City Stores	Tenant Rating	G.L.A. Sq. Ft.	Lease Term From	To	Year	Base Rental	Base Rental/Sq. Ft.	% Rent Formula	/Sq. Ft.	
14.	Total Sports	3	National	10,000	11/1/78	1/11/94	15 yrs. Yr. 1-3 3 mos. Yr. 4-7 Yr. 8-10 Yr. 11-15	\$50,000 \$60,000 \$70,000 \$80,000	\$5.00 \$6.00 \$7.00 \$8.00	4% over \$1,250,000 (\$125) 4% over \$1,500,000 (\$150) 4% over \$1,750,000 (\$175) 4% over \$3,000,000 (\$200)		
17.	Oriental Arts, Inc.	1	Local	1,066	2/1/81	1/31/83	2 yrs. Yr. 1 Yr. 2	\$ 8,925 \$ 9,975	\$8.37 \$9.35	6% over \$148,750 (\$140) 1% over \$161,250 (\$151)		
18.	Unassigned	--	--	(1,232)	--	--	--	\$ 9,856	\$8.00	1% over \$166,250 (\$156) 6% over \$164,267 (\$133)		
19.	Unassigned	--	--	( 449)	--	--	--	\$ 7,000	\$15.59	10% over \$70,000 (\$156)		
20.	Unassigned	--	--	( 873)	--	--	--	\$12,000	\$13.75	5% over \$70,000 (\$275)		
21.	Photomill (3)	5	Local	1,536	10/1/78	1/31/89	10 yrs. Yr. 1-3 3 mos. Yr. 4-7 Yr. 8-10	\$ 6,144 \$12,288 \$18,432	\$4.00 \$8.00 \$12.00	6% over \$102,400 (\$671) 6% over \$204,800 (\$133) 6% over \$307,200 (\$200)		
22.	Hurrah	8	National	1,632	2/1/79	1/31/89	10 yrs. --	\$11,424	\$7.00	6% over \$190,400 (\$177)		
23.		24	Reg.	4,966	11/1/78	1/31/94	15 yrs. -- 3 mos.	\$32,279	\$6.50	6% over \$537,983 (\$108)		
24.	Great	5	National	1,037	10/1/78	1/31/84	5 yrs. Yr. 1 3 mos. Yr. 2-5	\$10,000 \$15,000	\$9.64 \$14.46	8% over \$125,000 (\$121) 8% over \$187,500 (\$181)		
25.	The Book Center	1	Reg.	1,201	6/1/79	1/31/87	7 yrs. Yr. 1-2 8 mos. Yr. 3-8	\$ 9,608 \$12,010	\$8.00 \$10.00	6% over \$160,133 (\$100) 6% over \$200,167 (\$167)		
27.	Imports	1	Local	788	12/1/80	1/31/84	3 yrs. -- 2 mos.	\$10,200	\$12.00	6% over \$170,000 (\$261)		
Total				66,142								

(3) Assigned to Photomill as of April 1, 1981

Rental Summary

	G.L.A. - S.F.
Leased Space	56,364 (85.2%)
Unassigned Space	9,778 (14.8%)
Totals	66,142 (100.0%)

Exhibit 15

H A L L

Tenant by Tenant Base Rent Projections  
Including Lease Step-ups (1), and Reletting Activity (2)

Space No.	Tenant	Area Sq. Ft.	1982 6 mos.	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992 6 mos.
1.	Footwear	5,745	\$ 19,964	\$ 39,927	\$ 39,927	\$ 39,927	\$ 39,927	\$ 45,816	\$ 51,705	\$ 51,705	\$ 51,705	\$ 51,705	\$ 25,835
2.	Fabric	10,179	\$ 27,993	\$ 55,985	\$ 55,985	\$ 55,985	\$ 55,985	\$ 55,985	\$ 55,985	\$ 55,985	\$ 55,985	\$ 55,985	\$ 27,993
3.	Unassigned	813	\$ 3,862	\$ 7,724	\$ 7,724	\$ 7,724	\$ 7,724	\$ 7,724	\$ 9,858	\$ 9,858	\$ 9,858	\$ 9,858	\$ 4,929
4.	Cedrica	1,586	\$ 5,155	\$ 10,309	\$ 11,895	\$ 11,895	\$ 11,895	\$ 11,895	\$ 11,895	\$ 18,083	\$ 18,083	\$ 18,083	\$ 9,042
5.	Unassigned	2,100	\$ 7,875	\$ 15,750	\$ 15,750	\$ 15,750	\$ 15,750	\$ 20,101	\$ 20,101	\$ 20,101	\$ 20,101	\$ 20,101	\$ 12,827
6.	Unassigned	4,288	\$ 11,528	\$ 23,056	\$ 23,056	\$ 23,056	\$ 23,056	\$ 30,897	\$ 30,897	\$ 30,897	\$ 30,897	\$ 30,897	\$ 19,717
7.	Northwestern Book	5,495	\$ 13,738	\$ 27,475	\$ 27,475	\$ 27,475	\$ 33,068	\$ 38,660	\$ 38,660	\$ 38,660	\$ 38,660	\$ 38,660	\$ 24,670
8.	Body Shoppe	1,795	\$ 14,360	\$ 14,360	\$ 17,950	\$ 17,950	\$ 17,950	\$ 20,635	\$ 20,635	\$ 20,635	\$ 20,635	\$ 20,635	\$ 13,238
9.	Richards	1,612	\$ 6,045	\$ 12,090	\$ 12,090	\$ 12,090	\$ 15,430	\$ 15,430	\$ 15,430	\$ 15,430	\$ 15,430	\$ 19,693	\$ 9,846
10.	Unassigned	1,255	\$ 4,993	\$ 8,785	\$ 8,785	\$ 8,785	\$ 8,785	\$ 11,772	\$ 11,772	\$ 11,772	\$ 11,772	\$ 11,772	\$ 7,512
11.	House of Large Sizes	1,332	\$ 4,329	\$ 8,658	\$ 9,990	\$ 9,990	\$ 9,990	\$ 9,990	\$ 9,990	\$ 11,322	\$ 11,322	\$ 11,322	\$ 5,661
12.	Video	2,186	\$ 8,744	\$ 17,488	\$ 19,674	\$ 19,674	\$ 19,674	\$ 26,365	\$ 26,365	\$ 26,365	\$ 26,365	\$ 26,365	\$ 16,824
13.	Pizza	2,976	\$ 8,793	\$ 17,586	\$ 17,586	\$ 20,832	\$ 20,832	\$ 20,832	\$ 20,832	\$ 20,832	\$ 20,832	\$ 33,856	\$ 16,928
14.	Total Sports	10,000	\$ 30,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 70,000	\$ 70,000	\$ 70,000	\$ 80,000	\$ 80,000	\$ 80,000	\$ 40,000
17.	Oriental	1,066	\$ 4,988	\$ 10,412	\$ 10,412	\$ 10,412	\$ 10,412	\$ 10,412	\$ 13,290	\$ 13,290	\$ 13,290	\$ 13,290	\$ 6,645
18.	Unassigned	1,232	\$ 4,928	\$ 9,856	\$ 9,856	\$ 9,856	\$ 9,856	\$ 13,208	\$ 13,208	\$ 13,208	\$ 13,208	\$ 13,208	\$ 8,428
19.	Shirt	449	\$ 3,500	\$ 7,000	\$ 8,934	\$ 8,934	\$ 8,934	\$ 8,934	\$ 8,934	\$ 11,402	\$ 11,402	\$ 11,402	\$ 5,701

EXHIBIT 15 (Continued)

M A L L

Tenant by Tenant Base Rent Projections  
Including Lease Step-ups (1) and Reletting Activity (2)

Space No.	Tenant	Area Sq. Ft.	1982 6 mos.	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992 6 mos.
20.	Diamond Center	873	\$ 6,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 16,885	\$ 16,885	\$ 16,885	\$ 16,885	\$ 16,885	\$ 23,759	\$ 11,880
21.	Photomall	1,536	\$ 6,144	\$ 12,288	\$ 12,288	\$ 12,288	\$ 12,288	\$ 18,432	\$ 18,432	\$ 20,016	\$ 20,016	\$ 20,016	\$ 10,008
22.	Hurrah	1,632	\$ 5,712	\$ 11,424	\$ 11,424	\$ 11,424	\$ 11,424	\$ 11,424	\$ 11,424	\$ 18,608	\$ 18,608	\$ 18,608	\$ 9,304
23.		4,966	\$ 16,140	\$ 32,279	\$ 32,279	\$ 32,279	\$ 32,279	\$ 32,279	\$ 32,279	\$ 32,279	\$ 32,279	\$ 32,279	\$ 16,140
24.	Great	1,037	\$ 7,500	\$ 15,000	\$ 17,868	\$ 17,868	\$ 17,868	\$ 17,868	\$ 17,868	\$ 22,804	\$ 22,804	\$ 22,804	\$ 11,400
25.	Book Center	1,201	\$ 6,005	\$ 12,010	\$ 12,010	\$ 12,010	\$ 12,010	\$ 18,347	\$ 18,347	\$ 18,347	\$ 18,347	\$ 18,347	\$ 11,700
27.	Imports	788	\$ 5,100	\$ 10,200	\$ 11,807	\$ 11,807	\$ 11,807	\$ 11,807	\$ 11,807	\$ 13,669	\$ 13,669	\$ 13,669	\$ 6,835
		66,142	\$233,396	\$451,662	\$466,765	\$470,011	\$493,829	\$545,698	\$556,599	\$592,153	\$592,153	\$616,314	\$333,063

- (1) Most lease anniversaries end 1/31 of any particular year. For cash flow projection purposes, we've assumed lease anniversary dates to be 12/31 of the preceding year. No material change results from this minor timing adjustment.
- (2) Relet rental rates assume a 5% annual growth over the average rent currently generated from the existing tenant.

EXHIBIT 15 (Continued)

H A L L

2 Rent Computations

<u>Tenant</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
Fabrica	540	--	622	3,192	5,967	8,965	7,703	11,198	14,975	19,052	23,546
Northwestern Book	--	--	--	551	1,396	--	--	--	2,500	5,813	--
Pizza	--	--	1,309	--	1,207	2,971	4,875	6,931	--	--	1,119
House of Large Sizes	--	--	--	--	--	578	1,424	2,337	1,991	3,056	4,206
Ikurrah	--	--	707	1,678	2,726	3,858	5,081	--	643	2,183	3,846
	--	--	1,793	4,518	7,462	10,642	14,075	17,784	21,789	26,114	30,785
Great	3,420	4,894	3,617	5,337	7,193	9,197	11,363	13,701	16,227	18,955	22,296

EXHIBIT 15 (Continued)

M A I. I.

	7/1 to 12/31 1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1/1 to 6/30 1992
<b>Revenues</b>											
Base Rents (1)	\$233,396	\$451,662	\$466,765	\$470,011	\$493,829	\$545,698	\$556,599	\$592,153	\$ 592,153	\$ 616,314	\$ 333,063
Ground Rent (2)	\$ 14,453	\$ 28,907	\$ 28,907	\$ 33,243	\$ 33,243	\$ 33,243	\$ 38,229	\$ 38,229	\$ 38,229	\$ 43,964	\$ 21,982
Lease Rent (3)	\$ 10,593	\$ 13,660	\$ 19,116	\$ 28,830	\$ 34,046	\$ 47,074	\$ 58,515	\$ 67,783	\$ 77,572	\$ 98,565	\$ 56,681
Real Estate Tax Recovery (4)	\$ 69,741	\$115,300	\$121,400	\$133,000	\$139,800	\$146,300	\$157,300	\$165,200	\$ 173,300	\$ 182,000	\$ 95,600
Recovered Exp. (5)	\$ 45,310	\$ 95,100	\$ 99,800	\$104,800	\$110,000	\$115,600	\$121,300	\$127,400	\$ 133,700	\$ 140,400	\$ 73,700
Total Gross Revenue	\$373,493	\$704,629	\$735,988	\$769,884	\$810,918	\$887,915	\$931,943	\$990,765	\$1,014,954	\$1,081,243	\$ 581,026
Less Vacancy (6)	\$ 43,935	\$ 59,307	\$ 61,775	\$ 42,564	\$ 44,889	\$ 50,081	\$ 39,200	\$ 41,900	\$ 44,500	\$ 45,500	\$ 24,700
Percentage	(17%)	(12%)	(12%)	(8%)	(8%)	(8%)	(6%)	(6%)	(6%)	(6%)	(6%)
Effective Gross Revenue	\$329,558	\$645,322	\$674,213	\$727,318	\$766,029	\$837,834	\$892,743	\$948,865	\$ 970,454	\$1,035,743	\$ 556,326
<b>Expenses</b>											
Real Estate Taxes (7)	\$ 84,000*	\$153,000**	\$138,000	\$144,500	\$152,000	\$159,000	\$167,300	\$175,700	\$ 184,400	\$ 193,700	\$ 101,700
Recoverable Exp. (8)	\$ 39,400	\$ 82,700	\$ 86,800	\$ 91,100	\$ 95,700	\$100,500	\$105,500	\$110,800	\$ 116,300	\$ 122,100	\$ 64,100
Mgmt. (5%) (9)	\$ 12,900	\$ 24,700	\$ 25,700	\$ 26,600	\$ 28,000	\$ 31,300	\$ 32,700	\$ 34,500	\$ 35,400	\$ 37,900	\$ 20,600
Reserves for Tenant Work (12)	0	\$ 3,300	\$ 1,500	0	\$ 6,700	\$ 4,600	\$ 800	\$ 6,600	0	\$ 3,200	\$ 7,500
Reserves for Repairs (10)	\$ 3,500	\$ 7,300	\$ 7,700	\$ 8,100	\$ 8,400	\$ 8,900	\$ 9,300	\$ 9,800	\$ 10,300	\$ 10,800	\$ 17,500
Leasing Fees (11)	0	\$ 10,300	\$ 4,500	0	\$ 20,800	\$ 14,200	\$ 2,200	\$ 19,700	0	\$ 9,000	\$ 21,200
Total Expenses	\$139,800	\$281,300	\$264,200	\$270,200	\$311,600	\$318,400	\$317,800	\$357,500	\$ 346,400	\$ 376,700	\$ 232,600
Net Operating Income	\$189,758	\$364,022	\$410,013	\$457,118	\$454,429	\$519,334	\$574,943	\$591,365	\$ 624,054	\$ 659,043	\$ 323,726

\* Includes specials of \$21,604.82

\*\* Includes specials of \$22,000.00

EXHIBIT 15 (Continued)

1982 RECOVERABLE EXPENSES ANNUALIZEDFor           Mall          

Recoverable expenses for 1982 are shown below in the 1982 annualized budget:

Recoverable Expenses

Insurance		\$ 8,400
Utilities		
Electric	\$19,900	
Water and Sewer	\$ 3,200	
Gas	<u>\$ 3,200</u>	
		\$26,300
Maintenance Services		
Snow Removal	\$10,500	
Janitorial	\$12,600	
Parking Lot Sweep	\$ 3,000	
Trash	\$ 400	
Rodent Control	\$ 1,100	
Landscaping	\$ 3,800	
Mall Music	<u>\$ 300</u>	
		\$31,700
Overload Security		\$ 1,300
Supplies		
Maintenance	\$ 3,000	
Electric	\$ 600	
Landscaping	<u>\$ 1,300</u>	
		\$ 4,900
Repairs		
Electricity	\$ 3,100	
Equipment	\$ 2,500	
Plumbing	<u>\$ 600</u>	
		<u>\$ 6,200</u>
TOTAL RECOVERABLES		\$78,800

Recoverable expenses have been increased at 5% per year, compounded.

## EXHIBIT 15 (Continued)

BASIC ASSUMPTIONS TO CASH FLOW PROJECTIONSRevenues

1. In completing the financial analysis, we projected a ten-year (from July 1, 1982 to July 1, 1992) cash flow projection. Rental revenues are based upon actual leases giving full recognition to all step-up rental provisions. For vacant space, economic rents were estimated based upon rent levels at competitive properties. Upon reletting, rental rates are projected as increasing 5% per year over current levels. A five-year term was assumed for all new leases.
2. The ground rent is adjusted according to the CPI change for all cities every three years. For example, the 1982 rent is based upon the CPI change from February 1978 to February 1981 (see Exhibit D in addenda). A 5% annual rate of inflation is assumed for each subsequent rental adjustment.
3. For tenants in occupancy for a year or more, historical sales were used as a benchmark for projected sales. For tenants, the calendar years 1982 through 1992 sales volumes were escalated at 8% per year. Percentage rent was calculated on a tenant-by-tenant and year-by-year basis using the percentage rent formula outlined in each lease.
4. The standard lease provides for all tenants to pay their pro-rata share of taxes. Since the projected vacancy allowance varies, tenant reimbursement is as follows:

	<u>Vacancy</u>	<u>Tax Reimbursement</u>
1982 (6 mos)	17	83%
1983-84	12	88%
1984-87	8	92%
1988-91	6	94%

5. The standard lease provides for 100% of all recoverable expenses to be reimbursed to the landlord by the tenants, collectively. Unlike the tax clause, the pro-rata share each tenant contributes is allocated between the gross leased and occupied space; consequently 100% of all recoverable expenses are paid collectively by the existing tenants. A 15% administrative charge is added to all reimbursable expenses (per the leases). Furthermore, based upon experience, 75% of the "Reserves for Structural Repairs" are reimbursable expenses.
6. A discussion for vacancy allowance is detailed in Item #4.

## EXHIBIT 15 (Continued)

Basic Assumptions to Cash Flow Projections - ContinuedExpenses

7. Real estate taxes for 1982 are detailed on page 1 of this report. For 1983 and thereafter, taxes have been escalated at a 5% annual rate of increase.

Finally, in 1982 about \$43,000 of special assessments will be billed to Burnhaven, including interest payable at 8%. Approximately one-half of the \$43,000 is to be paid in 1982 and the balance in 1983 as scheduled in the cash flow projection.

8. Recoverable expenses for 1982 are shown in the 1982 annualized budget on the following page.
9. Property management expense is 5% of base, ground and percentage rents.
10. As per our discussions with \_\_\_\_\_ properties, reserves for structural repairs are estimated at \$.10 per square foot for the first three years and are increased at 5% per year thereafter.
11. For 1982, leasing fees are \$2.25 per square foot of leased space. The fee is increased 5% per year, consistent with the increase in base rents. Leasing fees are expensed in the year incurred.
12. According to \_\_\_\_\_ properties, tenant work is minimal for this type of mall. The cost is estimated at \$.70 per square foot for 1982 and escalated at 8% per year thereafter. Tenant work is expensed in the year incurred.



Discounted Cash Flow Analysis - Continued

		<u>Annual Cash Flow</u>		<u>Discount @ 17%</u>		<u>Present Worth</u>
Last 6 mos.	1982	\$ 189,758	x	.924500	=	\$ 175,431
	1983	\$ 364,022	x	.790171	=	\$ 287,640
	1984	\$ 410,013	x	.675360	=	\$ 276,906
	1985	\$ 457,118	x	.577230	=	\$ 263,862
	1986	\$ 454,429	x	.493359	=	\$ 224,197
	1987	\$ 579,334	x	.421674	=	\$ 244,290
	1988	\$ 574,943	x	.360405	=	\$ 207,212
	1989	\$ 591,365	x	.308039	=	\$ 182,163
	1990	\$ 624,054	x	.263281	=	\$ 164,302
	1991	\$ 659,043	x	.225026	=	\$ 148,302
1st 6 mos.	1992	\$ 323,726	x	.208037	=	\$ 67,347
	*Rev.	\$4,839,000	x	.208037	=	<u>\$1,006,000</u>
						\$3,247,652
						Rounded to
						\$3,200,000

## \* Projected 1992 Resale Price

The 1992 resale price was estimated by adding the last six months income of 1991 and the first six months income of 1992 and capitalizing the total income at 13-1/2%.

\$329,522	-	1991 (last six months)	
<u>\$323,726</u>	-	1992 (first six months)	
\$653,248	-	Capitalized @ 13-1/2%	\$4,838,866
		Estimated 1992 Sale Price	\$4,838,900

**V A L T E S T**

**A DEMONSTRATION PACKET**

**PREPARED BY  
LANDMARK RESEARCH, INC.  
MADISON, WISCONSIN**

**PREPARED FOR  
THE REAL ESTATE ANALYSTS NORTHSTAR USERS GROUP**

**SEPTEMBER 24 AND 25, 1982  
COSTA MESA, CALIFORNIA**

VALTEST

## DEMONSTRATION 1

## INPUT ASSUMPTIONS

\*\*\*\*\*

1. ENTER PROJECT NAME ? J
  2. ENTER PROJECTION PERIOD ? 5
  3. DO YOU WANT TO ENTER EFFECTIVE GROSS REVENUE INSTEAD OF NOI? N  
TO REPEAT PREVIOUS YEAR'S NOI/EGR FOR BAL OF PROJECTION ENTER 0  
N.O.I. YEAR 1? 5000  
N.O.I. YEAR 2? 5000  
N.O.I. YEAR 3? 6000  
N.O.I. YEAR 4? 6000  
N.O.I. YEAR 5? 7000
  4. ACQUISITION COST: ? 50000
  5. DO YOU WANT TO USE STANDARD FINANCING? Y OR N? Y  
MTG. RATIO OR AMOUNT, INT., TERM, NO PAY/YR ? .8, .12, 25, 12
  6. ENTER RATIO OF IMP #1/TOTAL VALUE, LIFE OF IMP #1? .8, 15  
IS THERE A SECOND IMPROVEMENT? Y OR N? N
  7. DEPRECIATION METHOD, IMPROVEMENT #1 ? 2  
ENTER D.B. Z: ? 175  
IS PROPERTY SUBSIDIZED HOUSING ? Y OR N ? N  
IS PROPERTY RESIDENTIAL? Y OR N? Y
  8. IS OWNER A TAXABLE CORPORATION? Y OR N ? Y  
CORPORATE FEDERAL ORDINARY TAX RATE COULD BE :  
17% - 46% (1978 LAW, EFFECTIVE 1979)  
16% - 46% (1981 LAW, EFFECTIVE 1982)  
15% - 46% (1981 LAW, EFFECTIVE 1983 & THEREAFTER)  
MAXIMUM CORPORATE CAPITAL GAIN ALTERNATIVE TAX RATE IS 28%  
  
(PLUS STATE RATE)
- ENTER:
- 1) EFFECTIVE ORDINARY RATE 2) EFFECTIVE ORDINARY RATE (YEAR OF SALE)  
? .46, .46
  9. RESALE PRICE (NET OF SALE COSTS) ? 60000
  10. IS THERE LENDER PARTICIPATION ? N
  11. ENTER OWNER'S AFTER TAX REINVESTMENT RATE (%)? 9
  12. ENTER OWNER'S AFTER TAX OPPORTUNITY COST OF EQUITY FUNDS (%)? 9

## DEMONSTRATION 1 (Cont.)

## AFTER TAX CASH FLOW PROJECTION

DATE 9/14/82

## DATA SUMMARY

\*\*\*\*\*

ACQUISTN COST: \$50,000. MTG. AMT.: \$40,000.  
 NOI 1ST YR: \$5,000. MTG. INT.: 12%  
 ORG. EQUITY: \$10,000. MTG. TERM: 25. YRS  
 CTD 1ST YEAR: \$-55. DEBT SERVICE 1ST YEAR: \$5,055.  
 MTG. CONST.: .1263869  
 IMP. #1 VALUE: \$40,000. IMP. #1 LIFE: 15.  
 INC. TX RATE: 46%  
 SALE YR RATE: 46% OWNER: CORPORATION

DEPRECIATION IMPROVEMENT #1 : 175% D.B.  
 RESIDENTIAL PROPERTY

LENDER PARTICIPATION: CASH THROW-OFF: NONE REVERSION: NONE

NO REPRESENTATION IS MADE THAT THE ASSUMPTIONS PROVIDED BY JEAN  
 ARE PROPER OR THAT THE CURRENT TAX ESTIMATES USED IN THIS  
 PROJECTION WILL BE ACCEPTABLE TO TAXING AUTHORITIES. NO ESTIMATE  
 HAS BEEN MADE OF MINIMUM PREFERENCE TAX. CAPITAL LOSSES IN YEAR OF  
 SALE ARE TREATED AS ORDINARY LOSSES (SECTION 1231 PROPERTY) AND  
 ARE CREDITED AGAINST TAXES PAID AT THE  
 ORDINARY RATE AT THE TIME OF SALE.  
 FOR THE PURPOSE OF THE MODIFIED INTERNAL RATE OF RETURN (M.I.R.R.)  
 CALCULATION, NEGATIVE CASH IN ANY ONE PERIOD IS COVERED  
 BY A CONTRIBUTION FROM EQUITY IN THAT PERIOD

YEAR	NOI	MTG INT & LENDERS %	TAX DEP	TAXABLE INCOME	INCOME TAX	AFTER TAX CASH FLOW
1.	5000.	4785.	4667.	-4453.	-2049.	1994.
2.	5000.	4751.	4122.	-3874.	-1783.	1728.
3.	6000.	4713.	3641.	-2355.	-1084.	2029.
4.	6000.	4669.	3216.	-1857.	-869.	1814.
5.	7000.	4626.	2841.	-462.	-214.	2159.
	\$29000.	\$23539.	\$18488.	\$-13031.	\$-5999.	\$9722.

## EXHIBIT 16 (Continued)

## DEMONSTRATION 1 (Cont.)

RESALE PRICE:	\$60,000.	1ST YR B4 TAX EQ DIV:	-.5548%
LESS MORTGAGE BALANCE:	\$38,261.	AVG DEBT COVER RATIO:	1.1473
PROCEEDS BEFORE TAXES:	\$21,739.		
LESS LENDER'S %:	\$0.		
NET SALES PROCEEDS BEFORE TAXES:	\$21,739.		

RESALE PRICE:	\$60,000.
LESS LENDER'S %:	\$0.
NET RESALE PRICE:	\$60,000.
LESS BASIS:	\$31,512.
TOTAL GAIN:	\$28,488.
EXCESS DEPRECIATION:	\$5,155.
CAPITAL GAIN:	\$23,333.
ORDINARY GAIN:	\$5,155.

TAX ON ORDINARY GAIN:	\$2,371.
TAX ON CAPITAL GAIN:	\$6,533.
PLUS MORTGAGE BAL:	\$38,261.
TOTAL DEDUCTIONS FROM NET RESALE PRICE:	\$47,166.

NET SALES PROCEEDS AFTER TAX:	\$12,834.
----------------------------------	-----------

IF PURCHASED AS ABOVE, HELD 5 YEARS & SOLD FOR \$60,000.  
 THE MODIFIED I.R.R. BEFORE TAXES IS 20.6487% AND AFTER TAXES IS 19.5605%  
 ASSUMING AN AFTER TAX REINVESTMENT RATE OF 9%, AND OPPORTUNITY COST OF 9%

EXHIBIT 16 (Continued)  
DEMONSTRATION 1 (Cont.)

MORTGAGE ANALYSIS

J

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YEAR	NOI	MORT INT.	MORT AMORT	DEBT SERV	DCR	MTG. BAL.
1.	5000.	4785.	270.	5055.	.989	39730.
2.	5000.	4751.	304.	5055.	.989	39426.
3.	6000.	4713.	343.	5055.	1.187	39083.
4.	6000.	4669.	386.	5055.	1.187	38697.
5.	7000.	4620.	435.	5055.	1.385	38261.
AVG	\$5,800.				1.147	

DISTRIBUTION OF CASH THROW-OFF

J

YEAR	CASH THROW-OFF TOTAL	CASH THROW-OFF TO EQUITY	CASH BONUS TO LENDER
1.	-55.	-55.	0.
2.	-55.	-55.	0.
3.	945.	945.	0.
4.	945.	945.	0.
5.	1945.	1945.	0.
	----- 3723.	----- 3723.	----- 0.

RESALE PRICE:	\$60,000.
LESS MORTGAGE BALANCE:	\$38,261.
PROCEEDS BEFORE TAXES:	\$21,739.
LESS LENDER'S %:	\$0.
NET SALES PROCEEDS BEFORE TAXES:	\$21,739.
	=====

CASH THROW-OFF = 0%      REVERSION = 0%

DEMONSTRATION 1 (Cont.)

DEPRECIATION SCHEDULE

J

IMPROVEMENT # 1

175% D.B.

RESIDENTIAL

\*\*\*\*\*

YEAR	TAX DEP.	S.L. DEP.	EXCESS DEP	BALANCE
1.	4666.7	2666.7	2000.0	35333.3
2.	4122.2	2666.7	1455.6	31211.1
3.	3641.3	2666.7	974.6	27569.8
4.	3216.5	2666.7	549.8	24353.3
5.	2841.2	2666.7	174.6	21512.1

	=====	=====	=====
TOTAL	18487.9	13333.3	5154.6

EQUITY ANALYSIS

J

\*\*\*\*\*

BEFORE TAX EQUITY DIVIDEND

YR	NDI	YR END EQUITY	AMOUNT	CASH RETURN	
				ORG EQ	CUR EQ
1.	\$5,000.	\$10,325.	\$-55.	-.0055	-.0054
2.	5,000.	10,685.	-55.	-.0055	-.0052
3.	6,000.	11,028.	945.	.0945	.0856
4.	6,000.	11,414.	945.	.0945	.0827
5.	7,000.	11,850.	1,945.	.1945	.1641

ORIGINAL EQUITY: \$ 10000

V A L T E S T

## DEMONSTRATION 2

## INPUT ASSUMPTIONS

\*\*\*\*\*

1. ENTER PROJECT NAME ? CARDINAL-2
  2. ENTER PROJECTION PERIOD ? 5
  3. DO YOU WANT TO ENTER EFFECTIVE GROSS REVENUE INSTEAD OF NOI? N  
TO REPEAT PREVIOUS YEAR'S NOI/EGR FOR BAL OF PROJECTION ENTER 0  
N.O.I. YEAR 1? 81745  
N.O.I. YEAR 2? 81920  
N.O.I. YEAR 3? 98910  
N.O.I. YEAR 4? 108800  
N.O.I. YEAR 5? 119680
  4. ACQUISITION COST: ? 1007000
  5. DO YOU WANT TO USE STANDARD FINANCING? Y OR N?Y  
MTG. RATIO OR AMOUNT, INT., TERM, NO PAY/YR ? 647000, .15236, 30, 12
  6. ENTER RATIO OF IMP #1/TOTAL VALUE, LIFE OF IMP #1? .149, 15  
IS THERE A SECOND IMPROVEMENT? Y OR N? Y  
ENTER RATIO OF IMP #2/TOTAL VALUE, LIFE OF IMP #2? .781, 15  
ENTER REHABILITATION TAX CREDIT FOR IMP #2: 196625  
IS STRUCTURE A CERTIFIED HISTORICAL LANDMARK? Y OR N?Y
  7. DEPRECIATION METHOD, IMPROVEMENT #1 ? 1  
DEPRECIATION METHOD, IMPROVEMENT #2 ? 1  
IS PROPERTY SUBSIDIZED HOUSING ? Y OR N ?N  
IS PROPERTY RESIDENTIAL? Y OR N? Y
  8. IS OWNER A TAXABLE CORPORATION? Y OR N ?N  
THE MAXIMUM FEDERAL INDIVIDUAL ORDINARY RATE COULD BE:  
70% (PRE-1981 LAW)  
50% (1981 LAW, EFFECTIVE 1982)  
  
(PLUS STATE RATE)
- ENTER:
- 1) EFFECTIVE ORDINARY RATE 2) EFFECTIVE ORDINARY RATE (YEAR OF SALE)  
? .5, .5
  9. RESALE PRICE (NET OF SALE COSTS) ? 1258750
  10. IS THERE LENDER PARTICIPATION ?N
  11. ENTER OWNER'S AFTER TAX REINVESTMENT RATE (X)? 11
  12. ENTER OWNER'S AFTER TAX OPPORTUNITY COST OF EQUITY FUNDS (X)? 11



## DEMONSTRATION 2 (Cont.)

 AFTER TAX CASH FLOW PROJECTION  
 CARDINAL-2  
 DATE 9/14/82

## DATA SUMMARY

\*\*\*\*\*

ACQUISTN COST: \$1,007,000.	MTG. ANT.: \$647,000.
NOI 1ST YR: \$81,745.	MTG. INT.: 15.236%
ORG. EQUITY: \$360,000.	MTG. TERM: 30. YRS
CTO 1ST YEAR: \$-17,893.	DEBT SERVICE 1ST YEAR: \$99,638.
	MTG. CONST.: .15400037
IMP. #1 VALUE: \$150,043.	IMP. #1 LIFE: 15.
IMP. #2 VALUE: \$786,467.	IMP. #2 LIFE: 15.
INC. TX RATE: 50%	
SALE YR RATE: 50%	OWNER: INDIVIDUAL

DEPRECIATION IMPROVEMENT #1 : STRAIGHT LINE  
 DEPRECIATION IMPROVEMENT #2 : STRAIGHT LINE  
 RESIDENTIAL PROPERTY  
 CERTIFIED HISTORICAL STRUCTURE  
 LENDER PARTICIPATION: CASH THROW-OFF: NONE REVERSION: NONE

NO REPRESENTATION IS MADE THAT THE ASSUMPTIONS PROVIDED BY JEAN ARE PROPER OR THAT THE CURRENT TAX ESTIMATES USED IN THIS PROJECTION WILL BE ACCEPTABLE TO TAXING AUTHORITIES. NO ESTIMATE HAS BEEN MADE OF MINIMUM PREFERENCE TAX. CAPITAL LOSSES IN YEAR OF SALE ARE TREATED AS ORDINARY LOSSES (SECTION 1231 PROPERTY) AND ARE CREDITED AGAINST TAXES PAID AT THE ORDINARY RATE AT THE TIME OF SALE. THE  
 FOR THE PURPOSE OF THE MODIFIED INTERNAL RATE OF RETURN (M.I.R.R.) CALCULATION, NEGATIVE CASH IN ANY ONE PERIOD IS COVERED BY A CONTRIBUTION FROM EQUITY IN THAT PERIOD

YEAR	NOI	MTG INT & LENDERS %	TAX DEP	TAXABLE INCOME	INCOME TAX	AFTER TAX CASH FLOW
1.	81745.	98500.	62434.	-79190.	-236221.	218328.
2.	81920.	98313.	62434.	-78828.	-39415.	21697.
3.	98910.	98097.	62434.	-61622.	-30812.	30084.
4.	108800.	97845.	62434.	-51480.	-25741.	34903.
5.	119680.	97552.	62434.	-40307.	-20154.	40196.
	-----	-----	-----	-----	-----	-----
	\$491055.	\$490307.	\$312170.	\$-311427.	\$-352343.	\$345207.

NOTE: 1ST YEAR'S TAX REDUCED BY \$196,625. FOR TAX CREDIT (IMP #2)

## EXHIBIT 16 (Continued)

## DEMONSTRATION 2 (Cont.)

RESALE PRICE:	\$1,258,750.	1ST YR B4 TAX EQ DIV:	-4.9703%
LESS MORTGAGE BALANCE:	\$639,115.	AVG DEBT COVER RATIO:	.9857
PROCEEDS BEFORE TAXES:	\$619,635.		
LESS LENDER'S %:	\$0.		
NET SALES PROCEEDS BEFORE TAXES:	\$619,635.		
	=====		

RESALE PRICE:	\$1,258,750.
LESS LENDER'S %:	\$0.
NET RESALE PRICE:	\$1,258,750.
LESS BASIS:	\$694,830.
TOTAL GAIN:	\$563,920.
EXCESS DEPRECIATION:	\$0.
CAPITAL GAIN:	\$563,920.
ORDINARY GAIN:	\$0.
	=====

TAX ON ORDINARY GAIN:	\$0.
TAX ON CAPITAL GAIN:	\$112,784.
PLUS MORTGAGE BAL:	\$639,115.
TOTAL DEDUCTIONS FROM NET RESALE PRICE:	\$751,899.
	=====

NET SALES PROCEEDS AFTER TAX:	\$506,851.
	=====

IF PURCHASED AS ABOVE, HELD 5 YEARS & SOLD FOR \$1,258,750.  
 THE MODIFIED I.R.R. BEFORE TAXES IS 10.5005% AND AFTER TAXES IS 22.2744%  
 ASSUMING AN AFTER TAX REINVESTMENT RATE OF 11%, AND OPPORTUNITY COST OF 11%

DEMONSTRATION 2 (Cont.)

DISTRIBUTION OF CASH THROW-OFF  
CARDINAL-2

YEAR	CASH THROW-OFF TOTAL	CASH THROW-OFF TO EQUITY	CASH BONUS TO LENDER
1.	-17893.	-17893.	0.
2.	-17718.	-17718.	0.
3.	-728.	-728.	0.
4.	9162.	9162.	0.
5.	20042.	20042.	0.
	-----	-----	-----
	-7136.	-7136.	0.

RESALE PRICE:	\$1,258,750.
LESS MORTGAGE BALANCE:	\$639,115.
PROCEEDS BEFORE TAXES:	\$619,635.
LESS LENDER'S %:	\$0.
NET SALES PROCEEDS BEFORE TAXES:	\$619,635.
	-----

CASH THROW-OFF = 0% REVERSION = 0%

MORTGAGE ANALYSIS  
CARDINAL-2

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YEAR	NDI	MORT INT.	MORT AMORT	DEBT SERV	DCR	MTG. BAL.
1.	81745.	98500.	1139.	99638.	.820	645861.
2.	81920.	98313.	1325.	99638.	.822	644537.
3.	98910.	96097.	1541.	99638.	.993	642995.
4.	108800.	97845.	1793.	99638.	1.092	641202.
5.	119680.	97552.	2086.	99638.	1.201	639115.
AUG	\$98,211.				.986	

EQUITY ANALYSIS  
CARDINAL-2

\*\*\*\*\*

BEFORE TAX EQUITY DIVIDEND

YR	NDI	YR END EQUITY	AMOUNT	ORG EQ	CUR EQ
1.	\$81,745.	\$379,032.	\$-17,893.	-.0497	-.0472
2.	81,920.	398,075.	-17,718.	-.0492	-.0445
3.	98,910.	400,345.	-726.	-.0020	-.0018
4.	108,800.	402,138.	9,162.	.0254	.0228
5.	119,680.	404,224.	20,042.	.0557	.0496

ORIGINAL EQUITY: \$ 360000

EXHIBIT 16 (Continued)  
 DEMONSTRATION 2 (Cont.)

DEPRECIATION SCHEDULE  
 CARDINAL-2  
 IMPROVEMENT # 1  
 STRAIGHT LINE  
 RESIDENTIAL

\*\*\*\*\*

YEAR	TAX DEP.	S.L. DEP.	EXCESS DEP	BALANCE
1.	10002.9	10002.9	.0	140040.1
2.	10002.9	10002.9	.0	130037.3
3.	10002.9	10002.9	.0	120034.4
4.	10002.9	10002.9	.0	110031.5
5.	10002.9	10002.9	.0	100028.7
	-----	-----	-----	
SUB-TOTAL	50014.3	50014.3	.0	

DEPRECIATION SCHEDULE  
 CARDINAL-2  
 IMPROVEMENT # 2  
 STRAIGHT LINE  
 RESIDENTIAL

\*\*\*\*\*

YEAR	TAX DEP.	S.L. DEP.	EXCESS DEP	BALANCE
1.	52431.1	52431.1	.0	734035.9
2.	52431.1	52431.1	.0	681604.7
3.	52431.1	52431.1	.0	629173.6
4.	52431.1	52431.1	.0	576742.5
5.	52431.1	52431.1	.0	524311.3
	-----	-----	-----	
SUB-TOTAL	262155.7	262155.7	.0	
	=====	=====	=====	
TOTAL	312170.0	312170.0	.0	

V A L T E S T - DEMONSTRATION 3

86

## INPUT ASSUMPTIONS

\*\*\*\*\*

1. ENTER PROJECT NAME ? SELL AT LOSS TEST
2. ENTER PROJECTION PERIOD ? 5
3. DO YOU WANT TO ENTER EFFECTIVE GROSS REVENUE INSTEAD OF NOI? Y  
TO REPEAT PREVIOUS YEAR'S NOI/EGR FOR BAL OF PROJECTION ENTER 0

EFFECTIVE GROSS REVENUE YEAR 1? 13800  
 EFFECTIVE GROSS REVENUE YEAR 2? 14210  
 EFFECTIVE GROSS REVENUE YEAR 3? 1000  
 EFFECTIVE GROSS REVENUE YEAR 4? 15080  
 EFFECTIVE GROSS REVENUE YEAR 5? 15530

VAR OF EXPENSE (X) YEAR 1? 6  
 VAR OF EXPENSE (X) YEAR 2? 5  
 VAR OF EXPENSE (X) YEAR 3? 0

FIXED OF EXPENSE YEAR 1? 3700  
 FIXED OF EXPENSE YEAR 2? 3920  
 FIXED OF EXPENSE YEAR 3? 4160  
 FIXED OF EXPENSE YEAR 4? 4410  
 FIXED OF EXPENSE YEAR 5? 4670

4. ACQUISITION COST: ? 66000
5. DO YOU WANT TO USE STANDARD FINANCING? Y OR N? Y  
MTG. RATIO OR AMOUNT, INT., TERM, NO PAY/YR ? 49500, .18, 25, 12
6. ENTER RATIO OF IMP #1/TOTAL VALUE, LIFE OF IMP #1? .25, 15  
IS THERE A SECOND IMPROVEMENT? Y OR N? Y  
ENTER RATIO OF IMP #2/TOTAL VALUE, LIFE OF IMP #2? .55, 15  
ENTER REHABILITATION TAX CREDIT FOR IMP #2: 9075  
IS STRUCTURE A CERTIFIED HISTORICAL LANDMARK? Y OR N? Y \*
7. DEPRECIATION METHOD, IMPROVEMENT #1 ? 2  
ENTER D.B. X: ? 175\*  
DEPRECIATION METHOD, IMPROVEMENT #2 ? 2  
ENTER D.B. X: ? 175\*  
IS PROPERTY SUBSIDIZED HOUSING ? Y OR N ? N  
IS PROPERTY RESIDENTIAL? Y OR N? N
8. IS OWNER A TAXABLE CORPORATION? Y OR N ? Y  
CORPORATE FEDERAL ORDINARY TAX RATE COULD BE :  
17% - 46% (1978 LAW, EFFECTIVE 1979)  
16% - 46% (1981 LAW, EFFECTIVE 1982)  
15% - 46% (1981 LAW, EFFECTIVE 1983 & THEREAFTER)  
MAXIMUM CORPORATE CAPITAL GAIN ALTERNATIVE TAX RATE IS 28%

\*For Illustrative  
Purposes Only

(PLUS STATE RATE)

ENTER:

- 1) EFFECTIVE ORDINARY RATE 2) EFFECTIVE ORDINARY RATE (YEAR OF SALE)  
? .4, .4
9. RESALE PRICE (NET OF SALE COSTS) ? 60000
10. IS THERE LENDER PARTICIPATION ? Y  
ENTER CASH THROW-OFF (%), PROCEEDS BEFORE TAXES (%): 5, 5
11. ENTER OWNER'S AFTER TAX REINVESTMENT RATE (%)? 9
12. ENTER OWNER'S AFTER TAX OPPORTUNITY COST OF EQUITY FUNDS (%)?

## DEMONSTRATION 3 (Cont.)

AFTER TAX CASH FLOW PROJECTION  
 SELL AT LOSS TEST  
 DATE 9/14/82

## DATA SUMMARY

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ACQUISTN COST:	\$66,000.	MTG. AMT.:	\$49,500.
NOI 1ST YR:	\$9,272.	MTG. INT.:	18%
ORG. EQUITY:	\$16,500.	MTG. TERM:	25. YRS
CTG 1ST YEAR:	\$258.	DEBT SERVICE 1ST YEAR:	\$9,014.
		MTG. CONST.:	.1820916
IMP. #1 VALUE:	\$16,500.	IMP. #1 LIFE:	15.
IMP. #2 VALUE:	\$36,300.	IMP. #2 LIFE:	15.
INC. TX RATE:	40%		
SALE YR RATE:	40%	OWNER:	CORPORATION

DEPRECIATION IMPROVEMENT #1 : 175% D.B.  
 DEPRECIATION IMPROVEMENT #2 : 175% D.B.  
 NON-RESIDENTIAL PROPERTY  
 CERTIFIED HISTORICAL STRUCTURE  
 LENDER PARTICIPATION: CASH THROW-OFF: 5%      REVERSION: 5%

NO REPRESENTATION IS MADE THAT THE ASSUMPTIONS PROVIDED BY JEAN ARE PROPER OR THAT THE CURRENT TAX ESTIMATES USED IN THIS PROJECTION WILL BE ACCEPTABLE TO TAXING AUTHORITIES. NO ESTIMATE HAS BEEN MADE OF MINIMUM PREFERENCE TAX. CAPITAL LOSSES IN YEAR OF SALE ARE TREATED AS ORDINARY LOSSES (SECTION 1231 PROPERTY) AND ARE CREDITED AGAINST TAXES PAID AT THE ORDINARY RATE AT THE TIME OF SALE.  
 FOR THE PURPOSE OF THE MODIFIED INTERNAL RATE OF RETURN (M.I.R.R.) CALCULATION, NEGATIVE CASH IN ANY ONE PERIOD IS COVERED BY A CONTRIBUTION FROM EQUITY IN THAT PERIOD

YEAR	NOI	MTG INT & LENDERS %	TAX DEF	TAXABLE INCOME	INCOME TAX	AFTER TAX CASH FLOW
1.	9272.	8914.	6160.	-5803.	-11397.	11643.
2.	9580.	8907.	5441.	-4770.	-1909.	2447.
3.	-3210.	8953.	4667.	-16870.	-6749.	-5475.
4.	9916.	8866.	4246.	-3197.	-1280.	2137.
5.	10084.	8837.	3750.	-2505.	-1003.	2019.
	\$35641.	\$44377.	\$24404.	\$-33145.	\$-22338.	\$12771.

NOTE: 1ST YEAR'S TAX REDUCED BY \$9,075. FOR TAX CREDIT (IMP #2)

## EXHIBIT 16 (Continued)

## DEMONSTRATION 3 (Cont.)

RESALE PRICE:	\$60,000.	1ST YR B4 TAX EQ DIV:	1.4881%
LESS MORTGAGE BALANCE:	\$48,670.	AVG DEBT COVER RATIO:	.7908
PROCEEDS BEFORE TAXES:	\$11,330.	AVG DEFAULT RATIO:	1.1581
LESS LENDER'S %:	\$567.		
NET SALES PROCEEDS BEFORE TAXES:	\$10,764.		

RESALE PRICE:	\$60,000.
LESS LENDER'S %:	\$567.
NET RESALE PRICE:	\$59,433.
LESS BASIS:	\$41,596.
TOTAL GAIN:	\$17,838.
TAX DEPRECIATION:	\$24,404.
CAPITAL GAIN:	\$0.
ORDINARY GAIN:	\$17,838.

TAX ON ORDINARY GAIN:	\$7,135.
TAX ON CAPITAL GAIN:	\$0.
PLUS MORTGAGE BAL:	\$48,670.
TOTAL DEDUCTIONS FROM NET RESALE PRICE:	\$55,805.

NET SALES PROCEEDS AFTER TAX:	\$3,629.
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IF PURCHASED AS ABOVE, HELD 5 YEARS & SOLD FOR \$60,000.  
 THE MODIFIED I.R.R. BEFORE TAXES IS -12.4777% AND AFTER TAXES IS 5.4951%  
 ASSUMING AN AFTER TAX REINVESTMENT RATE OF 9%, AND OPPORTUNITY COST OF 9%

## DEMONSTRATION 3 (Cont.)

DISTRIBUTION OF CASH THROW-OFF  
SELL AT LOSS TEST

YEAR	CASH THROW-OFF TOTAL	CASH THROW-OFF TO EQUITY	CASH BONUS TO LENDER
1.	258.	246.	13.
2.	566.	538.	28.
3.	-12224.	-12224.	0.
4.	902.	857.	45.
5.	1070.	1016.	53.
	-----	-----	-----
	-9427.	-9567.	140.

RESALE PRICE:	\$60,000.
LESS MORTGAGE BALANCE:	\$48,670.
PROCEEDS BEFORE TAXES:	\$11,330.
LESS LENDER'S %:	\$567.
NET SALES PROCEEDS BEFORE TAXES:	\$10,764.
	=====

CASH THROW-OFF = 5% REVERSION = 5%

EQUITY ANALYSIS  
SELL AT LOSS TEST  
\*\*\*\*\*

YR	NDI	BEFORE TAX EQUITY DIVIDEND		CASH RETURN	
		YR END EQUITY	AMOUNT	ORG EQ	CUR EQ
1.	\$9,272.	\$16,613.	\$246.	.0149	.0148
2.	9,580.	16,747.	538.	.0326	.0321
3.	-3,210.	29,131.	-12,224.	-.7406	-.4196
4.	9,916.	29,324.	857.	.0520	.0292
5.	10,084.	29,554.	1,016.	.0616	.0344

ORIGINAL EQUITY: \$ 16500



## EXHIBIT 16 (Continued)

## DEMONSTRATION 3 (Cont.)

 MORTGAGE ANALYSIS  
 SELL AT LOSS TEST  
 \*\*\*\*\*

YEAR	NOI	MORT INT.	MORT AMORT	DEBT SERV	DCR	MTG. BAL.	DEFAULT RATIO
1.	9272.	8901.	113.	9014.	1.029	49387.	.981
2.	9580.	8879.	135.	9014.	1.063	49253.	.960
3.	-3210.	8853.	161.	9014.	-.356	49092.	13.224
4.	9916.	8821.	192.	9014.	1.100	48900.	.940
5.	10084.	8784.	230.	9014.	1.119	48670.	.931
AVG	\$7,128.				.791		1.158

 REVENUE AND EXPENSE REPORT  
 SELL AT LOSS TEST  
 DATE 9/14/82  
 \*\*\*\*\*

YEAR	EFF GROSS REV	% RATE	% VAR OP.	\$ FIXED OP	NOI
1.	\$13,800.	6.2	\$828.	\$3,700.	\$9,272.
2.	\$14,210.	5.2	\$711.	\$3,920.	\$9,580.
3.	\$1,000.	5.2	\$50.	\$4,160.	\$-3,210.
4.	\$15,080.	5.2	\$754.	\$4,410.	\$9,916.
5.	\$15,530.	5.2	\$777.	\$4,670.	\$10,084.
	-----		-----	-----	-----
	\$59,620.		\$3,119.	\$20,860.	\$35,641.

EXHIBIT 16 (Continued)  
 DEMONSTRATION 3 (Cont.)

DEPRECIATION SCHEDULE  
 SELL AT LOSS TEST  
 IMPROVEMENT # 1  
 175% D.B.  
 NON-RESIDENTIAL

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YEAR	TAX DEP.	S.L. DEP.	TAX DEP.	BALANCE
1.	1925.0	1100.0	1925.0	14575.0
2.	1700.4	1100.0	1700.4	12874.6
3.	1502.0	1100.0	1502.0	11372.5
4.	1326.8	1100.0	1326.8	10045.8
5.	1172.0	1100.0	1172.0	8873.7
	-----	-----	-----	
SUB-TOTAL	7626.3	5500.0	7626.3	

DEPRECIATION SCHEDULE  
 SELL AT LOSS TEST  
 IMPROVEMENT # 2  
 175% D.B.  
 NON-RESIDENTIAL

\*\*\*\*\*

YEAR	TAX DEP.	S.L. DEP.	TAX DEP.	BALANCE
1.	4235.0	2420.0	4235.0	32065.0
2.	3740.9	2420.0	3740.9	28324.1
3.	3304.5	2420.0	3304.5	25019.6
4.	2919.0	2420.0	2919.0	22100.7
5.	2578.4	2420.0	2578.4	19522.2
	-----	-----	-----	
SUB-TOTAL	16777.8	12100.0	16777.8	
	=====	=====	=====	
TOTAL	24404.0	17600.0	24404.0	

## EXHIBIT 17

DEMONSTRATION OF SELECTION OF BEST USE SCENARIO FOR  
VACANT OFFICE TOWER REQUIRING  
COMPLETE MECHANICAL RENOVATIONB. Alternative Uses for Pyare Square

A combination of the physical characteristics of the property and the general demand characteristics of the Hilldale area suggest the following alternative scenarios for use of the subject property (Appendix D):

Scenario #1: The building would be remodeled into multi-tenant office space of class A on floors 4 to 14 and class B on floors 1 to 3.

Scenario #2: The building would be modified into residential apartments on floors 4 to 14 and class B office space on floors 1 to 3.

Scenario #3: The building would be modified into residential condominiums on floors 4 to 14 and class B office space on floors 1 to 3.

Scenario #4: The building would be modified into a hotel facility with hotel rooms on floors 4 to 14, a restaurant on floor 3, and seminar and office space on the remainder.

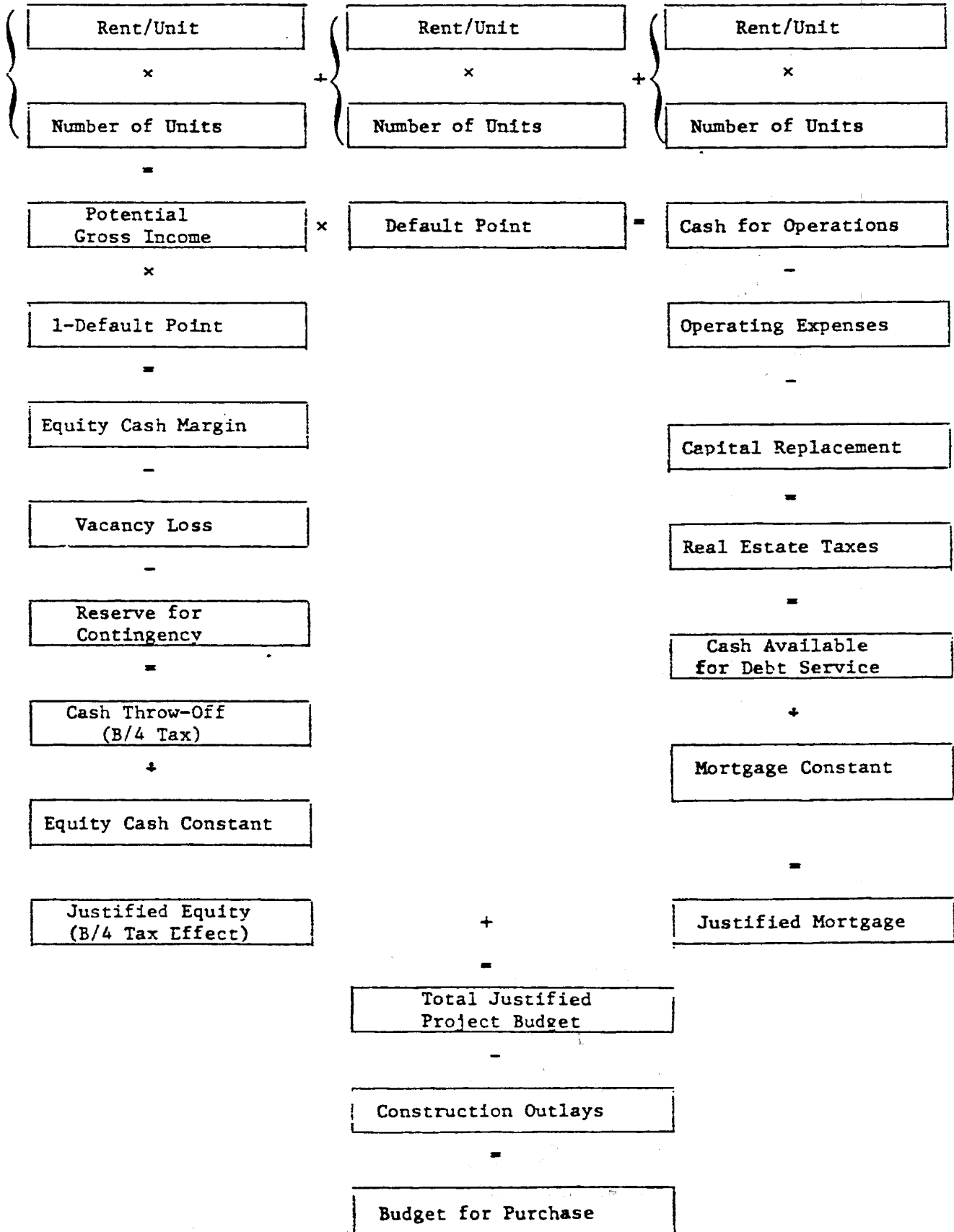
C. Economic Ranking of Alternatives

The alternative uses that might be plausible for the subject property can first be ranked in terms of the general budget parameters inherent in revenues and expenses for each. The best financial alternatives must then be screened for effective demand, political acceptability, and risk. In order to reveal the general range of justified investment on the existing property, the appraiser developed a logic of converting rents to justified investment by determining a market rent for each use and assuming an acceptable cash breakeven point<sup>1</sup> for financial planning and budgeting. This process capitalizes funds available for debt service or cash dividends into amounts of justified investment. This residual approach can be misleading if there are small errors in the cash-flow forecast, but if estimating bias is consistent when applied to the alternative uses, it does rank the alternatives in terms of their ability to pay for the subject property as is. The logic of this process is provided in Exhibit 15; the cost assumptions and calculations are provided in Appendix D.

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<sup>1</sup> The ratio of cash expenses, real estate taxes, and debt service to potential gross income.

BASIC LOGIC FOR RANKING ALTERNATIVE PROGRAM SCENARIOS BY JUSTIFIED PURCHASE BUDGET



A summary of these calculations from the Appendix are provided in Exhibit 16. A preliminary ranking based on a cash-justified investment (Line 3, Exhibit 16), without regard to future reversion value, demonstrates that Scenario 1 is the preferable use of the structure as is.

#### D. Ranking of Alternatives

In terms of estimating risks, Scenario 1 offers more certainty in regard to construction budget because multi-tenant office use is more similar to the previous use. Less extensive remodeling plans imply that fewer problems will arise. In Scenarios 2, 3, and 4, all new plumbing facilities and windows are required for floors 4 to 14. The same improvements simply need refurbishing if the building remains office use. In addition, the market for a high-rise residential or hotel facility is largely untested in the Hilldale area, but office use has been expanding. A change from office use of Pyare Square carries business risks that are difficult to ascertain, and the costs incurred in those risks could be great.

#### E. Political Compatibility of Alternatives

According to the village administrator of Shorewood Hills, all four of the scenarios would be politically acceptable because the village wants to see improvement of the building. However, Scenarios 2, 3, and 4 require a zoning change that must be approved by the village--an effort that is likely to be more time-consuming than futile.

Although condominiums are a relatively new idea to Shorewood Hills, the community boasts of being a residential suburb, and so a well-conceived plan should pass the board. A hotel use, however, is questionable and would be subject to serious scrutiny because demand is not evident. Office use appears to be most probable in light of the fact that costs are lower, zoning is proper, and demand is evident.

#### F. Conclusions

Since the estimated residual justified purchase prices of Scenarios 1 and 3 are fairly close, the choice in determining the most probable fitting use relates to the higher costs of converting to residential coupled with the risks involved in tapping an untested market. A prudent investor would seek to stabilize his income by choosing the less speculative scenario. A review of the summary feasibility data in Exhibit 17 supports the conclusion that the most probable use of the subject property in the opinion of the appraiser is Scenario 1.

The most probable use of the subject property would be renovation to a multi-tenant office building.

SUMMARY OF BUDGETS FOR ALTERNATIVE USE SCENARIOS

Budget Stem	Scenario #1	Scenario #2	Scenario #3	Scenario #4
1. Cost to construct	( 2,509,975)	(2,414,225)	(2,668,140)	(2,569,600)
2. Justified investment for property as is	2,897,566	1,409,513	2,868,983	(4,662,172)
3. Total justified investment in subject property as is	387,591	(1,004,712)	200,843	(7,231,772)

SUMMARY MATRIX OF FEASIBILITY OF ALTERNATIVE USES

Feasibility Factor	Scenario #1	Scenario #2	Scenario #3	Scenario #4
Justified Investment in subject	387,600	Negative	200,843	Negative
Remodeling Risks	Moderate	Significant	Significant	Serious
Effective Market demands	Positive	Positive	Questionable	Soft
Political acceptability	Strong	Strong	Strong	Mixed
Financial Risk	Depends on marketing ability in projecting new image for the building	Depends on desire to live in a high-rise	Depends on desire to own a home in a high-rise	Financial risk is great-- Hilldale is not a major office center nor a stop for travellers.

EXHIBIT 17 (Continued)

### B. Most Probable Price

A number of transactions involving the sale and purchase of multi-story office facilities have occurred in the greater Madison metropolitan area. This makes it possible to infer from past transactions the probable price and range of sales price involving the subject property and the most probable buyer defined above. In order to reconcile the important differences between the subject property and past transactions, a ranking system will be used. This system, shown in Exhibit 13, yields a weighted score point total for each property. The weighting of the features distinguishes the most probable buyer. The point totals are a measure of the desirability of the given property to the most probable buyer. The time-adjusted cash equivalent price of each comparable can then be weighted for a property point total that provides a common denominator for comparison purposes. The common denominator can be further refined by weighting it for net rentable area. The result is a cash equivalent dollar/point square foot figure, which is then related to the cash equivalent sales price by computing the mean price per point. This statistical process produces the predicted price per unit, or central tendency, and therefore a means to estimate the range and reliability of the sale price prediction, or standard error.

#### SCALE FOR SCORING COMPARABLES ON PROBABLE BUYER CONSIDERATIONS

---

Location	5 = Neighborhood of stable or increasing prices 3 = Neighborhood of stagnant prices 1 = Neighborhood of declining or deteriorating prices
Vacancy at sale	5 = Mostly occupied, 10% or less vacancy 3 = Partially occupied 1 = Vacant at time of sale
Building condition and remodeling required	5 = Minimal improvements required, good condition 3 = Average renovation, fair condition 1 = Empty shell, major renovation required, poor condition
Accessibility	5 = Easily accessible, visible entrance or entrances 3 = Some accessibility problems 1 = Very difficult access, one-way streets or no islands
Parking	5 = Adequate, available parking 3 = Limited, expensive parking 1 = No parking

---



C. Market Comparison Approach to Probable Price

The first problem in real estate market comparison is to define the unit by which the comparison proceeds. Recent comparable sales that were arm's-length transactions, located in office or retail nodes, ordinary mid/high-rise construction types, and preferably sold as vacant shells were collected. Exhibit 14 summarizes the comparable sales selected for use in predicting the most probable price for the subject property. Of the eight sales, one was for cash, the balance required some type of nonmarket seller-financing.

SUMMARY OF COMPARABLE SALES

Property	Date of Sale	Terms of Sale
110 E. Main	10/76	land contract
149 E. Wilson	8/78	seller-financing
16 N. Carroll	9/74	installment
137 E. Wilson	10/78	cash
301 N. Broom	11/79	land contract
212 E. Washington	12/77	seller-financing
102-110 N. Hamilton	7/77	land contract
202 N. Henry	3/79	land contract

For each of the eight selected comparables, shown in Exhibits 15 to 22, attributes thought to greatly influence buyer behavior were scored. Location in a neighborhood of stable or increasing prices was believed to be desired by the prudent investor. Vacancy presented a depressing effect on price and was therefore viewed as a negative factor. The amount of renovation required to bring the building into compliance with codes was recognized as a negative influence on price. Well-maintained, concrete structures were preferred over those with poor maintenance or ordinary construction. Accessibility also affects price with a negative influence recognized for those buildings with difficult access paths, constrained by poor visibility. Inadequate on-site or off-site parking is an important factor that impacts on price. The final weighted matrix is presented in Exhibit 23.

Exhibit 24 displays the calculations used to obtain the predicted price for the subject property and an estimate of the reliability of the prediction.

WEIGHTED MATRIX FOR COMPARABLE PROPERTIES OF 4610 UNIVERSITY AVENUE

Feature	Weight	Weight/Weighted Ratings								
		110 E. Main	149 E. Wilson	16 N. Carroll	137 E. Wilson	301 N. Broom	212 E. Washington	102-110 Hamilton	202 Henry	Pyare Square
Location	.10	3/.3	3/.3	3/.3	3/.3	5/.5	3/.3	3/.3	5/.5	5/.5
Vacancy	.20	3/.6	1/.2	5/1.0	1/.2	1/.2	1/.2	3/.6	1/.2	1/.2
Building condition & remodeling required	.35	3/1.15	1/.35	3/1.15	1/.35	1/.35	1/.35	3/1.15	1/.35	1/.35
Accessibility	.15	1/.15	1/.15	1/.15	1/.15	1/.15	3/.45	1/.15	1/.15	3/.45
Parking	.20	1/.2	1/.2	1/.2	1/.2	5/1.0	5/1.0	1/.2	1/.2	3/.6
Total weighted score	100%	2.4	1.2	2.8	1.2	2.2	2.3	2.4	1.4	2.1
Time-adjusted cash equivalent (TACE) price <sup>1</sup>		\$1,391,008	\$270,694	\$781,741	\$271,200	\$96,570	\$574,209	\$395,464	\$262,933	...
Total net rentable area (NRA)		76,000	32,000	35,725	25,500	5,760	38,000	28,000	24,000	84,969
TACE price per sq.ft.(NRA)		\$18.30	\$8.46	\$21.88	\$10.64	\$16.77	\$15.11	\$14.12	\$10.96	...
Mean price per point per sq. ft.		\$7.63	\$7.05	\$7.82	\$8.86	\$7.62	\$6.57	\$4.88	\$7.82	...

<sup>1</sup>See Appendix F for cash equivalency calculations.

## EXHIBIT 18 (Continued)

CALCULATION OF MOST PROBABLE PRICE USING  
MEAN PRICE PER POINT EQUATION METHOD

Comparable Property	Selling Price per NRA	Weighted Point Score	Price per NRA Weighted Point Score = (x)
1	\$18.30	2.4	\$7.63
2	8.46	1.2	7.05
3	21.88	2.8	7.82
4	10.64	1.2	8.86
5	16.77	2.2	7.62
6	15.11	2.3	6.57
7	14.12	2.4	5.88
8	10.96	1.4	7.82
		Total	\$59.25

$$\text{Central tendency } (\bar{x}) = \frac{\sum x}{n} = \frac{59.25}{8} = 7.41$$

$$\text{Dispersion (std. dev. = s)} = \sqrt{\frac{\sum (x - \bar{x})^2}{n-1}} = \sqrt{\frac{5.71}{7}} = .90$$

where:

<u>x</u>	<u><math>\bar{x}</math></u>	<u><math> (x - \bar{x}) </math></u>	<u><math>(x - \bar{x})^2</math></u>	<u>n</u>	<u><math>\frac{n-1}{1}</math></u>
7.63	- 7.41	.22	.05	8	7
7.05	7.41	.36	.13		
7.82	7.41	.41	.17		
8.86	7.41	1.45	2.10		
7.62	7.41	.21	.04		
6.57	7.41	.84	.71		
5.88	7.41	1.53	2.34		
7.82	7.41	.41	.17		
			5.71		

$$\text{Value range: } \bar{x} \pm s = 7.41 \pm .90 [8.31, 6.51]$$

Estimate of value of subject property =

$$\text{NRA of subject} \times \text{Weighted point score} \times \left[ \frac{\text{Sample mean of price per NRA}}{\text{per total weighted score}} = s \right]$$

$$(84,969) \times (2.1) \times [7.41 \pm .90]$$

High estimate:<sup>1</sup> \$1,480,000  
 Central tendency: \$1,320,000  
 Low estimate: \$1,160,000

<sup>1</sup>All value estimates are rounded.

## EXHIBIT 18 (Continued)

NET PRESENT VALUE UNDER  
L.C. FINANCING AND BALLOON PAYOUT  
ACCORDING TO CONTRACT ON 12/31/85

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982 - 84</u> <u>4 years</u>
Down Payment	\$500,000	\$250,000	\$250,000	
	3,576 (2A)	5,364 (3A)	11,145 (3B)	\$ 67,710 (12C)
	<u>\$503,576</u>	<u>33,435 (9B)</u>	<u>50,787 (9C)</u>	
		<u>\$288,799</u>	<u>\$311,932</u>	
				Balance <u>2,450,000</u>
				<u>\$2,517,710</u>

NET PRESENT VALUE CONVENTIONAL LOAN

	<u>1979</u>	
Down Payment	\$862,000	
	--	Balance <u>2,404,022</u>

Cash year 1	\$503,576	\$288,799	\$311,932	
		<u>.884666</u>	<u>.796455</u>	
Cash year 2	255,491	\$255,491		
Cash year 3	248,440		248,440	
Cash year 4	48,551			\$67,710
Cash year 5	43,710			67,710
Cash year 6	39,351			67,710
Cash year 7	<u>\$1,317,332</u>			
	<u>\$2,456,451</u>			\$2,517,710
		Total Cash Equivalency (Versus \$3,450,000 nominal selling price)		

INCOME PREPORTED (Contract)	GROSS INCOME	\$499,249
	NET INCOME	<u>196,548</u>

MARKET RENT LEVELS

At least gross	\$450,000
Less 40% expense	<u>180,000</u>
NOI	<u>\$270,000</u>

$$\text{OAR} = \frac{270,000}{2,456,451} = .109915$$

$$\text{SP/Unit} = \frac{2,456,451}{168} = 14,622$$

Example Problem: Cash Equivalent Price - Existing Mortgage plus  
Purchase Money Mortgage

Given the following information, determine the cash equivalent  
price of the transaction:

Sale Price	\$1,000,000
Existing Mortgage (assumed)	Balance \$682,052 Mo. Pmt. \$6,039.20 Contract rate 8.5% Expired Term 6 years Remaining Term 19 years
Purchase Money Mortgage	\$200,000 @ 10% Amortization over 20 years, balloon in 10 years
Current Financing	14.5%, 20 year amortization with 10 year balloon

- What is the equity investment?
- What is the balance outstanding on the existing (assumed) mortgage in 10 years?
- What is the payment on the PMM?  
What is the balance outstanding EOY 10?
- What is the cash equivalent price of the transaction?

Suggested Solution - II  
Existing Mortgage plus PMM

A.	\$117,948
B.	\$454,781
C.	\$ 1,930 \$146,049
D.	Equity \$117,948
	Assumed Existing Mortgage
	PW \$6,039.20, 120 mos. @ 14.5%
	PW \$454,781, EOY 10 @ 14.5%
	Purchase Money Mortgage
	PW \$1,930, 120 mos. @ 14.5%
	PW \$146,049, EOY 10 @ 14.5%
	<u>\$ 34,558</u>
	Total (Cash Equivalent Price) \$763,581

\* Courtesy of Byrl Boyce

## IX. PROBLEM (CASH EQUIVALENCY)\*

\*Courtesy of A. Robert Parente, SREA, MAI.

An Income producing property (special purpose) was resold by the Midland National Bank on a "workout." The terms of the sale were as follows:

Sale Price:	\$1,178,808, no cash by purchaser, i.e., 100% debt financing
Terms of Financing:	<p>First year - interest only at a rate of 4-1/2% and payable monthly</p> <p>Second year - interest only at a rate of 6% and payable monthly</p> <p>For the next 23 years - principal and interest at 8-1/2%, payable monthly</p>

The property (a 12,000 sq. ft., 3-year old restaurant building) was purchased on November 10, 1977 for \$1,178,808. Typical terms of financing at that time (11/77) were 9-3/4% interest for 25 years on a 75% loan-to-value ratio. It is estimated that equity required a 12-15% return.

## Questions:

- A. What are the monthly interest costs in years 1 and 2?
- B. What is the constant on the amortized portion of the mortgage?
- C. What is the monthly payment on the mortgage?
- D. What is the unadjusted sales price per square foot for use in the DSC approach?
- E. What is the cash equivalent price assuming 100% financing were typical in the market?
- F. What is the cash equivalent price assuming an equity yield requirement of 12% 15%?
- G. What is the adjusted sales price per square foot under each of the conditions set forth above?

Suggested Solution - IX  
Problem (Cash Equivalency)

A. Year 1: \$4,420.53  
Year 2: \$5,894.04

B.  $f = .09913$

C. \$9,737.97

D.  $\$1,178,808 \div 12,000 = \$98.23/\text{sq. ft.}$

E. PW i Costs Year 1 @  $9\frac{3}{4}\%$  = \$ 50,347.92  
PW i Costs Year 2 @  $9\frac{3}{4}\%$  = 60,918.28  
PW Amortization payments  
Years 3-25 @  $9\frac{3}{4}\%$  = 881,198.63

Cash Equivalent Price  
(100% Financing) = \$992,464.83\*

\*\$186,343.17 less than face value of note

$\$992,464.83 \div 12,000 = \$82.71/\text{sq. ft.}$

F. Discount Rates given  $Y = 12\%$ ,  $Y = 15\%$ ,  $m = 75\%$   $i = 9.75\%$

$Y = 12\%$

$Y = 15\%$

Mortgage  $.75 \times .0975 = .073125$   
Equity  $.25 \times .12 = \underline{.03}$

$.75 \times .0975 = .073125$   
 $.25 \times .15 = \underline{.0375}$

Discount Rate (r) = .103125      Discount rate (r) = .110625

PWCF @ 10.3125%

PWCF @ 11.0625%

Year 1      \$ 50,198.33  
Year 2      60,399.42  
Years 3-25      835,796.73

\$ 49,999.88  
59,715.07  
780,188.86

\$946,394.48\*\*

\$889,903.81\*\*\*

\*\*\$232,413.52 below face      \*\*\*\$288,904.19 below face

G.  $\$946,394.48 \div 12,000 = \$78.87/\text{sq. ft.}$

$\$889,903.81 \div 12,000 = \$74.16/\text{sq. ft.}$

## EXHIBIT 21

CASH EQUIVALENCY EXAMPLE

NAKOMA HEIGHTS  
168 APARTMENT UNITS  
SOLD NOVEMBER 1, 1979  
NOMINAL SALES PRICE \$3,450,000

- A. One appraisal reviewed recently contained the following summary analysis. It is used as it probably parallels the Madison Assessor's Office perception of the transaction:

<u>Date</u>	<u>Price</u>	<u>Gross</u>	<u>Net</u>	<u>GIM</u>	<u>Income Expense</u>	<u>S.P. Unit</u>	<u>OAR</u>
7/79	\$3,450,000	\$449,249	\$196,548	7.68	56.3	\$20,536	5.7

- B. Cash Equivalency - Monthly payment differential

If 25% down with 75% L/V at 10.55 for 25 years

Down	862,000
Mortgage	\$2,588,000
	<u>\$3,450,000</u>

Monthly payment \$24,528; Annual payment \$294,335

1979 - 4/80	Conv. Mortgage	\$294,335
	L.C. (9.25)	<u>272,875</u>
		\$ 21,460/12 = \$1,788 (A)

4/80 - 4/81

\$2,950,000			Conv. Mortgage	\$294,335
<u>250,000</u>				<u>249,750</u>
\$2,700,000	X	.0925	=	\$ 44,585/12 = \$3,715 (B)

4/81

\$2,700,000				\$294,335
<u>250,000</u>				<u>226,625</u>
\$2,450,000	X	.0125		\$ 67,710/12 = \$5,643 (C)



3. See Exhibit 21 for example of converting purchase price and terms for syndicator.
- H. Cash equivalency to be consistent with definition of fair market value is the subject of major debate:
1. Strictly enforced, it tends to over-discount prices to a point where the seller would not have sold.
  2. Typically represents sale of financing to benefit both parties.
  3. There is growing evidence that in many cases the buyer and seller have shared the costs of seller financing so that fair market value is closer to the midpoint between nominal sales price and deferred points discounted for institutional interest rates.
- VIII. Critique of a Real Estate Appraisal requires some understanding of the institutions of appraisal, the normative economic logic of appraisal, and the elements of reform of the appraisal process already at work.
- A. Political compromises in the 1930s led to the appraisal doctrine which defined fair market value as that which results from synthesis of three normative approaches to value based on the economics of before tax income.
  - B. Marshallian economics presumes stability of currency and interest rates. Appraisers and their customers confuse normative models to establish a fair price with behavior models that would predict the most probable price at which a property would sell.
  - C. Normative methods are not predictive of price but nine times out of ten appraisers are supposed to predict the price at which a property would sell under specific circumstances.

- D. If the appraisal is to serve as a benchmark for a decision under specific circumstances, or purposes, then it should not be governed by conditions characteristic of an efficient market since real estate is not known for market efficiency.
- E. Widespread acceptance of appraisal models is a function of the cost of reeducation, on-the-job training, word processing, and data processing, and that is being drastically altered by electronics and communication advances.
- F. A consistent theory for reconstructing appraisal has been prepared by Professor R. U. Ratcliff but its tenets are being adapted at the grassroots level by individuals rather than considered by the controlling committee of the professional societies.
- G. Factors which have delayed appraisal reforms include:
  - 1. Compensation system which separates responsibility for payment of appraisal fee from beneficiary of objective useful analysis with a corresponding decline on reliance by financial institutions in the lending process, etc.
  - 2. Lack of understanding of the variety of services in terms of appraisal, feasibility analysis, or consulting which a professionally designated appraiser might offer. The right product depends on asking the right questions.
  - 3. Fear of appraisal societies that a retreat from old principles will discredit appraisal designations and existing regulatory monopolies and therefore contribute toward further competitive erosion by the accountants and the engineers and the investment bankers.

4. Postponement of reform pending merger of the major appraisal societies, an effort recently frustrated by a membership vote in March, which will trigger significant competition and public efforts which lack the benefit of significant reform of the profession and its out-of-date educational programs.

H. A common sense appraisal outline representing the Ratcliff approach would be as follows:

1. What is the issue?
2. What are the basic appraisal problems in the issue?
3. What definition of value is most appropriate?
4. What implicit assumptions are inherent in the value definitions?
5. What explicit assumptions are provided by others?
6. What is the most probable use of the property?
7. What is a profile of the most probable buyer of the property?
8. What level of behavioral transaction forecasting can be applied?
  - a. Inference from market sales
  - b. Simulation from actual buyer calculus
  - c. Standard normative models for prudent buyers
9. What externalities should be considered as modifying the expected transaction range?
10. How does the most probable price test in light of criteria presumed in the buyer profile?

- I. To critique an appraisal provided as a benchmark of a mortgage loan and to classify the appraiser as contemporary or old guard, the reader should look to the following elements.
  1. Definition of value - is it the classic definition or defined as the most probable price at which it would sell subject to specific financing terms?
  2. Does the interest to be appraised represent fee title encumbered or does it include entitlement to the financing requested or subject to financing appropriate to regulated institutional standard?
  3. For a proposed project does the appraisal assume completion and therefore a future appraisal date and does it assume absorption of the units into the market in a stated period of time. If so, it must prove absorption, capture rate, and construction as reasonable assumptions or it has sidestepped the critical issue of indirect cost.
  4. Does it discard any of the three approaches at the outset as inappropriate or does it wait until the report reaches the section called synthesis?
  5. In using the market approach for an appraisal, does the report indicate buyer motivation on comparable sales or current status of the comparable? Does the appraiser use basic statistics for adjustment or arbitrary percentage or flat dollar shifts in value? Does it provide the standard error of the investment or the mean price?
  6. In using the market approach for an appraisal, does the report indicate buyer motivation on comparable sales or current status of the comparable? Does the appraiser use basic statistics for

adjustment or arbitrary percentage of flat dollar shifts in value? Does it provide the standard error of the investment or the mean price?

7. In doing the income approach, does the appraiser use normalized income or cash flows over time, and in capitalizing the income does he use market rates, Ellwood rates, or cash on cash mortgage equity. Only the latter is reliable for mortgage loan purposes.
8. In doing the cost approach, does the appraiser show the entrepreneurial compensation or is that buried in over-estimated construction costs? Hard dollar costs should be the lowest of three estimates, not the highest as advocated by appraisal textbooks. The spread is the developer's fee for the entrepreneurial contribution to land, labor, and capital.
9. Does the appraiser provide a test on the after tax basis of either his resale assumptions on which his income approach depends or his conclusion as to most probable price at which it would sell? These tests might include something like VALTEST. The resulting financial ratios discussed previously, or a front door approach to demonstrate the rents implied by a given cost of acquisition.
10. Check the statement of limiting conditions to see what applies relative to underlying assumptions and limitations on use.

## FOURTH MODULE

### REAL ESTATE FEASIBILITY

Presented by

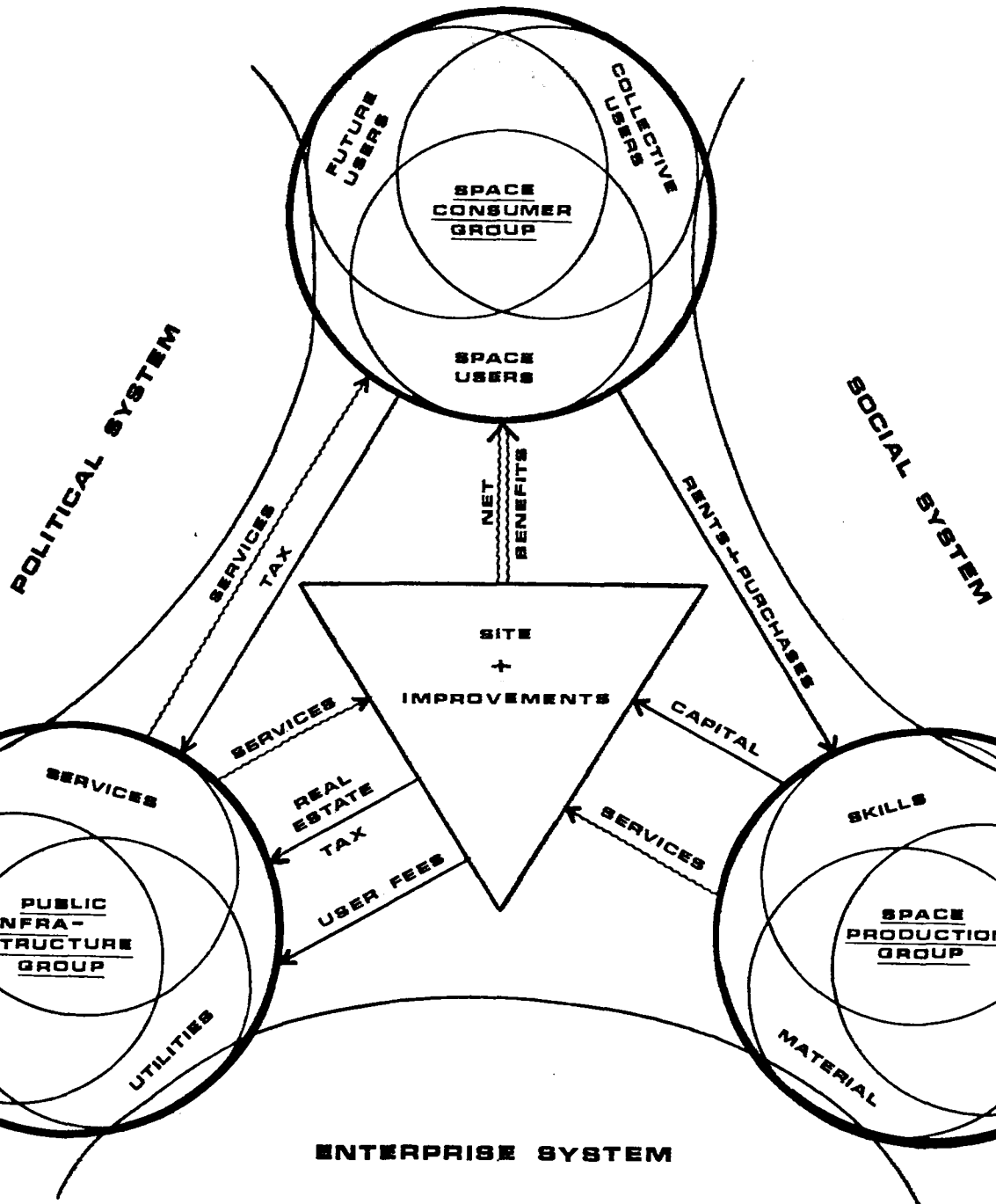
Professor James A. Graaskamp, Ph.D, CRE, SREA  
University of Wisconsin, School of Business

### FIRST HOUR

#### I. Basic Concepts and Definitions

- A. Real estate is a tangible product - defined as artificially delineated space with a fourth dimension of time referenced to a fixed point on the face of the earth.
1. Real estate is a space-time unit, room per night, apartment per month, square foot per year, tennis court hours, or a condominium for two weeks in January at a ski slope.
  2. To the space-time abstraction can be added special attributes to house some form of activity.
  3. Improvements from survey market to city layouts to structures define space.
  4. Legal contracts and precedents define time.
  5. Rights of use are defined by public values, court opinions.
  6. Private rights to use are those which remain after the public has exercised its rights to control, to tax, or to condemn.
- B. A real estate project is a 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 income 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 production 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 breakeven at a minimum, after full payment for services rendered.
  3. Solvency of the total process, not value, is the critical issue.
  4. Land is an environmental constraint and not a profit center.
  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;



# THE REAL ESTATE PROCESS



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.

"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 reasonably 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 improvements on it, the highest and best use may very well be determined to be different from the existing use. The existing use will continue, 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 contribution 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 appraiser's judgment and analytical skill, i.e., that the use determined

from analysis represents an opinion, not a fact to be found. In appraisal practice, the concept 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 Boyce, Ph.D., SRPA, Ballinger Publishing Co., Cambridge, Mass., 1975. (Emphasis added.)

- 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 public 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, and the proforma budget and the end of the year income statement.
  3. Risk management is the control of variance between key assumptions and realizations.
  4. An appraisal is a set of assumptions about the future productivity 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 replaced by concepts of most fitting use and the concept of most probable use.
1. The most fitting use is that use which is the optimal reconciliation of effective consumer demand, the cost of production, and the fiscal and environmental impact on third parties.
  2. Reconciliation involves financial impact analysis on "who pays" and "who benefits" - thus the rash of debate on how to do impact studies.
  3. The most probable use will be something less than the most fitting use depending upon 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. Most probable use means that an appraisal is first a feasibility study of alternative uses for a site in search of a user, an investor, and 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 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 objective, 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 content.
  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. An enterprise is any organized undertaking, and a real estate problem or project always begins from the viewpoint of some enterprise relative to its environment.
1. The systems engineer sees the eventual form of an enterprise, in terms of both its configuration and behavior, as representing a negotiated consensus between two general sources of power--the power of the environment to dictate form and behavior of the organization on the one hand, and the power of the organization to decide for itself what its characteristics and behavior will be on the other.
  2. The systems 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.

## REAL ESTATE FEASIBILITY

Presented by

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## SECOND HOUR

## I. 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.
1. The nature of a decision process must be made explicit.
  2. Defining a problem in terms of inherent characteristics must be addressed today.
  3. The nature of risk and risk management must be made explicit because the definition implies uncertainty by means of a subjective probability, "reasonable likelihood of succeeding."
  4. There is a need to identify and measure the weight elements of success.
  5. There is a need to identify and dimension the limited resources of the client in terms of personnel, expertise, cash, and time for commitment and completion.
  6. Definition of decision process and problem lead to proper description of work project for the analyst.

- C. 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

- D. These basic elements and definitions then lead to the requirement of a correct report title. 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 set 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 of forms of organization, and politician briefs.
5. Architectural and engineering studies: alternative building envelopes, structural solutions, and net usable space and space relationships, together with technical resolutions of problems in the physical context adequate for budgeting and marketing work.
6. Compatibility studies: project impact on various groups affected in terms of their attitudes, expectations and vested interests in the status quo and community goals.
7. Financial studies: cash flow budgets, potential risk and sensitivity analysis, fiscal impact analysis, and alternative sources of capital, tax implications, etc.

E. Feasibility analysis is a sub-topic within the generally expanding literature of problem solving. Any Counselor or problem solver is urged to read the following:

1. The Art of Problem Solving, Russell L. Ackoff, John Wiley & Sons, New York, 1978.
2. The Complete Problem Solver, John R. Hayes, The Franklin Institute Press, Philadelphia, 1981.
3. Strategic Planning in Emerging Companies, Steven C. Brandt, Addison-Wesley Publishing Company, 1981.

Ackoff subdivides any problem into five types of components:

1. The decision maker--the person or persons faced with the problem as a group or individual.
2. The controllable variables--those aspects of the problem situation the decision maker can control.
3. The uncontrolled variables--those aspects of the problem situation the decision maker cannot control but those which, together with the controlled variables can effect the outcome of his choice. The uncontrolled variables may be quantitative or qualitative, but together they define the problem environment, in the language of Ackoff, or the context in the language of Christopher Alexander.
4. Constraints imposed from within or without on the values of the controlled and uncontrolled variables. For example, the consumer places a limit on how much he is willing to pay for rent, although rent levels themselves are often set by cost factors beyond his control.
5. The possible outcomes produced jointly by the decision makers choice and the uncontrolled variable.

Ackoff further refines problem solving:

A problem is said to be solved when the decision maker selects those values of the controlled variables which maximize the value of the outcome; that is, when he has optimized. If he selects values of the controlled variables that do not maximize the value of the outcome but produce an outcome that is good enough, he has resolved the problem by satisficing. There is a third possibility: he may dissolve the problem. This is accomplished by changing his values so that the choices available are no longer meaningful. For example, the

problem of selecting a new car may be dissolved by deciding that the use of public transportation is better than driving oneself. It may also be dissolved by moving to within walking distance from work so that driving is no longer required. We use "solving" loosely to cover all three alternatives.

Ackoff also points out that many problem solvers are reactive responding to the immediate irritation which leads us "to walk into the future facing the past - we move away from, rather than toward something. This often results in unforeseen consequences that are more distasteful than the deficiencies removed." Recall D.D.T. Problem should be proactive by specifying the ideal outcome and looking for ways to move in that direction. "The chances of overlooking relevant consequences are minimized when we formulate a problem in terms of approaching ideals ... focusing on an ideal reveals the relationships between things that can be done in the future and tends to make us feel simultaneously with sets of interacting threats and opportunities, to treat them as a whole, as a system of problems.

From that it is important to learn that:

Planning is dealing with sets of interacting problems

Problem solving is finding alternative routes to approach an ideal solution

Feasibility analysis is testing a specified course of action for its likelihood of fulfilling the ideal

An appraisal is a fictitious feasibility study in which human behavior is assumed to be normative

F. The Hayes text is a rich collection of problem solving and decision making methods. Hayes believes that problems should be represented with doodles, flow charts, simple diagrams, or other graphics. He sees the problem solving process as correctly representing the goal, correctly specifying the initial state of affairs, correctly specifying the differences between the current state of affairs and the goal, the restrictions in moving toward the goal and operators available to advance affairs to the goal. He defines decision technique for conditions of certainty, uncertainty, or competitive conflict. Hayes develops for strategic viewpoints:

1. The mini-max strategy which assumes that "nature is against us" so that the object is to choose the strategy that will minimize the disaster, although it has the unfortunate property that may also eliminate the best possible outcome.



2. The maxi-max strategy chooses the course of action which could provide the best of the best possible outcomes, but it does not defend you against the possibility of enjoying the worst possible outcome.
  3. The Hurwitz strategy allows a compromise between the pessimistic and the very optimistic strategies above while allowing one to modify the probabilities with a factor for the level of optimism or pessimism of the decision maker.
  4. Minimizing maximum regret strategy may be most significant for real estate investors as in phasing the project or buying standby credit at an exorbitant rate.
- G. Hayes describes four general types of decisions which require different decision procedures: decisions under certainty, under risk, under uncertainty, and under conflict. In the case of certainty the facts are known and static, and it is only necessary to rank in terms of desirability. Consider four student apartments as described in Exhibit 2. Hayes demonstrates five different methods which may be useful for making decisions under certainty:
1. Dominance which determines that one alternative dominates if it is at least as good as the other properties and is better in one attribute on at least one property. (See Exhibit 3.)
  2. The lexicographic method which ranks like a dictionary specifying the most important attributes first and then resolving ties in ranking by going to the second most important attribute second. The weakness is that the selection process ignores all but the most important attributes so that the selection may have serious unattractive secondary attributes.
  3. Additive weighting takes all attributes into account but gives them different weights depending on value systems of observer. It does not recognize interactions of attributes so it can lead to inappropriate decisions by ignoring interactions just as lexicographics ignore minor attributes. (See Exhibit 4.)
  4. Effectiveness indices take into account interactions, such as the profitability index which takes present value of premises relative to total capital budget.

## EXHIBIT 2

## Student Apartments

A1		A2	
brightness:	always needs artificial lighting	size of rooms:	cramped
cleanliness:	needs vacuuming	noise level:	usually quiet
kitchen:	new stove, sink, and refrigerator	general repairs:	needs no repairs
noise level:	frequently noisy	brightness:	very bright throughout the day
size of rooms:	average	cleanliness:	needs vacuuming
general repair:	needs no repairs	landlord attitude:	cordial
distance from place of employment:	15 minutes	distance from place of employment:	60 minutes
landlord attitude:	indifferent	kitchen:	stove, sink, and refrigerator in good condition
A3		A4	
distance from place of employment:	20 minutes	general repair:	needs no repairs
brightness:	fairly bright	brightness:	very bright
landlord attitude:	very friendly	noise level:	often quiet
cleanliness:	ready to move in	size of rooms:	small
kitchen:	stove, sink, & refrigerator, old but useable	distance from place of employment:	45 minutes
noise level:	sometimes noisy	kitchen:	stove & refrigerator in good condition
general repair:	needs one week repair work	landlord attitude:	cordial
size of rooms:	comfortable	cleanliness:	ready to move in

EXHIBIT 3  
Alternatives

	1	2	3	4
Distance in Minutes	15 Min	60 Min	20 Min	45 Min
Size of Rooms	Average	Cramped	Comfortable	Small
Kitchen	New stove, etc.	Stove, etc. in good condition	Stove, etc. old but useable	Stove, etc. in good condition
General Repair	Needs no Repair	Needs no Repair	Needs one Week work	Needs no Repair
Cleanliness	Needs Vacuuming	Needs Vacuuming	Ready to Move in	Ready to Move in
Noise Level	Frequently Noisy	Often Quiet	Sometimes Noisy	Often Quiet
Brightness	Always needs artificial light	Very Bright	Fairly Bright	Very Bright
Landlord	Indifferent	Cordial	Very Friendly	Cordial

Only one alternative dominates another in this problem: Alternative 4 dominates Alternative 2. Alternative 4 is as good as Alternative 2 in "kitchen," "general repair," "noise level," "brightness," and "landlord," and it is better in "distance," "size," and "cleanliness." Alternative 1 does not dominate Alternative 2 because, while it is better in some properties, such as "distance," it is worse in others.

## EXHIBIT 4

## Alternative Apartments

	1	2	3	4	Weight
Distance in Minutes	15 Min (4)	60 Min (1)	20 Min (3)	45 Min (2)	7
	28	7	21	14	
Size of Rooms	Average (3)	Cramped (1)	Comfortable(4)	Small (2)	4
	12	4	16	8	
Kitchen	New stove, etc. (5)	Stove, etc. in good condition (4)	Stove, etc. old but useable (3)	Stove, etc. in good condition (4)	3
	15	12	9	12	
General Repair	Needs no Repair (5)	Needs no Repair (5)	Needs one Week work (2)	Needs no Repair (5)	2
	10	10	4	10	
Cleanliness	Needs Vacuuming (4)	Needs Vacuuming (4)	Ready to Move in (5)	Ready to Move in (5)	1
	4	4	5	5	
Noise Level	Frequently Noisy (2)	Often quiet (4)	Sometimes Noisy (3)	Often quiet (4)	1
	2	4	3	4	
Brightness	Always needs artificial light (1)	Very bright (5)	Fairly Bright (3)	Very Bright (5)	1
	1	5	3	5	
Landlord	Indifferent(3)	Cordial (5)	Very Friendly (4)	Cordial (5)	1
	3	5	4	5	
Sum of Value X Weight	75	51	65	63	

5. Satisficing approach requires the decision maker to identify the minimum value he is willing to accept for each of the attributes, rejecting alternatives which fail the test, and accepting the first alternative which meets all the minimal values tests. (For example, a building with a debt cover ratio no less than 1.2, a cash on cash yield of 9%, leasable area no less than 60,000 square feet in an office building no more than five years old with one parking stall per 300 square feet of G.L.A.) (See Exhibit 5.)

#### H. Summary of systems in Exhibit 6

Success may be measured by any of the above systems with lists of attributes selected by the analyst as relevant tests of alternative courses of action, such as:

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 breakeven, rate of capital recapture, loan ratios or sensitivity to specified contingencies
  6. Probability distributions of alternative outcomes and standard error
  7. Psychological gratifications
  8. Specified legal attributes
  9. Measures of impact on environment
- I. Data base management on personal computers will require that you learn to use decision rules dealing with certainty, conflict, and difference by understanding the advantages and disadvantages of each rule.

EXHIBIT 5  
Worksheet Containing MUSTS and WANTS,  
With Appropriate Weights Added, For a House-Purchase

MUST OBJECTIVES: Resource Limits and Requirements

- Down payment not to exceed \$10,000
- Monthly payment (principal, interest, taxes, and insurance)  
not to exceed \$300
- Minimum of four bedrooms
- Minimum of two bathrooms
- Location outside of downtown area, within 45-minutes driving  
time to office parking lot
- Occupancy within 60 days

WANT OBJECTIVES: Best use of resources, maximum results and returns,  
minimum disadvantage

	Weight
Minimum down payment . . . . .	6
Lowest monthly payment . . . . .	10
Location conveniently close to work . . . . .	7
Able to use present furnishings, drapes . . . . .	5
Shelter for two cars . . . . .	4
Public transportation nearby . . . . .	4
Location convenient to elementary and high schools . . . . .	8
Location convenient to shopping center, stores . . . . .	7
Workshop and storage space available . . . . .	2
Stable resale value . . . . .	7
Attractive; modern style and appearance . . . . .	5
Good landscaping; trees, shrubs . . . . .	4
Large play area for kids . . . . .	5
Large, modern kitchen with a view . . . . .	2
Large, comfortable family room . . . . .	3
Location on quiet street, in good neighborhood . . . . .	4
Minimum maintenance cost to house . . . . .	7
Minimum risk - tax increase or special assessments . . . . .	4

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Source: Page 198, The Rational Manager by Charles H. Kepner and Benjamin B. Tregoe.

## EXHIBIT 6

## Decision Making Methods

Method	Type	Use this method	Cost of computation required	Number of alternatives examined
Dominance	Optimizing	for preliminary screening of alternatives	low	all
Lexicography	Optimizing	when attributes are very different in weight	very low	all
Additive Weighting	Optimizing	when it is important to find the best alternative	high	all
Effectiveness Index	Optimizing	when it is very important to get best alternative	very high	all
Satisficing	Non-optimizing	when the cost of examining the whole set of alternatives is very high	very low	some

## REAL ESTATE FEASIBILITY

Presented by

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## THIRD HOUR

## I. Problem Perceived by the Client

The original problem as perceived by the client is generally ill-defined or misdirected as the problem becomes understood by the analyst.

A. There are several reasons for the shift in perception by both parties, such as:

1. Implicit assumptions by the client as to the services offered by a real estate appraiser
2. Implicit assumptions and poor sequencing in the decision process
3. The bias of viewpoint, because everyone is an expert on real estate
4. A bias introduced by training, previous experience, or peer group controlling the client

B. The consultant must begin by attempting to discover the sequence or protocol of decisions which have brought the client to that point to discover what has been taken for granted, what has been overlooked, and what will be needed.

C. Education can't provide the tools for this critical initial step in the relationship between counselor and client. Ackoff pointed out that educators generally produce only competence, communicativeness, and concern while the characteristics that makes for outstanding managers are courage and creativity. Hayes goes on to define creativity as "A special kind of problem solving, that is the act of solving an ill-defined problem. Ill-defined problems are those which require problem solvers to contribute to the definition of the problem from their own resources."



- D. The consultant must structure the initial interview and subsequent intermediate report sessions to ask the client explicitly about the following:
1. His concept as to the "essence" of his business
  2. His preferred method of meeting entrepreneurial risk
  3. His preferred method of dealing with governmental regulation and news media
  4. His preferred method of personnel compensation
  5. His style of value decision trade-offs between qualitative and quantitative issues
  6. His perception of his risk position and his risk utility "curve"
  7. His personal non-business objective
  8. His reasons for being involved with real estate (a simple question revealing, in most cases, tremendous naivete and lack of in-depth preparation by the client)
- E. In the process of developing the assignment with the client, keep in mind the following questions:
1. What is the Problem at hand?
  2. From what Viewpoint or Perspective should the problem be analyzed?
  3. What Judgments seem to be appropriate?
  4. What Assumptions should be adopted?
  5. Is the resulting Premise realistic?
  6. What Derivation Process should be applied?
  7. What Conclusion results?
  8. What Alternative choices are available?
- F. Since the problem perceived by the client may be poorly defined, the analyst needs to convert the stated problem into a sequence of issues which relate to the enterprise decision process outlined earlier. (See Exhibit 7.)
1. That stated question, "How much should I pay for the land?" is a step in implementation of the program. Go back to the statement of objectives, "Why do I need to invest in land?" and the search for opportunities, "How did we choose this piece of land?"
  2. In general, you must discover what has been done, what explicit assumptions have been made, what implicit assumptions seem to be operating, and who made the decisions thus far. (See Exhibit 8.)

EXHIBIT 7  
SCOPE OF SERVICES

BASIC BUSINESS	BASIC SERVICES	COMPONENT ACTIVITIES	INFORMATION TRACTS & CRITICAL DETAILS
Real Estate Investment Analysis	Development Coordination	Planning & Programming	Analysis of Economic Context Re: Past Growth Trends Economic Base & Volatility Strengths & Weaknesses Recent Trends & Changes Future Economic Outlook including - Growth Potential - Growth Constraints - Investment Considerations
		Site & Use Analysis	
	Development Feasibility Analysis	Economic Analysis of Region	Analysis of Specific Property Types Re: Past Directions of Growth Major Growth Factors Future Growth Areas Sub-Area Differentiation Historic Supply/Demand Relationships Future Demand Trends Absorption Capacity Recent Trends & Projected Construction
		Construction Cost Analysis	
		Highest & Best Use Analysis	
		Market Analysis	
	Appraisal	Marketability Analysis	Analysis of Specific Property Types Re: Rent Levels & Trends Vacancy Levels & Trends Quality Differences Locational Differences Lease Terms & Differences
		Location Analysis	
		Rent & Vacancy Survey	
	Income Property Analysis (potential or previous acquisitions & problem properties)	Market Price Analysis	Analysis of a Specific Property Re: Revenue Assumptions (1st year & Growth) Expense Assumptions (1st year & Growth) Reserves and Capital Replacement Req'ts Financing Assumptions Depreciation Assumptions Resale Assumptions Return Comparisons
		Value-Price Determination	
		Financial Return Analysis	
		Transaction Structuring	
	Acquisition, Sale, Trade, Refinancing Assistance	Hold/Sell/Refinance/Evaluation	Formulation of Investment Criteria Re: Economic expectations (nat'l & local) Realistic Return Levels for alternate markets and property types Risk/return tradeoffs Diversification (geographic & prop. type) Management Strategies Alternate investment vehicles
		Investment Strategy Formulation	
		Acquisition Negotiation	
		Sale & Debt Packaging	
	Property Management & Analysis	Property Search & Evaluation	Formulation of Search Methodology Re: Comparison/Selection of Markets Identification/Solicitation of available properties Contact with Owners and/or Brokers Determination of Market Preference Points (Cap rates, cash-on-cash returns, expense ratios, and market trends) Approximation of Value to Buyer Determination of Upside Potential
Buyer Identification			
Management Assistance	Management Analysis & Planning		

EXHIBIT 8

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.

3. A useful technique is always to reverse the question or place it in some hierarchy of values.
  - a. For industrial real estate assume that working capital is preferable to fixed assets. Therefore,
  - b. Own no real estate - shift real estate problems by purchasing procedures.
  - c. If you can't shift space needs, lease short term
  - d. If you want the option of long term leases, negotiate a long term lease for rental discount and then give back part of the discount if you cancel under a change of conditions clause.
  - e. Own or build only as last resort
  
4. One creative think system recommends conversion of new problem by analogy to old format; retail location is useful for any multi-tenant space just as commodity terms made describe a mortgage. Familiar problems may need a purge of conventional answers by conversion to strange analogies.
  
- G. Another way of understanding the problem is to relate it to scope of services you can offer, as in Exhibit 8, or the ideal way to approach a solution for the client. For example:
  1. It is preferred to identify locational need and use requirements of a user before searching for a specific site. (See Exhibit 9.)
  2. If the site is already owned by a specific client, it is then necessary to adapt the use to the specific limitations of the site. (See Exhibit 10.)
  3. In the absence of a site in search of a use or a use in search of a site, the problem is to search for an investment opportunity in real estate. (See Exhibit 11.)
  4. Limitations of a site owned may require the consultant to solve both a disposition and an acquisition problem.
  
- H. Definition of a report medium and viewpoint of an intended audience is critical in the early stages of defining the assignment.
  
- I. In distinguishing between judgment and assumptions, the analyst may need to be an expert on experts, helping to select members of a team of specialists under the control of a generalist.

EXHIBIT 9

Figure 6

Analysis Process: In Search of a Use(s) For a Site

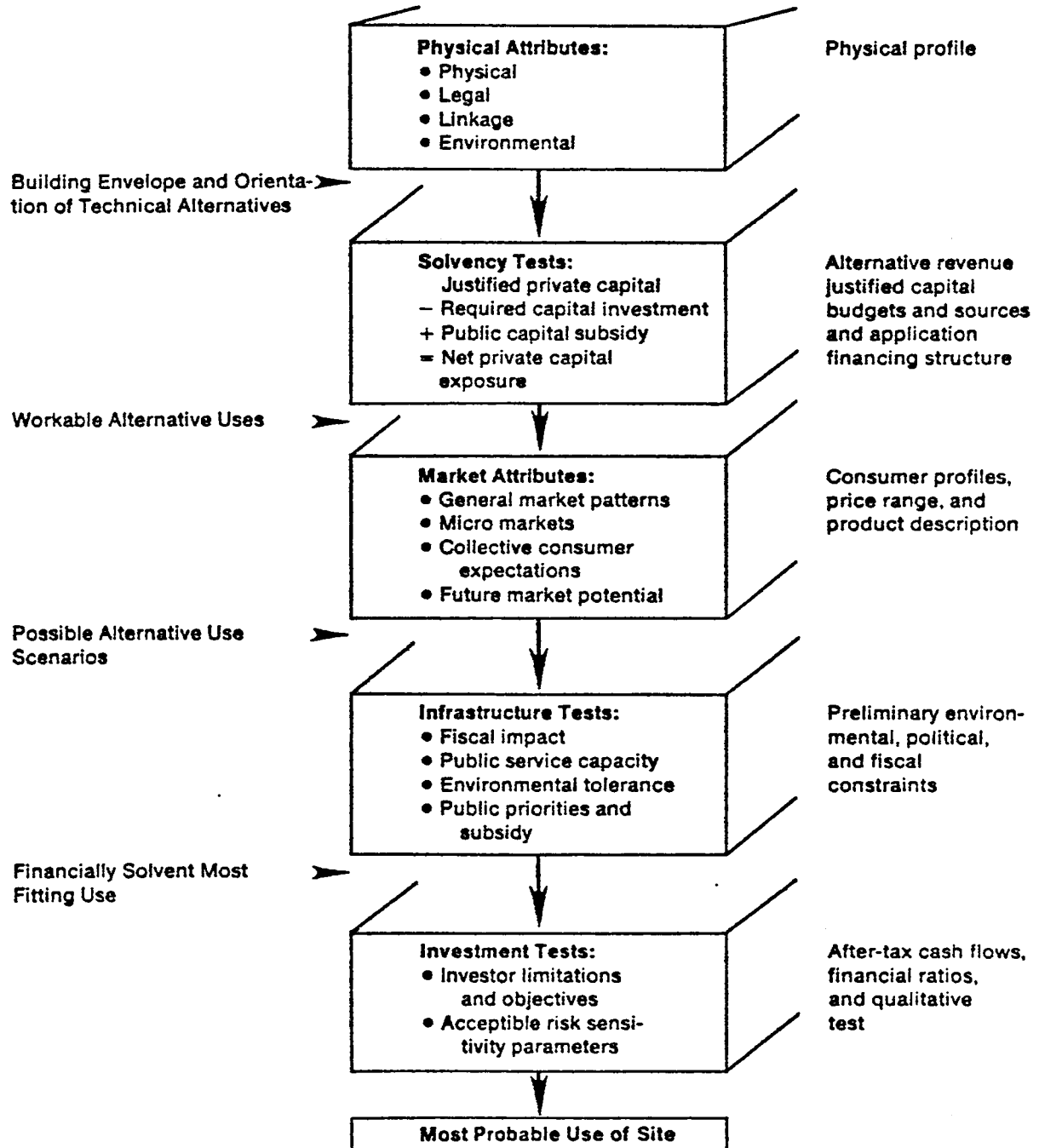


EXHIBIT 10

**Figure 5**  
**Analysis Process: The Search For a Site For a Use(s)**

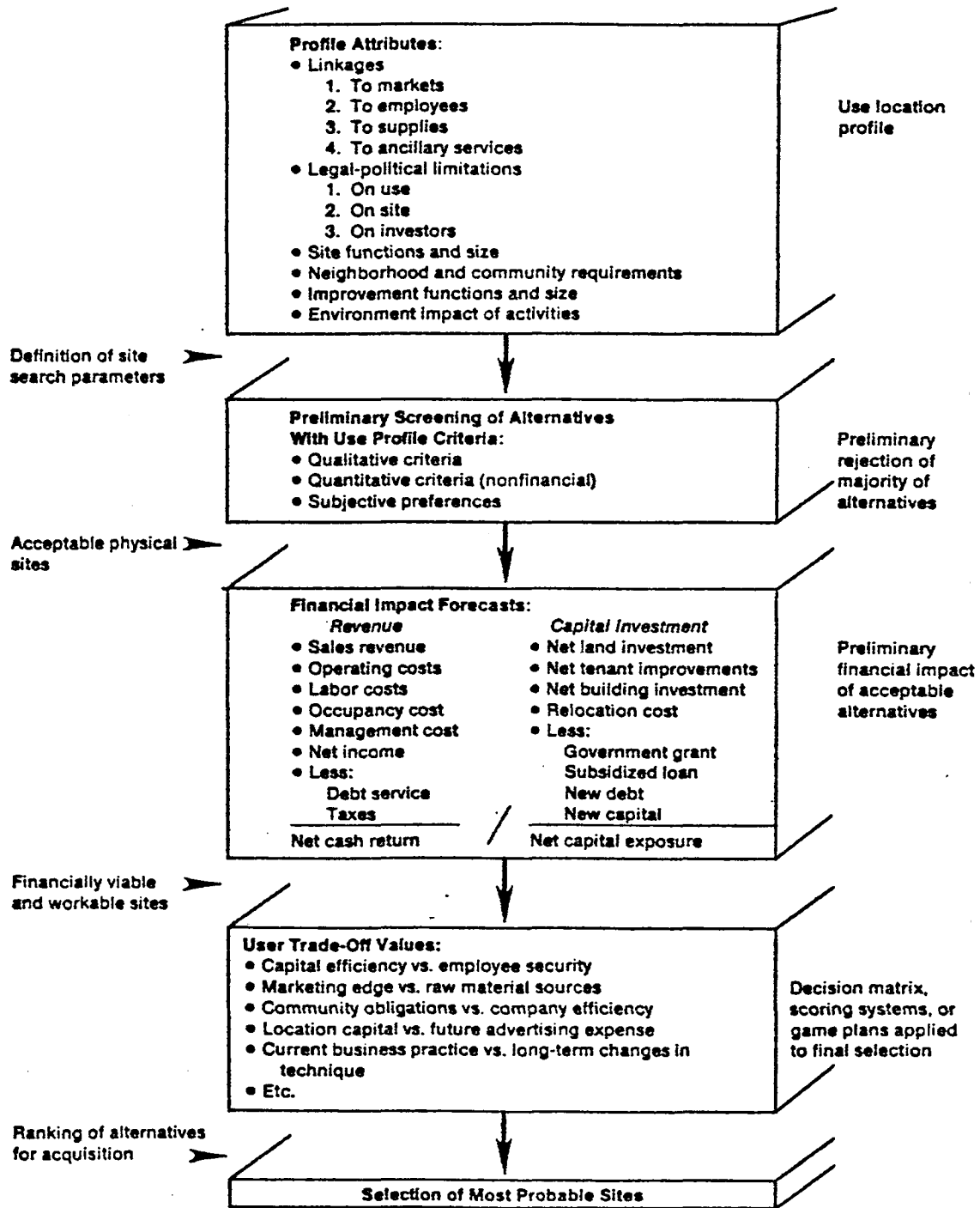
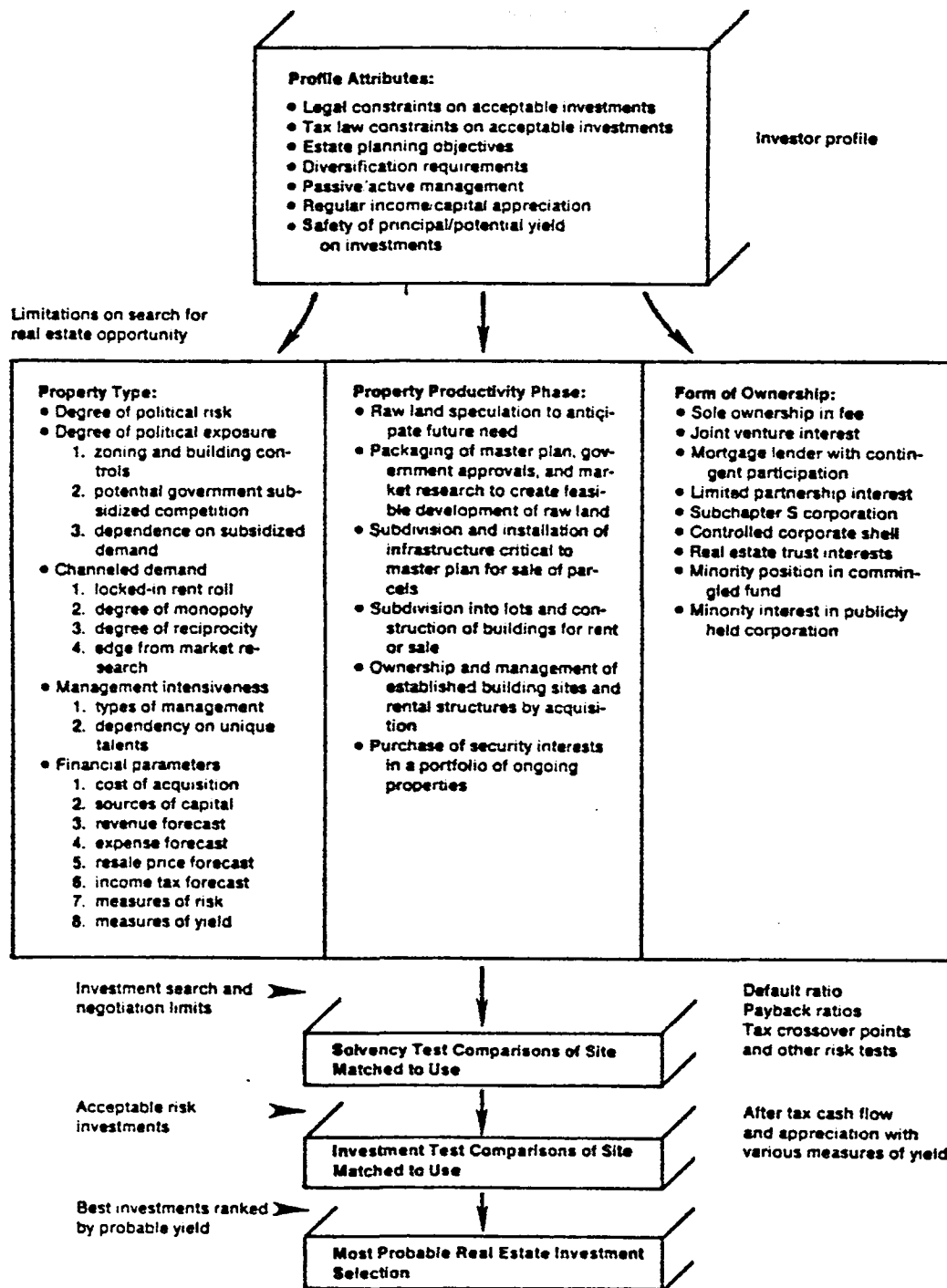


EXHIBIT 11

**Figure 7**  
**Process for Investor Selection of Real Estate**



REAL ESTATE FEASIBILITY

Presented by

Professor James A. Graaskamp, Ph.D., CRE, SREA  
University of Wisconsin, School of Business

FOURTH HOUR

- I. Although macro-economic theory argues a tendency toward perfect competition, the individual project should be striving toward a monopoly. Market analysis is the research necessary to create and maintain a competitive edge in order to stabilize investment performance against the profit decline of perfect competition, against inadvertent clash with community attitudes, and against future user rejection.
  - A. Given that premise, market research is risk management. The levels of market research would be:
    1. Intuitive positioning to reflect attitudes about the future long-term trends of society, demographics, the economy, etc.
      - a. For example, if government, education, and high tech are attitudes, then positioning might lead one to focus on state capitals with universities having technical rather than liberal arts emphasis.
      - b. Attitudes might be set by futuristic books such as Megatrends, Third Wave, or The Ten Countries of North America.
      - c. An old precept is "sell if everybody's buying, market to the gap that everyone overlooks." Thus market positioning might take an established idea in first and second tier cities and introduce it in the third and fourth tier cities.
    2. Next, marketing would stratify within a narrow band of broader demographic market of intuitive positioning.
    3. Stratification would consist of several segments of the broader band of preference (elderly breakdown or thirteen housing segments).
    4. Identifying issues and symbols which would trigger adverse reactions of the collective consumer.



5. Evaluating demand/supply relationships to determine need for sensitivity to specialized consumer needs.
  6. Focusing the project to provide relief from anxiety, a reduction in physical discomfort, improved efficiency of an activity house, or improvement of self-esteem of the targeted user/customer group.
  7. Defining and controlling the window for presentation of the concept (the approach zone, the sales center office, the formal introduction and interview, etc.).
  8. Identifying alternative markets and basic product features necessary to permit marketing campaign for an alternative second course, a fallback position.
- B. The real estate project marketing program must keep in mind the features required to neutralize the collective consumer who might oppose entitlements, the features and codes which will motivate the space consumer at a price which provides financial viability, and the overall six strategic attributes to be marketed to the investor. At the very least, market and merchandising research should be able to eventually produce a marketing program which suggests:
1. Where the developer/investor should position his effort relative to demographic and economic trends given a desired scale of operation.
  2. The unmet needs in the marketplace in terms of most probable user groups, their total number, and their effective demand constraints.
  3. The time span of their effective demand in the marketplace.
  4. The competitive standard product minimum required for entry into the market.
  5. The competitive product/service/margin necessary for monopoly advantage.
  6. The project image most likely to neutralize collective opposition.
  7. Essential media and themes required for promotion programs.
  8. Financial parameters required to attract investors, mortgage or equity.

II. The first step is to reduce aggregate data about user groups which is plausible but overly general information to a scale which will focus on a sub-segment with a proper rationale or hierarchy. To do that requires an analytical model and in most cases, each situation requires the analyst to create his own model with which to structure the data available and to discover the missing links in the logic diagram which must be researched.

A. Models organize the analyst, the report, and the client

1. Models explain what you are going to do.
2. Models make relationships and key assumptions explicit.
3. Models permit clients to understand logic of conclusions and to test his own set of assumptions.

B. A market research model should be careful to recognize?

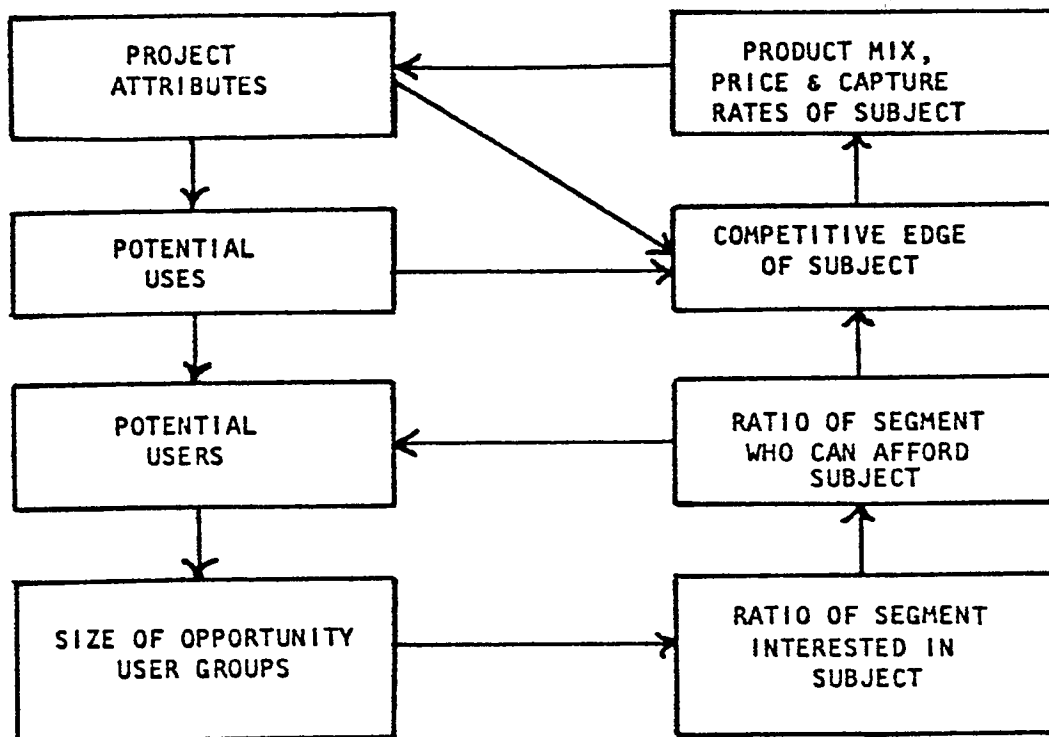
1. What are the questions?
2. What data is available which is relevant?
3. What theory is available to focus data on the questions?
4. How will the results be communicated?
5. What are the abilities of the analyst?
6. What is the cost benefit ratio between the model method and the question?

C. Merchandising data is generally primary information generated by the analyst about specific competitive projects and specific user groups which will permit an estimate of what percentage of the opportunity group can be captured for a specific project.

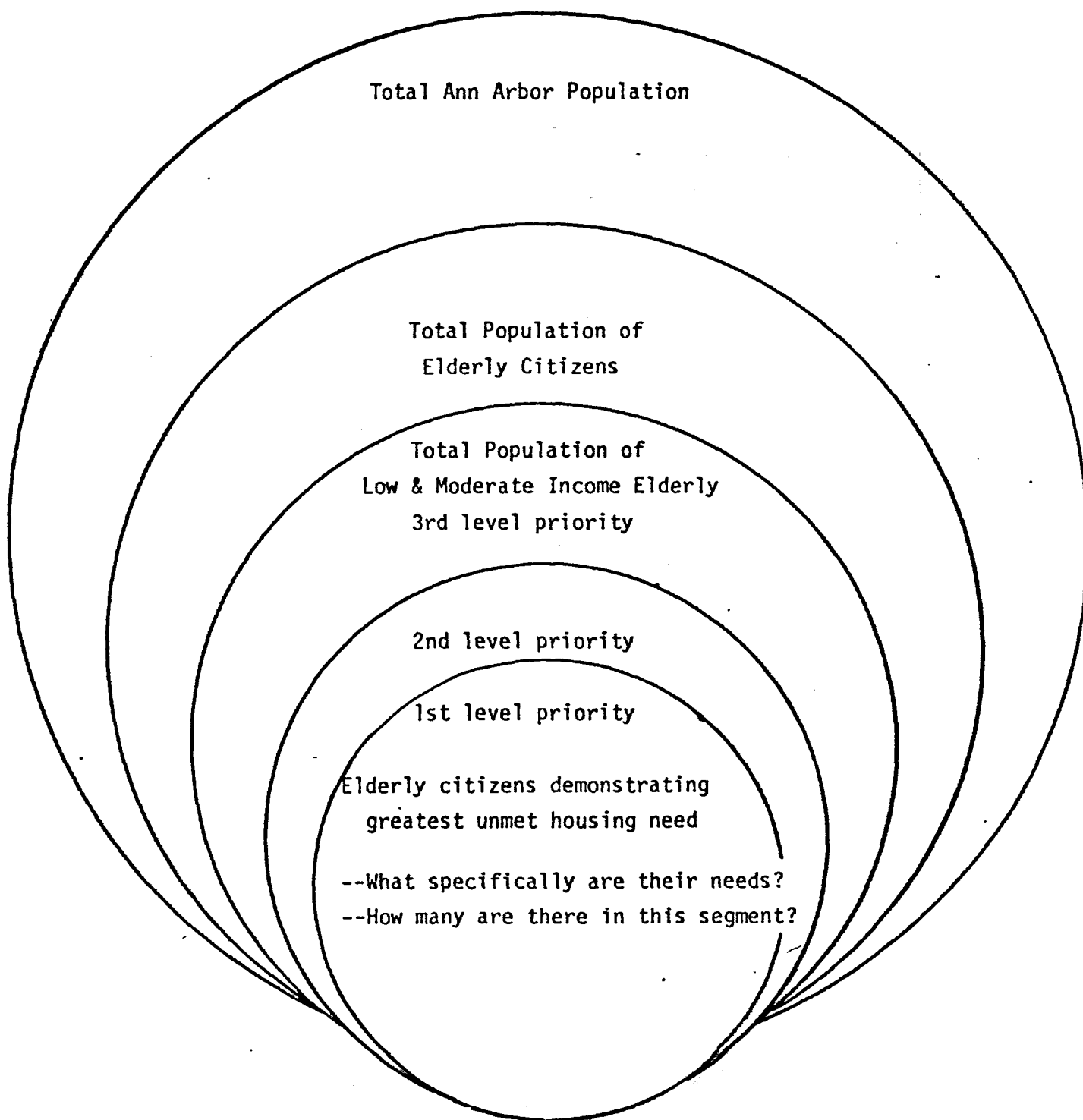
1. Absorption rates apply to aggregate market data to determine the total size or amount of market activity in terms of how many lots were sold, how many apartments in a rental range were newly rented, or how many square feet of leased office space were occupied.

2. Capture rates are the product of merchandise research and are the ratio of the total opportunity potential which might be secured for a project or must be secured to achieve financial goals. The capture rate will reflect a careful judgment of product mix, amenities, pricing, and timing.
- D. A flow chart of the market research process is provided in Exhibits 12 and 13.
- E. Most multi-tenant or multi-user land uses are susceptible to a retail trade area model. A retail model is a device analogous to establishing a retail trade area perimeter for a super market to segregate households which have a reasonable probability of using the outlet from those who don't because of convenience, distance, age, or income. Thus the analyst should establish a preliminary hypothesis for:
1. Primary market area to be served.
  2. Secondary market area to be served.
  3. Principal competitors.
- F. Consider Exhibit 14 as a simple market model to define the size of an opportunity area in a selected county for elderly persons requiring residential care units.
1. For lines with asterisks the key ratios for reduction were derived from a survey of the elderly generating primary data for this county.
  2. For example, while 37% of the elderly were financially qualified, only about 60% of those were interested in considering a residential, minimal care facility or 22% of those in the conventional housing market - hence the reduction from 19,700 to only 4,200. This chart should have showed the ratios from the survey.
  3. Failure to convert serious interest into action was a round number based on experience of those who had marketed similar developments in the past, as was an allowance for potential customers coming from outside the county to be closer to relatives, etc.

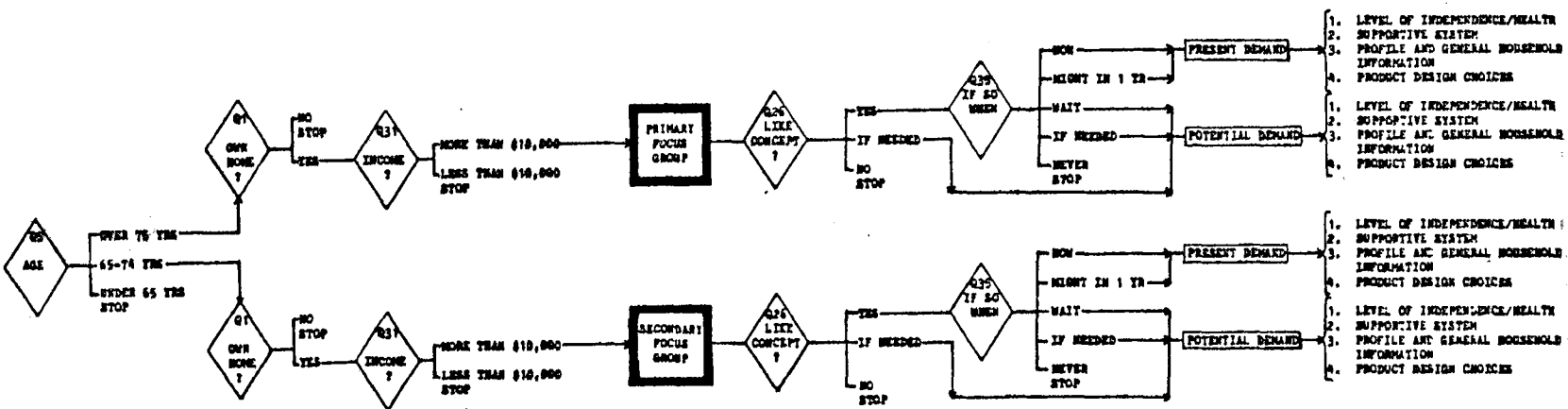
EXHIBIT 12  
SEGMENTATION LOGIC TREE



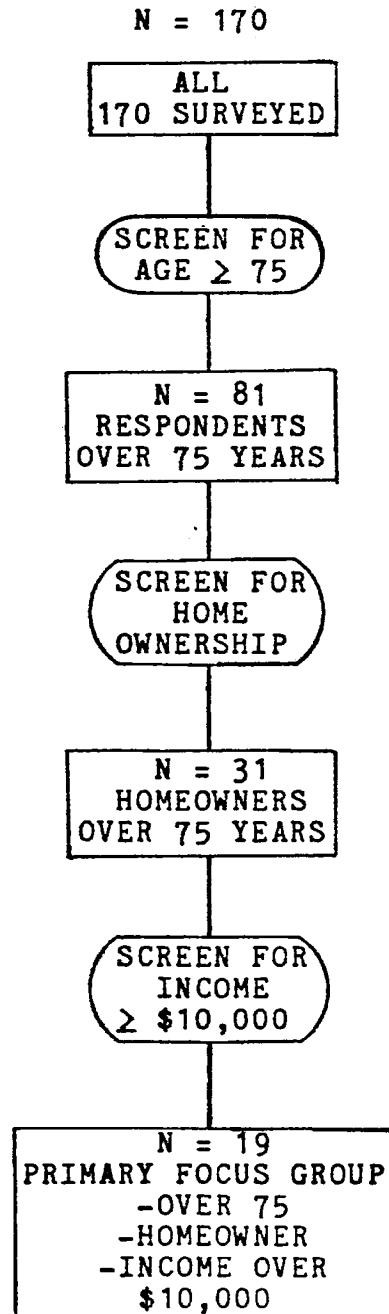
FOCUSING IN ON THE VARIOUS SEGMENTS OF THE ELDERLY POPULATION  
TO DETERMINE RELATIVE LEVELS OF HOUSING NEED  
AND THE URGENCY OF THAT NEED



FLOW CHART OF LOGICAL STEPS TO ESTIMATE PRESENT AND POTENTIAL EFFECTIVE DEMAND



## EXHIBIT 14 (Continued)

MODEL FOR SELECTION OF  
PRIMARY MARKET GROUP  
FROM SURVEY SAMPLE

- III. Market data provides a measure of potential scale of a market opportunity; the most important aspect of market analysis is forecasting the degree of market penetration or capture rate of remedial development.
- A. To reduce aggregate market data to a merchandising hypothesis, the first clue to segmentation may be found in correctly understanding the essence of buyer motivation or of the activity to be housed.
1. Retailing is a break point for goods (a warehouse grocery), or a service industry, or a theater using lighting, staging, and mood to reinforce a role played by the buyer.
  2. A restaurant may be to provide a quick food break (high turnover, pedestrian flow, conditioned ordering), or to provide recreational entertainment and consumption of an evening, or to provide a staging for business, social, or publicity roles.
  3. A motel for transients, for resorts, or for terminal traffic uses all of its facilities and location to sell a "room-night" of occupancy because that is an 80% gross margin. Anything done after that is justified by its contribution to "room-night" sales or its reduction of average cost to capture a customer per "room-night."
  4. The revenue unit may be related to the method of measuring profit of the project in question such as per acre, per camper pad, per event, per front foot of shoreline, per stool or table, etc., not to mention sq. ft., per frame at a bowling alley or per tennis court hours, or per hour of ice time.
  5. Sometimes the prospect is identified by who really signs the check for a particular type of real estate.
    - a. The salesman or the management paying his travel costs
    - b. The doctor or the clinic
    - c. The district manager or the corporate real estate manager
    - d. The ticket buyer or the promoter
    - e. The bowling league, team business manager, travel agency tour guide

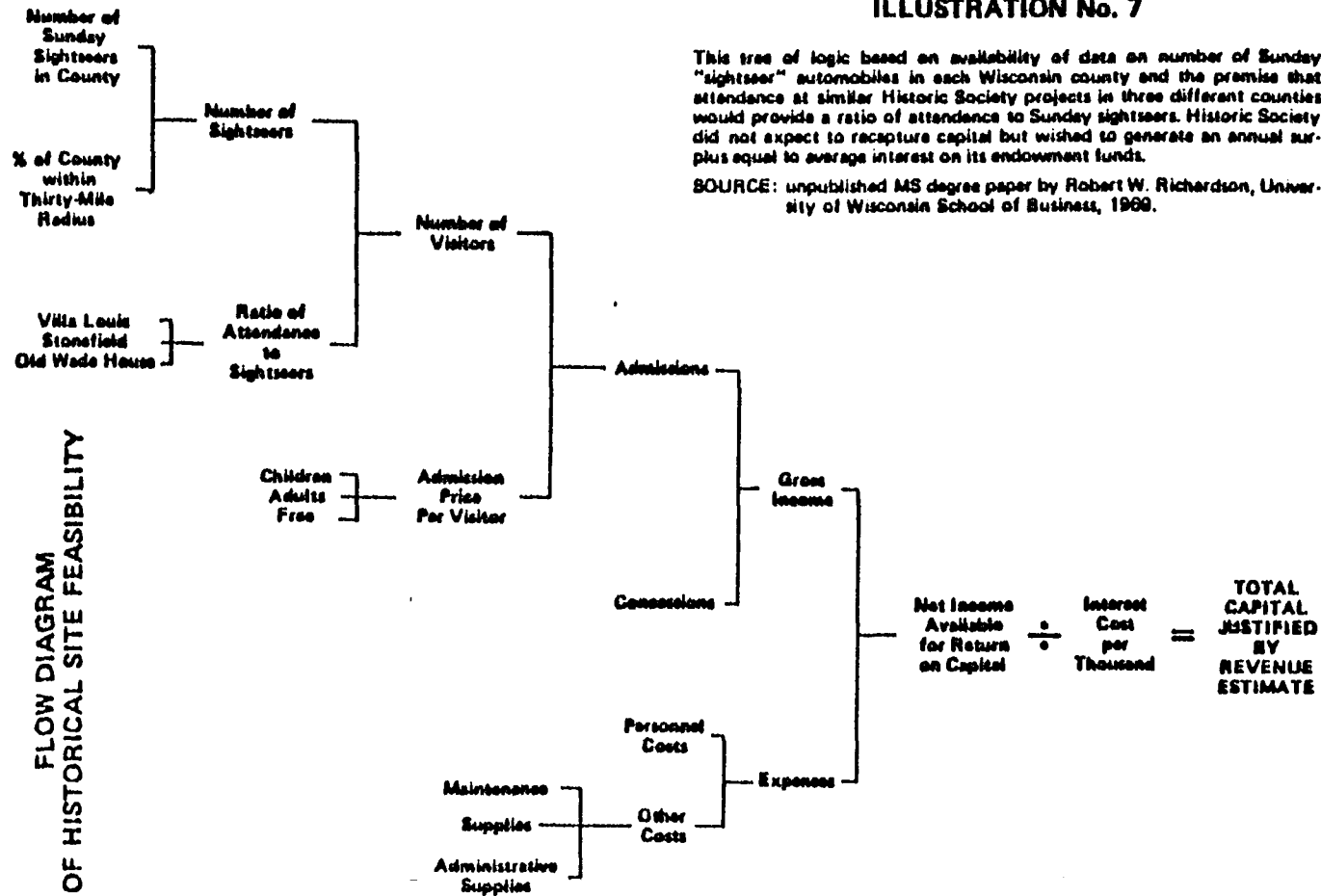


6. The market segment may be defined initially by the source for a prospective user list - people who share a common address, hobby, professional specialty or some other identifier.
  - a. A reverse directory or criss-cross telephone book
  - b. Building directories of comparables
  - c. Mailing lists of specialty publications
  - d. License number spotting
  - e. Guest registers
  - f. Charge account mailing addresses
  
- B. The objective of these approaches, revenue unit, the decision maker, the prospect list source, is to segment the user market to a specific and relatively small group of potential customers who can be surveyed to generate original and relevant information about their space needs and motivations. Unlike most consumer markets, the number of prospects is always low; think small!
  1. Real estate is a series of micro-markets. A 24-unit building with one, two, three bedroom units has at least three sub-markets.
  2. A 24-unit building is a \$500,000 enterprise with a \$75,000 gross sales potential from only 24 customers!
  
- C. Consider alternatives for segmentation of macro market models in Exhibit 15 using a branch diagram and definitions of detached family housing unit consumers in Exhibit 16.
  
- D. 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 reduction process defines a subset of the elderly market - a micro-market.

**ILLUSTRATION No. 7**

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.



Source: James A. Graaskamp. A Guide to Feasibility Analysis, (Society of Real Estate Appraisers, 1972), p.40.

## POTENTIAL MARKET SEGMENTS

- I. Singles — Unmarried, active, mobile, many interests, entertain informally, few financial burdens, recreation oriented. Buy basic furniture, basic kitchen equipment, cars, stereos, and vacations.
- II. Young Marrieds, #1 — Young couple, working wife, entertain informally, amateur gardeners, planning on family. Better off financially than they will be in the "family formation" future. Buy durables — cars, kitchen equipment, furniture, and vacations. Rate housing as a need for more living space.
- III. Young Marrieds, #2 — Discretionary income available, deferring family, active, entertain informally and often, some formal entertaining, independent, dual-person working household, do-it-yourself buffs, sports car. Rate housing as an investment.
- IV. Compact Family/Move Down — Discretionary income available, interested in no maintenance, informal living, some formal entertainment. Away from home often, occasional visits from family or guests, focus on both active and passive recreation.
- V. Divorcees/With Children — Family oriented activity, limited entertainment, informal lifestyle, limited maintenance.
- VI. Full Nest, #1 — Home purchasing at its peak, even though liquid assets are low. Dissatisfied with financial position, and amount of money saved. Conscious of monthly payments, family activities. Unemployed female with numerous interests, mostly child oriented. Lifestyle is casual and informal. Interested in new products, buy washers, dryers, T.V.'s, baby food, dolls, wagons, etc.
- VII. Full Nest, #2 -- Family move-up market, as financial position gets better, some wives work. Interested in larger sized packages. The most price/size sensitive group.
- VIII. Established Family -- Making monthly payment comfortably, some discretionary income as more wives work, approaching peak of economic and social lifestyle curve, some formal entertaining, older children and teenagers, many interests.
- IX. Luxury Families -- Have arrived, tremendous discretionary income, very formal house, don't entertain often, but when they do, it's formal, dine out often, no maintenance, privacy mandatory.

- X. Empty Nester - Home ownership at its peak, more satisfied with financial position. Small or no debt. Family is often away from home, occasional visits from family. Mobile in attitude, but permanent in residence, near grandchildren, many hobbies, one child in college, one or two children married, self-sufficient couple.
- XI. Active Retired — Still working two or three days per week, active either socially or politically in community or church affairs, self-sufficient, many hours away from home, do not entertain often, but when they do, it's semi-formal. Winter/summer residences. Likely to sell home before retirement.
- XII. Retired — Drastic cut in income, dependent, limited activities outside community. Winter/summer residences.

- E. 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 17.)
  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 17.)
- F. 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.

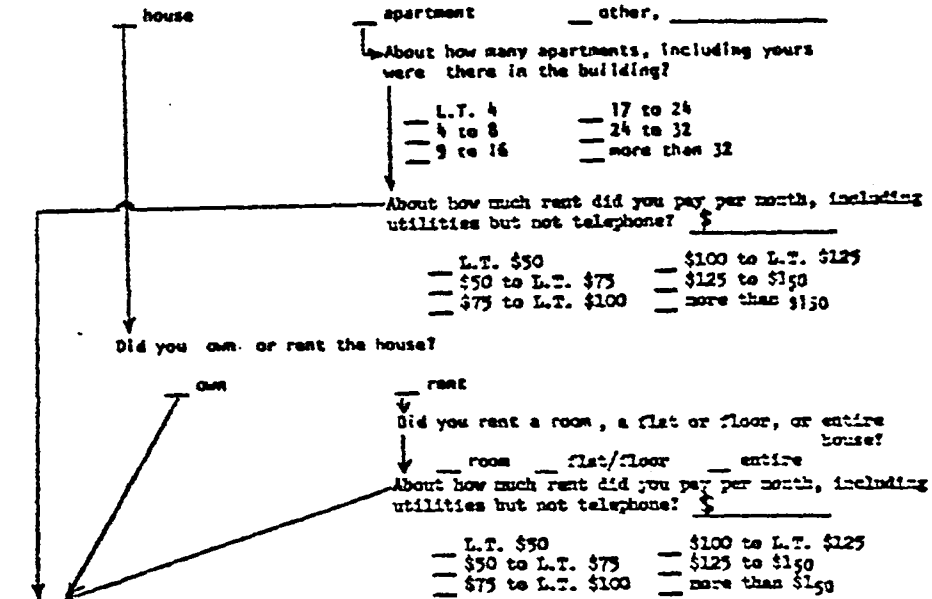
Simple Survey Formats  
for Classification of Subsets & Measurement of Preference

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?



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
- friends
- church
- Housing Authority
- newspaper
- radio
- television
- other, \_\_\_\_\_

26. How important are the following items to you?

	<u>Very Important</u>	<u>Somewhat Important</u>	<u>Indifferent</u>	<u>Somewhat Unimportant</u>	<u>Not Important</u>
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	( )	( )	( )	( )	( )

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

- G. 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 questions which can be asked. Riffled 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.
  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 cents 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.
      - . Would you be at all uneasy if people of a different religion or race were to move in next to your home?
      - . As you see it, what are some of the good points and the bad points of the present Governor of this state?
  5. Sensitive questions on family income should be asked at the end of the interview while the opening questions should be of more general interest. When a question about income is asked, the response should permit some degree of obliqueness by the respondent.
    - . The respondent can select a range of income or perhaps enter the answer with a letter A, 1, B, etc. in place of a dollar amount.



- . If socio-economic questions are generally short and direct, they are a welcome contrast to the time consuming and thought provoking questions which preceded them.
  - 6. Consider the following elderly housing study survey and market model in Exhibits 18 and 19 or the apartment market questionnaire in Exhibit 20.
- H. A survey of existing properties and alternatives available to a selected market segment defines only the competitive standard - namely the minimum product and price necessary to be in the market.
- 1. Comparison shopping further identifies where there may be gaps in the supply of alternatives, a market opportunity gap, or where the oversupply is so significant as to portend the last competitive alternative before bankruptcy - namely price cutting.
  - 2. Comparison shopping should not only identify the physical characteristics of the product and price but the nature of the promotion effort as well.
  - 3. Promotion comparison should consider pedestrian and vehicle approaches, model location, furnishings, and sales people.
  - 4. Review of the promotion campaign should reveal whom the competitors believe to be their prospect.
- I. A survey of users, is designed to reveal or to identify the competitive differential attributes which would provide that monopoly element required of every successful project.
- 1. A second product of consumer survey is the ability to develop locally relevant ratios which permit disaggregation of market data into market segments and the conversion of potential numbers of people into potential dollar sales over time.
  - 2. Survey questions to create ratios require previous construction of a market model hypothesis.
  - 3. Survey questions can discover latent political issues or provide a calm base for citizen input from those who rightfully dislike public hearings.
  - 4. Survey questions and execution should not be done by planners or appraisers.

LOGIC FOR ESTIMATION OF EFFECTIVE DEMAND  
FOR PROPOSED RETIREMENT CENTER

STEP 1:

$$\frac{\text{Number of households in sample with interested, qualified respondent(s)}}{\text{Number of households in sample}} = \text{Sample ratio}$$

STEP 2:

$$\text{Number of households in population segmented by age} * \text{Sample ratio} = \text{Number of households in population segmented by age, income/assets, and degree of interest}$$

STEP 3:

$$\text{Number of households in population segmented by age income/assets and degree of interest} * \text{Capture rate} = \text{Estimate of number of units proposed project can capture from identifiable groups}$$

STEP 4:

Developer must assume total unit demand will be the sum of units estimated in STEP 3 plus some units unanticipated from other communities and market segments.

## EXHIBIT 19

## ST. CATHERINE'S SURVEY

I am responding for:

\_\_\_ Myself; \_\_\_ My parent(s); \_\_\_ My friend(s)

## BACKGROUND AND HOUSEHOLD INFORMATION

1. Which of the following best describes your present living arrangement? I live:
- Alone
- With my spouse only
- With one of my children in my home
- In the home of one of my children
- With my children and my spouse
- With a friend or friends
- With relatives other than my spouse and children
- Other, please specify: \_\_\_\_\_
2. What is your present marital status? Are you:
- Single       Married       A widow or widower
3. Which of the following best describes your present housing type?
- I own a single family home or a duplex:
- in which I presently reside
- but do not presently reside there
- I own a condominium:
- in which I presently reside
- but do not presently reside there
- I rent an apartment
- I have a room in someone else's house
- Other, please specify: \_\_\_\_\_
4. How long have you lived in your present home?
- Less than one year       Five to ten years
- One to two years       Ten to twenty years
- Two to five years       More than twenty years
5. What is your age (your spouse's age)?
- Your Age \_\_\_\_\_ Your Spouse's Age \_\_\_\_\_

6. Are you:

Male             Female

7. What is/was the main employment (work) for you or the head of your household over the years? (Example: auto worker, tool maker, clerk, lawyer, manager, carpenter, nurse, teacher, farmer, etc.)

---

8. If you need any help in moving about or walking at this time, do you:

Use a cane                                     Use a wheelchair  
 Use a walker                                    Need no assistance at all

9. Below is a list of activities that many of us have difficulty with as we grow older. Do you have: NO DIFFICULTY, SOME DIFFICULTY, or find you CANNOT DO these activities?

	<u>NO</u> <u>DIFFICULTY</u>	<u>SOME</u> <u>DIFFICULTY</u>	<u>CANNOT</u> <u>DO IT</u>
Cooking . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shopping . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Housekeeping . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Personal care (bathing) . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hearing on the telephone . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reading the newspaper . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taking medication . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Going up and down stairs . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taking care of personal finances . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Driving a car . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking more than two blocks . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. In general, which of the following best describes your overall state of health?

- Excellent (plenty of energy)
- Average (good health - no problems and enough energy)
- Fair (some health problems but able to live completely independently)
- Need some care or assistance
- Need full-time care and assistance

## EXHIBIT 19 (Continued)

11. Do you currently use any of the following Community Support Services?

- Kenosha Homecare, Inc.
- Nutrition site meals
- Mobile Meals - American Red Cross
- Kenosha Visiting Nurse Association
- Tele-Care Program or Life-Line
- City Vans
- No, do not use support services
- Other, please specify: \_\_\_\_\_

12. If you were to need help with activities of daily living, who would you depend upon? (Check as many as apply.)

- Family
- Friends
- Church group
- Could afford to hire people to help me in my home
- Would prefer to use community support services in my home
- Would prefer to live in a retirement facility where I could be closer to support services
- Others, please specify: \_\_\_\_\_

13. Retirement centers offer different plans to assist residents who need short-term or long-term nursing home care. If one of the following plans were available, which plan would you prefer?

- I would prefer only to be assured of assistance from the retirement center staff in transferring to a nursing home, if and when needed
  - I would prefer assurance of priority entry to a nursing home which is associated with the retirement center, if and when needed
  - I would be willing to pay a significantly higher Entry Fee for a retirement center which would guarantee access to a nursing home bed, if and when needed, for the same Monthly Service Charge I was paying for my apartment. (Of course, doctors' fees, medications, special treatment, and extra meals would be charged separately.)
  - Other, please specify: \_\_\_\_\_
-

## EXHIBIT 19 (Continued)

14. There are many different reasons for moving into a residential facility designed especially to meet the needs of older adults. How would you rank the following reasons?

	VERY IMPORTANT	MODERATELY IMPORTANT	NOT IMPORTANT
a. For companionship with others of similar interests	[ ]	[ ]	[ ]
b. Freedom from the responsibility and maintenance of a single family home	[ ]	[ ]	[ ]
c. Availability of a nutritious meal in a full-service dining room	[ ]	[ ]	[ ]
d. Need for a special diet	[ ]	[ ]	[ ]
e. Security of knowing someone will check on me daily	[ ]	[ ]	[ ]
f. Security of 24-hour emergency assistance nearby	[ ]	[ ]	[ ]
g. Knowing supportive services such as house cleaning and personal care are available if needed	[ ]	[ ]	[ ]
h. Close to a nursing home to insure continuing care, if needed	[ ]	[ ]	[ ]
i. Close to a nursing home to visit my spouse or friends, if needed	[ ]	[ ]	[ ]
j. Near a hospital	[ ]	[ ]	[ ]
k. Other, please specify: -----	[ ]	[ ]	[ ]

## EXHIBIT 19 (Continued)

15. If you could choose a type of housing best suited for your current needs, would you:

- Live in my own single family house.
- Live in my own condominium.
- Live in an a government subsidized apartment, such as Villa Nova, Tuscan Villas, or Lakeside Towers.
- Live in a private apartment building, such as Imperial House, Wexford, or Capri, that rents to all age levels.
- Live in a private apartment building that only rents to older adults.
- Live in a private retirement center designed especially for older adults which provides supportive services as needed but has no nursing home on the premises.
- Live in a private retirement center designed especially for older adults which provides supportive services as needed and has a nursing home on the premises.
- Live with my children.
- Live with a brother or sister.
- Other, please specify: \_\_\_\_\_

16. In the future, which of the following event(s) might trigger the need to move? (Check as many as apply.)

- |  |   |
|--|---|
| <input type="checkbox"/> Health problem                  | <input type="checkbox"/> Children moving away   |
| <input type="checkbox"/> Death of a spouse               | <input type="checkbox"/> Opportunity to sell home/farm  |
| <input type="checkbox"/> Financial limitations           | <input type="checkbox"/> Selection of my name for vacant apartment at government subsidized elderly housing project |
| <input type="checkbox"/> Friction with my relatives      | <input type="checkbox"/> Other, please specify: _____   |
| <input type="checkbox"/> Growing awareness of loneliness |   |
| <input type="checkbox"/> Burden of home upkeep           |   |

17. Have you given any serious thought to moving from your present home?

- No       Yes. For what reason? \_\_\_\_\_
- \_\_\_\_\_

## EXHIBIT 19 (Continued)

18. If yes, how soon would you want to move?

- In less than one year  
 In one to three years  
 In three years or more

- - - - -  
 THE PROPOSED PROJECT  
 AND THE  
 RETIREMENT LIVING CONCEPT

St. Catherine's Hospital is considering the development of a private retirement living center in Kenosha which would not be subsidized by the government nor limited to any single religious denomination. The tentative location under consideration for the project is across from St. Catherine's Hospital and is adjacent to Pennoyer Park which fronts on Lake Michigan.

The program being considered by St. Catherine's would provide private apartments for individuals and couples, plus meal service for one or more meals in a large family dining room, the use of community rooms, planned activities and programs, and a resident manager who would schedule supportive services as needed and who would be available for 24-hour emergency assistance. Transportation would be provided for shopping and for other needs. All of these services would be included in the Monthly Service Charge. Retirement living emphasizes convenience, security, and freedom from the burden of home upkeep.

To answer the next few questions, please PRETEND for a moment that you have the need or interest in the residential facility described above. Your responses are IMPORTANT since they will be used in planning the proposed facility.

19. Are you familiar with this retirement living concept?  
 (Please check as many as apply.)

- Yes, I have visited friends who live in retirement centers.  
 I am familiar with Alexian Village and St. John's Tower in Milwaukee, Clement Manor in Greenfield, and/or Tudor Oaks in Muskego.  
 I am only familiar with subsidized developments such as Lakeside Towers and/or Villa Nova.  
 I am not familiar with this type of retirement living facility.



## EXHIBIT 19 (Continued)

20. Which supportive services and facilities would YOU want to have included in your Monthly Service Charge and which of these would YOU want to have available on a separate fee basis? (The more services included in your Monthly Service Charge, the higher the charge.)

	<u>INCLUDED IN MONTHLY CHARGE</u>	<u>AVAILABLE FOR A FEE AS NEEDED</u>	<u>NOT INTERESTED</u>
House cleaning services	[ ]	[ ]	[ ]
Laundry service - linens	[ ]	[ ]	[ ]
Laundry service - personal	[ ]	[ ]	[ ]
24-hour emergency assistance	[ ]	[ ]	[ ]
Personal care assistance	[ ]	[ ]	[ ]
Scheduled transportation for shopping and personal appointments	[ ]	[ ]	[ ]
Garage parking	[ ]	[ ]	[ ]
Cable TV outlets	[ ]	[ ]	[ ]
Tray service in my room when I'm ill	[ ]	[ ]	[ ]
Individual storage lockers within the building	[ ]	[ ]	[ ]
Laundry room with washer and dryer	[ ]	[ ]	[ ]
Organized social and recreational programs	[ ]	[ ]	[ ]

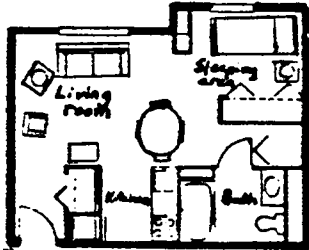
21. A larger apartment is more expensive than a smaller unit. Which is more important to you?

- [ ] Having as much space as possible.  
 [ ] Keeping costs as low as possible.

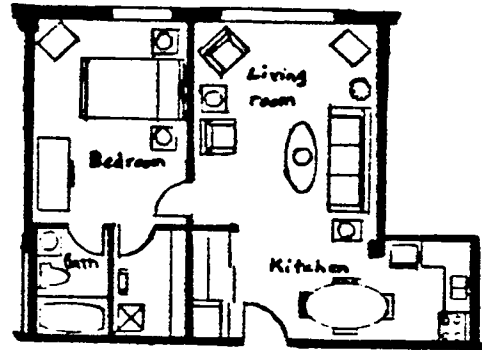
## EXHIBIT 19 (Continued)

22. To answer the next question, please refer to the drawings. There are four floor plans presented:

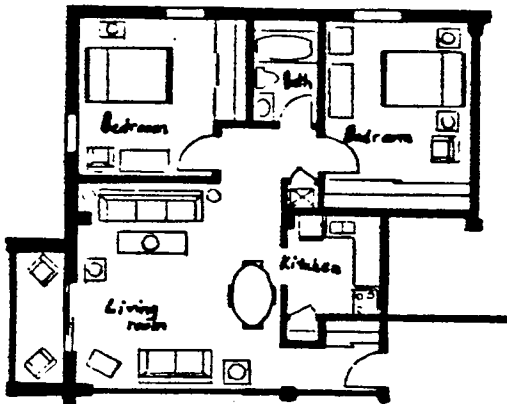
Plan A is a studio apartment with 1 bath (400 sq.ft.),  
 Plan B is a 1 bedroom apartment with 1 bath (600 sq.ft.),  
 Plan C is a 2 bedroom apartment with 1 bath (800 sq.ft.),  
 Plan D is a 2 bedroom apartment with 1-1/2 baths (830 sq.ft.)



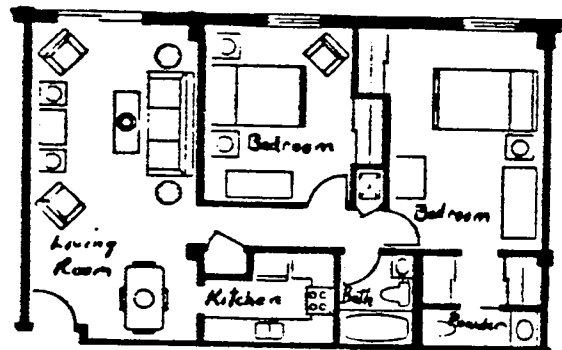
Plan A



Plan B



Plan C



Plan D

WHICH DO  
 YOU  
 PREFER?

- Plan A  
 Plan B  
 Plan C  
 Plan D

## EXHIBIT 19 (Continued)

23. How many persons would be living in your apartment?
- Just myself
  - Just myself, but I would want room for an occasional guest
  - There would be two of us
  - There would be two of us, but we would want room for an occasional guest.

24. There will be a kitchen in each apartment for meal preparation. As currently planned, there also will be a central dining room for one or more daily meals. Which MEAL PLAN would you prefer included in your Monthly Service Charge?
- I'd prefer to have ONE MEAL PER DAY PROVIDED in the central dining room.
  - I'd prefer to have TWO MEALS PER DAY PROVIDED in the central dining room.
  - I'd prefer to have ALL THREE MEALS PER DAY PROVIDED in the central dining room.
  - Other, please specify: \_\_\_\_\_

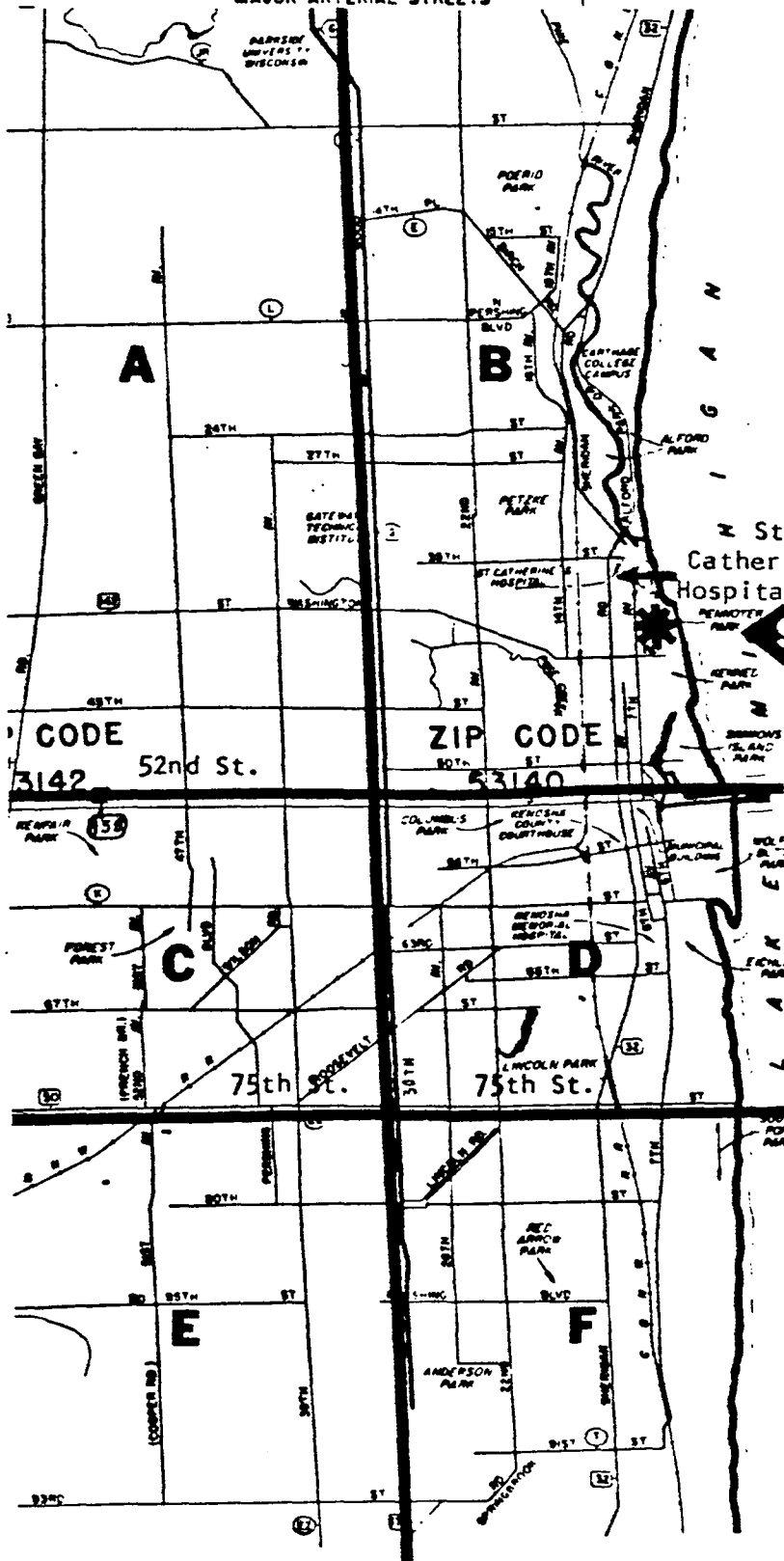
25. After thinking about the concept of retirement living, as previously described, does this appeal to you as an alternative living arrangement?
- Yes, this would suit my needs now
  - Yes, it looks interesting and I would explore it seriously for the future
  - Yes, if and when needed
  - Don't know, it would depend on \_\_\_\_\_
  - No, it's nice but not for me
  - No, it's not for me

26. What do you like about this concept?
- \_\_\_\_\_
- \_\_\_\_\_

27. Is there anything you particularly dislike about this concept?
- \_\_\_\_\_
- \_\_\_\_\_

# KENOSHA

MAJOR ARTERIAL STREETS



28. In what part of the City or County do you live: (Please refer to the map if you live in the City of Kenosha):

SECTION

- A - City of Kenosha
- B - City of Kenosha
- C - City of Kenosha
- D - City of Kenosha
- E - City of Kenosha
- F - City of Kenosha

- Town of Pleasant Prairie
- East of I-94 but not in Kenosha or Pleasant Prairie
- In Kenosha County but west of I-94

29. What would be the best location for you in the City of Kenosha for a retirement living facility? (See Map)

- Section A
- Section B
- Section C
- Section D
- Section E
- Section F
- I would not want to be in the City of Kenosha

30. The tentatively proposed site for St. Catherine's Hospital residential facility is shown in Section B of the map. If you wanted to move from your present home, would you consider moving to this area?

- Yes
- No

30th Ave.

## EXHIBIT 19 (Continued)

31. What do you like about this location for the proposed residential facility?

-----  
-----

32. What do you particularly dislike about this location?

-----  
-----

33. Do you own/drive a car?

- I own and drive a car  
 I do not own a car

34. If you own a car and were to move to the proposed retirement center, which of the following would you prefer?

- A heated and secure underground garage (for a monthly fee)  
 A covered stall (for a minimum monthly fee)  
 A surface parking lot (no monthly fee)  
 I would sell my car and use public/private transportation as needed  
 Other, please specify: -----

35. What mode of transportation do you use for shopping and errands?

- I use my car  
 I use the bus  
 I use a taxi  
 I walk  
 I catch a ride with friends  
 My family drives me where I need to go  
 Other, please specify: -----

## EXHIBIT 19 (Continued)

36. Ideally, how close to your home would you want each of these facilities? Please check the distance that is best for you.

	WITHIN WALKING DISTANCE (2 blocks)	WITHIN 1 MILE FROM HOME	WITHIN 2 MILES FROM HOME	DOES NOT MATTER
Bus Stop	[ ]	[ ]	[ ]	[ ]
Grocery store	[ ]	[ ]	[ ]	[ ]
Drug store	[ ]	[ ]	[ ]	[ ]
Medical offices	[ ]	[ ]	[ ]	[ ]
Dental offices	[ ]	[ ]	[ ]	[ ]
Nursing home	[ ]	[ ]	[ ]	[ ]
Shopping center	[ ]	[ ]	[ ]	[ ]
Bank and/or Savings and Loan	[ ]	[ ]	[ ]	[ ]
Recreational facilities	[ ]	[ ]	[ ]	[ ]
Library	[ ]	[ ]	[ ]	[ ]
Churches	[ ]	[ ]	[ ]	[ ]
Hospital	[ ]	[ ]	[ ]	[ ]
Other, please specify: _____	[ ]	[ ]	[ ]	[ ]

37. People often have a number of sources of income. Which of the following are your main sources of income now? (Please check as many as are appropriate.)

[ ] Salary/wages	[ ] Assistance from community
[ ] Social security	[ ] Interest/dividends on investments
[ ] Pension/Annuity	[ ] Income rental property
[ ] Assistance from family members	
[ ] Other, please specify: _____	

38. IF YOU OWN A HOME, what price do you think it would sell for today? Would it sell for...

- Less than \$40,000
- \$40,000 to \$50,000
- \$50,000 to \$60,000
- \$60,000 to \$70,000
- \$70,000 to \$80,000
- \$80,000 to \$90,000
- \$90,000 or more

How did you arrive at this figure? \_\_\_\_\_

\_\_\_\_\_

39. Do you still have a mortgage on your home?

- Yes
- No

For statistical purposes only, we need to know your TOTAL annual income for 1982. (Note: There is no way of knowing your identity.)

40. What was your (and your spouse's) TOTAL ANNUAL gross income for 1982?

- Less than \$12,500
- \$12,500 to \$15,000
- \$15,000 to \$20,000
- \$20,000 to \$25,000
- \$25,000 - \$30,000
- \$30,000 - \$35,000
- \$40,000 or more

41. What percentage of your gross income would you consider to be a reasonable Monthly Service Charge for your retirement apartment which would also include all utilities (except phone), a daily meal, scheduled transportation, 24-hour emergency assistance, and the use of community rooms?

- less than 30 percent
- 30 to 40 percent
- 40 to 50 percent
- 50 percent or more

42. Are you able to pay your current ordinary living expenses each month without going into savings?

- Yes
- No
- Occasionally need to go into savings for ordinary living expenses
- Occasionally need to go into savings for major purchases, taxes, or emergencies

## EXHIBIT 19 (Continued)

43. The payment plan being considered includes a one-time Entry Fee which may be partially refundable when you leave and a Monthly Service Charge.

The Entry Fee is applied to financing the construction costs which, in turn, reduces the amount of the mortgage required and the monthly interest and principal payments. A higher Entry Fee can permit a lower Monthly Service Charge. In most cases, the resident will obtain money for the Entry Fee payment from the sale of a home or from savings.

How much would you be willing and able to pay as an Entry Fee to live in the proposed retirement center.

- Under \$15,000  
 \$15,000 - \$20,000  
 \$20,000 - \$25,000  
 \$25,000 - \$30,000  
 Over \$30,000

44. As currently envisioned, the Monthly Service Charge would include the apartment of your choice with all utilities provided, except telephone; a daily meal served in the main dining room; a 24-hour emergency response and building security; scheduled opportunities for transportation; and social and leisure time activities.

If your Monthly Service Charge included all of the items listed above, what would you be willing and able to pay each month:

- Under \$600  
 \$600 - \$650  
 \$650 - \$700  
 \$700 - \$750  
 \$750 - \$800  
 Over \$800



## EXHIBIT 19 (Continued)

45. Sound fiscal management requires that the payment plan include both a partially refundable Entry Fee and a Monthly Service Charge. Some people prefer to pay a higher Entry Fee and a lower Monthly Service Charge while others prefer a lower Entry Fee and a higher Monthly Service Charge. A typical one bedroom apartment in a retirement center might have the following alternative combinations. Please indicate which combinations would be most suitable for you:

- A partially refundable Entry Fee between \$10,000 and \$20,000 could result in a Monthly Service Charge between \$800 and \$725.
- A partially refundable Entry Fee between \$20,000 and \$30,000 could result in a Monthly Service Charge between \$725 and \$650.
- A partially refundable Entry Fee between \$30,000 and \$40,000 could result in a Monthly Service Charge between \$650 and \$575.
- A partially refundable Entry Fee between \$40,000 and \$60,000 could result in a Monthly Service Charge between \$575 and \$425.
- Could not afford any of these.

46. The refund policy for the proposed facility is in the planning stage. The proportion of the Entry Fee which would be refundable when you leave would also affect the amount of the Monthly Service Charge. Which of the following refund policies would be acceptable to you?

- A NO REFUND policy which would REDUCE the Monthly Service Charge (as described in Question 45) by approximately 10%.
- A FULL REFUND policy which would INCREASE the Monthly Service Charge (as described in Question 45) by approximately 10%.
- A PARTIAL REFUND policy which would help keep the Monthly Service Charge at the levels described in Question 45.
- Other, please specify: \_\_\_\_\_

## EXHIBIT 19 (Continued)

47. If this retirement living concept appeals to you as an alternative to your present living arrangement, when would you seriously consider a move?

- I would like to seriously explore the possibility of moving to St. Catherine's proposed retirement center now.
- I might consider living in such a facility in a year or so.
- I might be interested, but I would want to wait to see how others liked it first.
- I would be interested ONLY if something happened to me so that I needed the extra help with daily living activities.
- I would never be interested in such a facility. If never, why? Please specify: \_\_\_\_\_
- \_\_\_\_\_

48. If you currently live in your own home, is the sale of your house critical to your decision and/or readiness to move into the planned retirement center?

- Yes, the house would have to be sold before a final decision could be made to move
- No, the decision to move is not necessarily dependent upon the sale of my house
- The house would not be sold even if I decided to move to the planned retirement center
- Other, please specify: \_\_\_\_\_
- \_\_\_\_\_

Additional Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

IF YOU WOULD LIKE TO LEARN MORE ABOUT THE PROJECT AS IT EVOLVES, PLEASE CHECK THE APPROPRIATE BOX ON THE ENCLOSED RETURN POSTCARD AND RETURN IT TO US.

Remember: DO NOT SIGN the questionnaire. Please return the questionnaire in the postage paid envelope as soon as possible.

THANK YOU FOR YOUR HELP!

C. Model Used for Calculation  
of Effective Demand

According to the 1980 Census, there are 2,971 elderly in Oshkosh who are 75 years or older. Of these, approximately 2,117 elderly live in non-subsidized housing and are not in nursing homes. (See Appendix for adjustments made to sample and population base.) As discussed previously, it is assumed that the most probable immediate users of the proposed congregate facility will be found in this segment of the population.

From the survey sample, in general, and the primary focus group, in particular, estimates can be made about the potential market for the proposed facility. Given the nonprobabilistic judgement survey sample used (necessitated by the cautious, conservative nature of the Oshkosh elderly) it can be assumed that the sample contains a somewhat higher proportion of potential users than exists in the total Oshkosh 75 + year old population.

Only those people with an interest in or curiosity about the proposed facility would respond to the newspaper advertisement, would sign up at a meeting to receive a questionnaire, and/or would be a part of a captive audience such as on the Simeanna waiting list or a current resident there.

Even though an annual income of \$10,000 and homeownership are considered minimum income/asset thresholds for eligibility in Carmel Residence, there will be some in this group who will be unwilling to put the necessary cash into an entry fee and there will be some in lower income levels who have assets beyond the levels disclosed in the questionnaire. Questions regarding entry fees were eliminated to avoid prejudicing potential users so tolerance levels are not known. Also there will be a few elderly in the secondary focus group (65 to 74 years) (see Exhibit 12) who will be ready to move into the facility in the near future. And, of course, there will be those who meet all of the income/asset/age qualifications of the primary focus group and yet will choose an alternative facility.

It must be remembered that no matter what segment of the sample is analyzed, the majority of respondents who found the concept of congregate living appealing, (Question #26) would consider a move to such a facility ONLY IF SOMETHING HAPPENED TO ME...(Question #35). The trigger event most likely to precipitate such a need for the total sample and for the primary focus group would be the following:

SCREENS USED TO SUBSET MOST PROBABLE USERS  
OF PROPOSED RETIREMENT CENTER

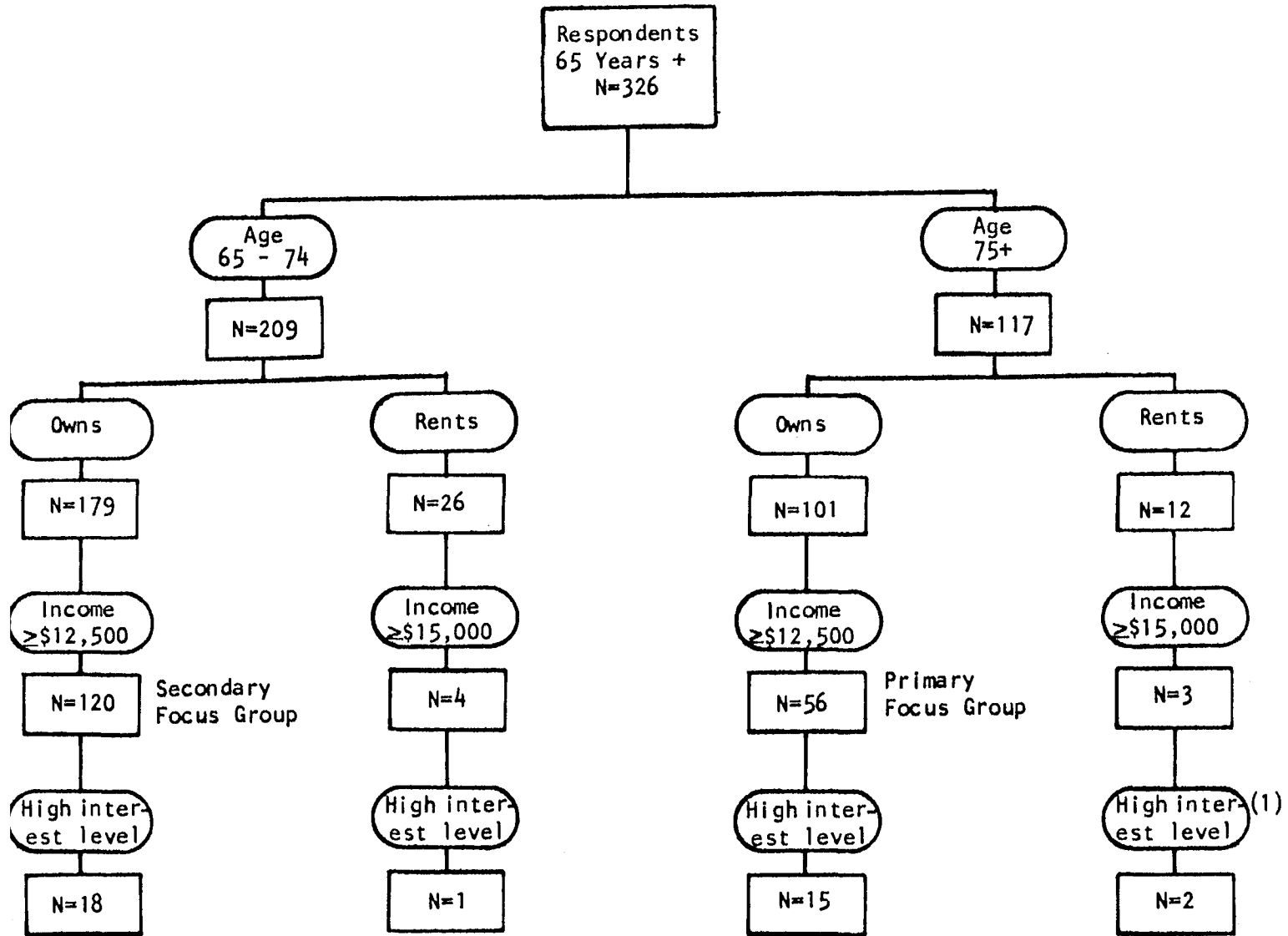


EXHIBIT 20 (Continued)

(1) High degree of interest in project is defined as those who answered Question #47 with a 1, 2, or 3 response. These respondents are interpreted as having serious interest now or interest in a year or so. See questionnaire in Appendix for exact wording of the question.

TOTAL SAMPLE  
All respondents

PRIMARY FOCUS GROUP  
75 + and homeowners

		Income > \$10,000
<u>N = 170</u>	<u>N = 27</u>	<u>N = 19</u>
Health problems 62%	82%	100%
Death of a spouse 21%	33%	42%

(Multiple answers possible - See Appendix for all responses.)

An analysis of Question #35, "If this congregate living concept appeals to you as an alternative to your present living arrangement, when would you seriously consider a move?", reveals that only a small fraction of those interested would consider a move in the near future.

A summary of the results from the total sample and the primary focus group are as follows:

## EXHIBIT 20 (Continued)

	TOTAL SAMPLE <u>All respondents</u>	PRIMARY FOCUS GROUP <u>75 + years, homeowners</u>	Income > \$10,000
	<u>N = 170</u>	<u>N = 27</u>	<u>N = 19</u>
Serious now	6%	7.5%	5%
Might in a year or so	14%	26%	32%
Might, but wait and see	3%	7.5%	10.5%
Only when & if	53%	44%	42%
No response	17%	15%	10.5%
Never	<u>7%</u>	<u>0%</u>	<u>0%</u>
	100%	100%	100%

A potential market exists, but apparently only a fraction of that market is ready to move immediately.

Unpredictable events, in the form of a growing awareness of health problems and the heightened recognition of the need for assistance, hold the key to the long term effective demand for units in the proposed Carmel Residence.

To make inferences from the sample results to the population the following calculations are made:

	<u>SAMPLE</u>	<u>OSHKOSH POPULATION</u>
Age ≥ 75 years	54	2,117
Homeowners	31	
Homeowners who responded to income question	27	
Homeowners with income ≥ \$10,000	19	
Application of Ratio	$\frac{19}{54} = 35\%$	2,117 x 35% = 741 Primary potential market for Carmel Residence

Of the 741 elderly Oshkosh residents who are 75 years or older, own a home, and have an income > \$10,000, and who constitute the primary potential market for Carmel Residence, only a fraction will need and/or desire to become a resident at the proposed facility.

It is assumed that over the next five years the proposed Carmel Residence can expect to capture from 15 percent to 20 percent of the potential elderly market. A five year frame is used because today's 75 year old will become more and more vulnerable to the health problems that will trigger the need for a congregate living facility. The proposed project must be scaled to meet this very specialized demand.

If 20 percent of the potential market can be captured over five years, the rate per year would be four percent; if 15



percent of the potential market can be captured, the annual capture rate would be three percent.

Therefore, given the estimated capture rates and a potential market of 741 persons, the following number of units could be absorbed in the first year:

	<u>ANNUAL ABSORPTION RATE FROM PRIMARY POTENTIAL MARKET</u>	
	<u>3%</u>	<u>4%</u>
Units Absorbed per Year	22	30

This conclusion is supported by a review of the survey results from the primary and secondary focus groups indicate the following interest in moving into a congregate living facility:

	<u>PRIMARY FOCUS GROUP</u>	<u>SECONDARY FOCUS GROUP</u>
	<u>N = 19</u>	<u>N = 24</u>
Serious - now	N = 1	N = 1
Might - 1 year or so	N = 6	N = 3
Might - wait and see	N = 2	N = 1
If and when needed	N = 8	N = 15
No response	N = 2	N = 4

A total of 316 questionnaires were mailed and 170 were returned; when adjusted to exclude Simeanna residents, the

totals are 237 mailed and 130 returned. The 107 of this group who did not return the questionnaire are considered not interested in the concept for a multitude of reasons. The 237 potential respondents are considered representative of the elderly population in Oshkosh who are not in subsidized housing or in nursing homes.

As previously discussed, by the nature of the sample selection process, the sample is skewed toward those most interested in the project. In the primary focus group (N=19) there are seven people who are inclined to move to the proposed facility in the near future. When those who are interested but will wait and see if they like the facility are included, the number increases to nine individuals who represent the sample effective demand for Carmel Residence in the first year. When those who are serious now or might be in a year are combined from both age groups, there are 11 who can be considered serious candidates for the facility. Based on the sample results, several estimates of the absorption rate follow:

<u>MARKET SEGMENT</u>		<u>ANNUAL ABSORPTION RATE</u>
<u>Primary Focus Group</u>		
Serious and Might - 1 year	N = 7	3.0%
Serious, Might - 1 year, and Might - wait and see	N = 9	3.8%
<u>Primary &amp; Secondary Focus Groups</u>		
Serious and Might - 1 year	N = 11	4.6%

Thus, the estimated five year capture rate of 15 percent to 20 percent of the potential market is substantiated by the survey sample results.

The primary market in Oshkosh needs only 22 to 30 units in Phase I. However, even the conservative estimate of 22 must be supplemented by the secondary market outside of Oshkosh which in the case of Evergreen Manor is 33 percent of their total occupancy.

Therefore, the consultant recommends that Lutheran Homes of Oshkosh build no more than 30 units in the first phase of construction to serve both the primary and secondary markets identified above. Given an even rate of absorption the first year, Lutheran Homes of Oshkosh will have to carry one-quarter of the inventory for almost one year. If 30 units are built in

6. Final stage was to write up a series of specifications or profiles on tenants, product design and components, and a cash flow analysis of the entire project from the viewpoint of the developer so he could see how much money there was to make. Then he would know that the city knew the financial aspects of the project. Developers were then asked to bid.

B. In the case of Santa Maria, three developers bid and the city picked Ernest Hahn to build the project. There was no demolition or site acquisition before the start of the EMAS. The entire project was done within a four year period. For the first six months of complete operation, June 1976 through December 1976, sales were approximately 15.6 million and is 70% leased. The Mall did 4.9 million, Sears - 6.9 million, and a local department store - 3.7 million.

#### V. Generalized Format of Merchandising Report Summary

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

##### A. Definition of geographic and demographic market

1. Primary trade area to be served
2. Profile of prospects by current location, status, income, etc. in primary carefully segmented area.
3. Secondary trade area to be served
4. Profile of prospects by current location, status, income, etc. in secondary carefully segmented area.

##### B. Definition of principal competitors

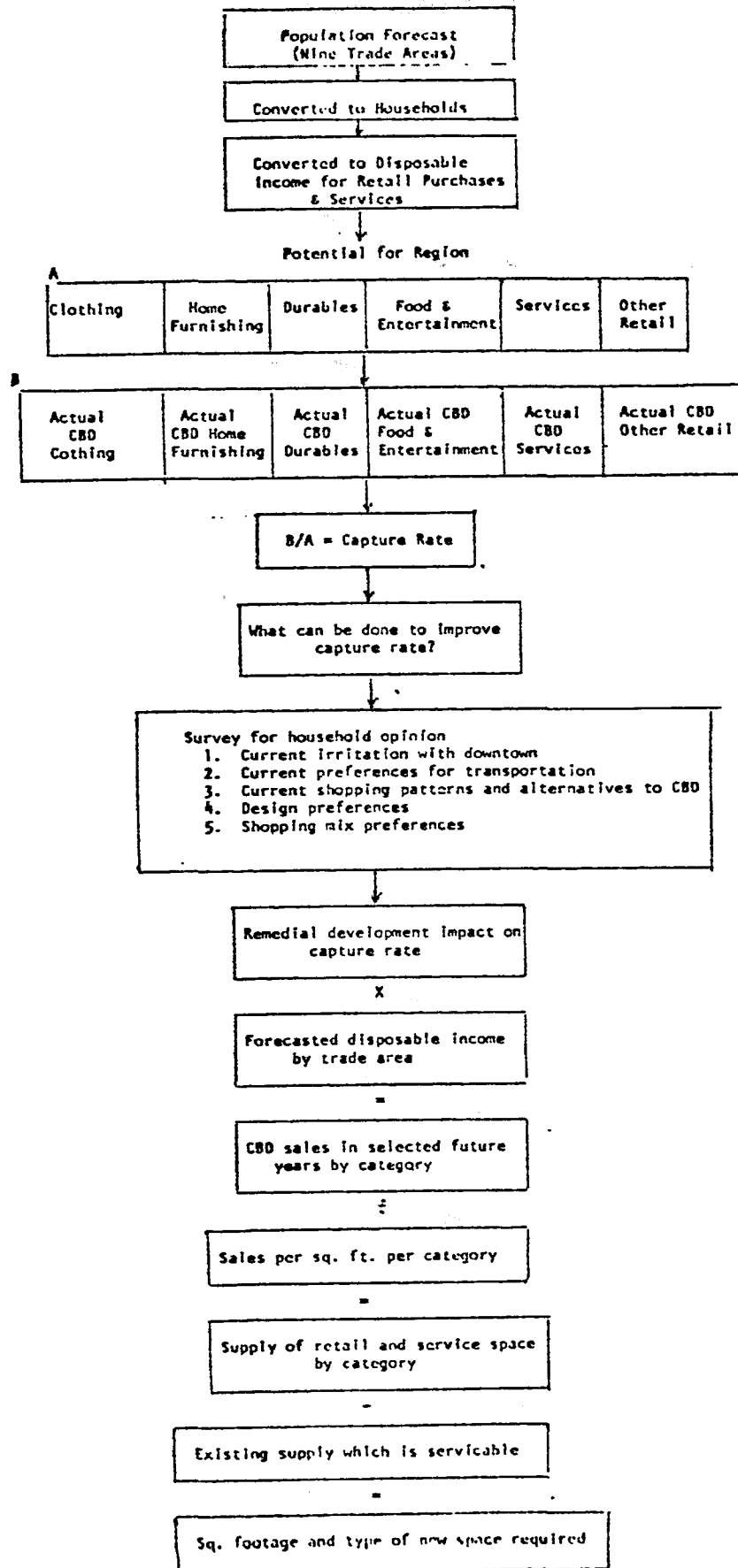
1. Existing supply
2. Prospective supply with timeline advantage
3. Competitive standard package of project features
4. Unique features of successful competitors
5. probable cause of unsuccessful competitors
6. Merchandising appeals of competitors
7. Definition of market penetration and competitive gap

IV. A good example of modeling market data through segmentation and survey for renovation in a small community is a project by Gruen Gruen + Associates for Santa Maria, California. The study was begun in 1972. Project is operating as the Santa Maria Town Center with retail sales ahead of forecasts.

A. The Gruen's were able to convince the redevelopment agency to avoid any physical planning until a detailed analysis of the demand for alternative services that could attract people back to the downtown area was done. This EMAS study (economic market analysis study) flow chart is in Exhibit 21 and had the following outputs:

1. First, a full analysis of economic data and retail data was utilized to generate information about the type of tenancies that could realistically be expected to penetrate downtown markets.
2. With a lead on tenancies, the Gruen's worked with an architect to provide sketches of alternative architectural styles and concepts to show residence in survey to see what type of treatments might strike the most positive response. (See Exhibit 22.)
3. The EMAS should then be able to indicate the kind of tenancies that could survive downtown, suggest their dollar sales potential, and indicate at a preliminary level a design scheme.
4. At the same time, back door financial studies are done from rents from capital budgets to discover what would be feasible for the private developer and what components may need to be subsidized by the public.
5. Appraisers use the EMAS and suggested tenant mix as the basis for their value estimate in the after condition.

EXHIBIT 21



## Exhibit 22

Excerpt With Permission From  
Economic & Market Analysis Study for Downtown Santa Maria

Prepared for City of Santa Maria Redevelopment Agency  
by Gruen Gruen + Associates

Thus, the relationship between survey derived indications of satisfaction and current expenditure patterns were sufficiently significant to warrant the use of survey responses to suggest the change in relative preferences that would be caused by an appropriately developed new shopping agglomeration in downtown Santa Maria. However, the rapid deterioration of this relationship with distance suggested that it be used very cautiously in Trade Areas 5 through 9. Therefore, in addition to considering the percentage of respondents who made no complaints, we also analyzed into the following three categories all the comments that were made in response to the interview question concerning the reasons for not shopping in downtown Santa Maria:

1. Complaints about physical deficiencies of the existing downtown that we have assumed the redevelopment will alleviate. (Remediable complaints)
2. Complaints concerning limited selection such as requests for a department store or more stores. (Remediable complaints)
3. Complaints about prices, the lack of a supermarket or other contemporary situations that we do not think the redevelopment programs will alter. (Irremediable complaints)

Table 10 presents the percentage of respondents making remediable complaints. These complaints were used in conjunction with the information about the relationship between the indications of satisfaction discussed above to adjust the present indicators of the proportion of expenditures on various items in downtown Santa Maria (the S variables originally presented in Table 4) to reflect the increase in consumer preferences for downtown Santa Maria that would result from the completion of a sales optimizing redevelopment program. We did not think the evidence warranted using these percentages of remediable complaints (%RC) directly by adding them to the previously revealed preference percentages (S<sub>1970</sub>) to get a new percentage (S<sub>1975</sub>, 1980, 1985). Instead, we adopted the following rules to get the new estimates of this preference variable:

	<u>Trade Areas 1 through 4</u>	<u>Trade Areas 5 through 9</u>
For Clothing	$\% RC \times .964 + S_{1970}$	Use % RC instead of S <sub>1970</sub>
For Home Furnishings	$\% RC \times .861 + S_{1970}$	Use % RC instead of S <sub>1970</sub>
For Other Retail	$\% RC \times .017 + S_{1970}$	1% + S <sub>1970</sub>

Table 10

Percentage of Respondents Making Complaints  
About Remediable Features of the Present Downtown  
(Complaints About Physical Problems  
or Inadequate Selection of Stores and Goods)

<u>Trade Area</u>	<u>% Remediable Complaints</u>
1	62.7
2	53.8
3	65.8
4	53.3
5	19.3
6	22.2
7	14.3
8	20.0
9	10.2

Source: Gruen Gruen + Associates telephone survey

Computations following these rules permitted us to develop the estimates of maximum percentage effective preference or penetration presented below in Table 11. The insertion of these percentages in the sales estimate generating equations we have been using throughout permits us to make the forecasts of potential sales summarized in Table 12. The forecast sales potential of almost \$42 million in 1975 would have downtown Santa Maria capturing 26.4% of the region's sales. By 1985 potential sales climb to almost \$58 million in spite of the fact that our model has downtown Santa Maria's share of the region's sales dropping slightly to 25.4%.

Table 11

Estimated Maximum Effective Preference (S)  
or Percentage Penetration Possible  
After Appropriate Redevelopment

<u>Trade Area</u>	<u>Clothing</u>	<u>Home Furnishings</u>	<u>Other Retail</u>
1	76.2	74.5	19.9
2	74.3	69.1	10.4
3	76.3	72.2	12.9
4	56.9	53.0	8.6
5	19.3	19.3	2.1
6	22.2	22.2	1.5
7	14.3	14.3	1.6
8	20.0	20.0	2.8
9	10.2	10.2	1.5

Source: Gruen Gruen + Associates



**Estimated Downtown Santa Maria Future Sales Potential  
(In Thousands of Dollars)**

Trade Area	\$ Available In Region 1975	Potential \$ Sales in NDP 1975	\$ Available In Region 1980	Potential \$ Sales in NDP 1980	\$ Available In Region 1985	Potential \$ Sales in NDP 1985	% of Regional Sales to NDP
1	21,347	12,520	23,950	14,047	26,764	15,693	58.6
2	9,159	4,940	10,665	5,753	12,369	6,673	53.9
3	15,852	8,916	18,705	10,521	22,956	12,912	56.2
4	6,759	2,806	7,949	3,300	9,473	3,933	41.5
5	19,676	2,756	22,963	3,217	26,613	3,728	14.0
6	18,030	2,854	20,878	3,305	24,042	3,806	15.8
7	9,065	942	10,920	1,135	13,106	1,362	10.4
8.	25,355	3,729	31,043	4,566	38,198	5,618	14.7
9	33,589	2,527	42,857	3,224	53,925	4,057	7.5
<b>Total</b>	<b>158,831</b>	<b>41,990</b>	<b>189,931</b>	<b>49,068</b>	<b>227,447</b>	<b>57,782</b>	

Source: Gruen Gruen + Associates

Exhibit 22 (Continued)

## EXHIBIT 22 (Continued)

Table 30

## Proportion of Expenditures in Downtown

<u>Trade Area</u>	<u>% Clothing</u>	<u>% Home Furnishings</u>	<u>% Other Retail</u>	<u>% Service</u>
1	15.9	20.5	18.8	33.3
2	22.6	22.8	9.5	35.9
3	13.1	15.5	11.8	28.0
4	5.7	7.0	7.7	5.3
5	5.4	4.5	1.1	4.0
6	2.9	0.9	0.5	1.8
7	2.5	1.5	0.6	0.6
8	6.6	5.0	1.8	3.5
9	2.0	0.6	0.5	0.6

Source: Gruen Gruen + Associates telephone survey

Table 31

Banking, Repair, Beauty Parlor/Barber Shop  
and Similar Services Obtained Downtown  
By Consumers of Differing Incomes

<u>Household Income</u>	<u>% Generally</u>	<u>% Occasionally</u>	<u>% Seldom</u>
Under \$7,000	43.7	22.9	16.0
\$7,000-10,000	43.3	20.0	36.7
\$10,000-15,000	60.7	12.5	26.8
Over \$15,000	61.5	21.2	17.3

Source: Gruen Gruen + Associates downtown survey

C. Establishment of merchandising strategy logic

1. Competition

- . Standard product
- . Price and quality
- . Competitive edge opportunity

2. Positioning strategy

- . Sales themes
- . Name and byline
- . Site and unit features
- . Strong sales points

3. Construction and architecture

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

D. Definition of prospect target for subject property

1. Recommendations on site location
2. Recommendations on site linkages and dynamics
3. Recommendations on building types and numbers
4. Recommendations on basic unit features
5. Recommendations on basic unit options
6. Recommendations on level of quality
7. Recommendations on basic price targets

E. Structuring the feasibility report

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

1. Format of the report should rely on three elements:

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

- b. A basic reference document which includes all the detail analysis.
  - c. A collection of reports by contributing professionals incorporated by reference.
2. To be terse the executive summary should depend on:
- a. Simple charts of choices of alternative outcomes
  - b. Simple flow charts
  - c. Specific criteria used to measure "likelihood of success"
3. Statement of limiting conditions should first begin with a definition of the word "feasible": (as per Institute of Appraisal Terminology Handbook), and then state that it was the purpose of the study to define the context of the situation and the parameters within which a solution might be found to fit the major constraints with a reasonable likelihood of success. It should carefully point out that the generalist has made a series of explicit assumptions which may, nevertheless, need confirmation by more detailed study best done by specialists. The statement of limiting conditions should further emphasize the constraints and objectives placed on the study by identifying who:
- a. Defined the constraints
  - b. Defined success
  - c. Provided the data and assumptions
  - d. Permitted key assumptions to remain untested for economy or speed
  - e. Accepted assumptions of conditions of uncertainty
  - f. Assembled proforma financial statements and projections
  - g. Executed feasibility confirmation of key assumptions with aid of specialists
  - h. Placed limitations on use and confidentiality

## FIFTH MODULE

### REAL ESTATE INVESTMENT ANALYSIS

Presented By

Professor James A. Graaskamp, Ph.D., CRE, SREA  
University of Wisconsin School of Business

#### FIRST HOUR

#### I. STRATEGIC PARAMETERS

Investment planning begins with certain strategic limitations and objectives of the investor which are well defined, systematic, and rational, as well as certain attitudes about the future which represent a less well defined web of bias controlling selection. These biases may, nevertheless, be rational anticipations about social, political, technological, or historical trends.

There is a hierarchy of real estate investment strategy screens which are always implicit in investor attitudes which are better utilized if they are made explicit as investors debate within their team or in the silence of their own den as to thrust of their real estate efforts.

A. Personality, religious persuasion, or logic lie behind investor attitudes about the future, particularly perceptions of long-term socio-economic trends for which forecasting is impossible and for which contingent events lead to alternative outcomes for our society whose broad, structural outlines we take for granted.

1. America and the threat of expropriation, progressive isolation of war.
2. The American response to the energy question.
3. The American response to the resource conservation question.
4. The American response to demographic shifts affecting housing, education, size of work force, community growth, etc.

5. The American response to shortage of capital in an era when most problems require capital intensive solutions.

6. The American response to the dilemma of incentive for expertise versus income stability for those without skills.

B. In approaching real estate investment, the investor has to make a couple of clear axioms from which he proceeds to operate:

1. Does portfolio theory and reasonable market efficiency of the securities market extend to real estate or does real estate have a great necessity and opportunity for those willing to incur the expense of property selection?

2. Is the investor going to be an activist providing some levels of expertise and investment product creation or is he a passivist who will provide only capital.

C. Given some investor mindset to the above factors and other anxieties, it is possible to formulate both broad strategic and selective tactical criteria. Such criteria should be developed in a systematic way in a general rank order of importance suggested as follows:

1. Political exposure

2. Degree of market control

3. Management intensiveness

4. Financial attributes from which investment classification can be drawn.

5. Alternative decision points and liquidity

6. Income tax strategy

7. Estate planning and tax implications

D. The non-financial aspects of a business must be understood before the numbers make any sense and before risk can be identified or evaluated. Thus,

the criteria in Section C can be expanded as follows:

1. Political exposure
  - a. Land use controls
  - b. Price controls (rent control, agricultural parity, FMR, etc.)
  - c. Subsidy of effective demand
  - d. Controls of supply costs (wages, building codes, specifications, etc.)
2. Degree of market control
  - a. Control of customer (contract, terrain, creation of tenancy)
  - b. Reciprocity
  - c. Monopolistic control of supply
  - d. Profile of consumer through market research
3. Management intensiveness
  - a. Development skills for the emerging real estate enterprise
  - b. Operating skills
  - c. Fungibility vs. personality (restaurant formulas vs. culinary)
  - d. Mortality of skills
4. Financial attributes
  - a. Trading property
  - b. Emerging developemnt or technology investment
  - c. Special situation investments
  - d. Cash return investments
  - e. Purchasing power preservation through tax shelter and retail indices
  - f. Financial position in terms of any of the above relative to liquidity, control, and time line
5. Alternative decision points and liquidity
  - a. Sunk cost of search and acquisition
  - b. Investment escape alternatives
  - c. Capacity for investment procrastination
  - d. Liquidity

6. Income tax strategy
  - a. Regulatory trade-offs
  - b. Shift from single conduit to split between operating profit centers and capital gain centers
  - c. Erosion of general tax subsidy and substitution of selective national priority incentive
  
7. Estate planning
  - a. Continuity of management
  - b. Liquidity for tax and bequest requirements
  - c. Gradual loss of the stepped-up basis
  - d. Careful separation of business associations and family involvements



# REAL ESTATE INVESTMENT ANALYSIS

Presented By

Professor James A. Graaskamp, Ph.D., CRE, SREA  
University of Wisconsin School of Business

SECOND HOUR

## II. FINANCIAL PARAMETERS AND ANALYSIS

The forecasting of future money returns to a present investment is the ultimate business problem and the dynamics of these problems explains the actions of consumer, producer, and the society.

- A. An investment in a bond can be defined as to when it begins in time, when it is sold, when coupons are collectible, and total costs and total receipts under alternative outcomes. Thus, yield is easily computed and risk depends on whether you can rely on the promisor.
- B. Real estate financial forecasting seldom enjoys such a rigid set of financial specifications and therefore seldom enjoys conservative conditions of certainty. An investment in real estate really means somebody "bought" a set of assumptions.
  1. Risk is the potential variance between assumptions and realizations between proforma prospects and the historical balance sheet and P& L statements.
  2. Degree of professionalism is measured, ultimately, by the care with which assumptions are made and supported by careful research.
- C. Basic cash flow analysis depends on four essential set of assumptions:
  1. Schedule of cash outlays (capital costs and expenses.)
  2. Schedule of cash receipts (periodic and reversions).
  3. Net cash flows for each period (negative and positive).
  4. Devices for comparison of alternatives

5. However, it quickly becomes apparent when accounting for the dollars "in and out" that not all dollars are the same. Some are current expenses while others represent acquisition of assets and many are shared with local and federal government through various tax processes.

D. A single period proforma is the first test of financial parameters.

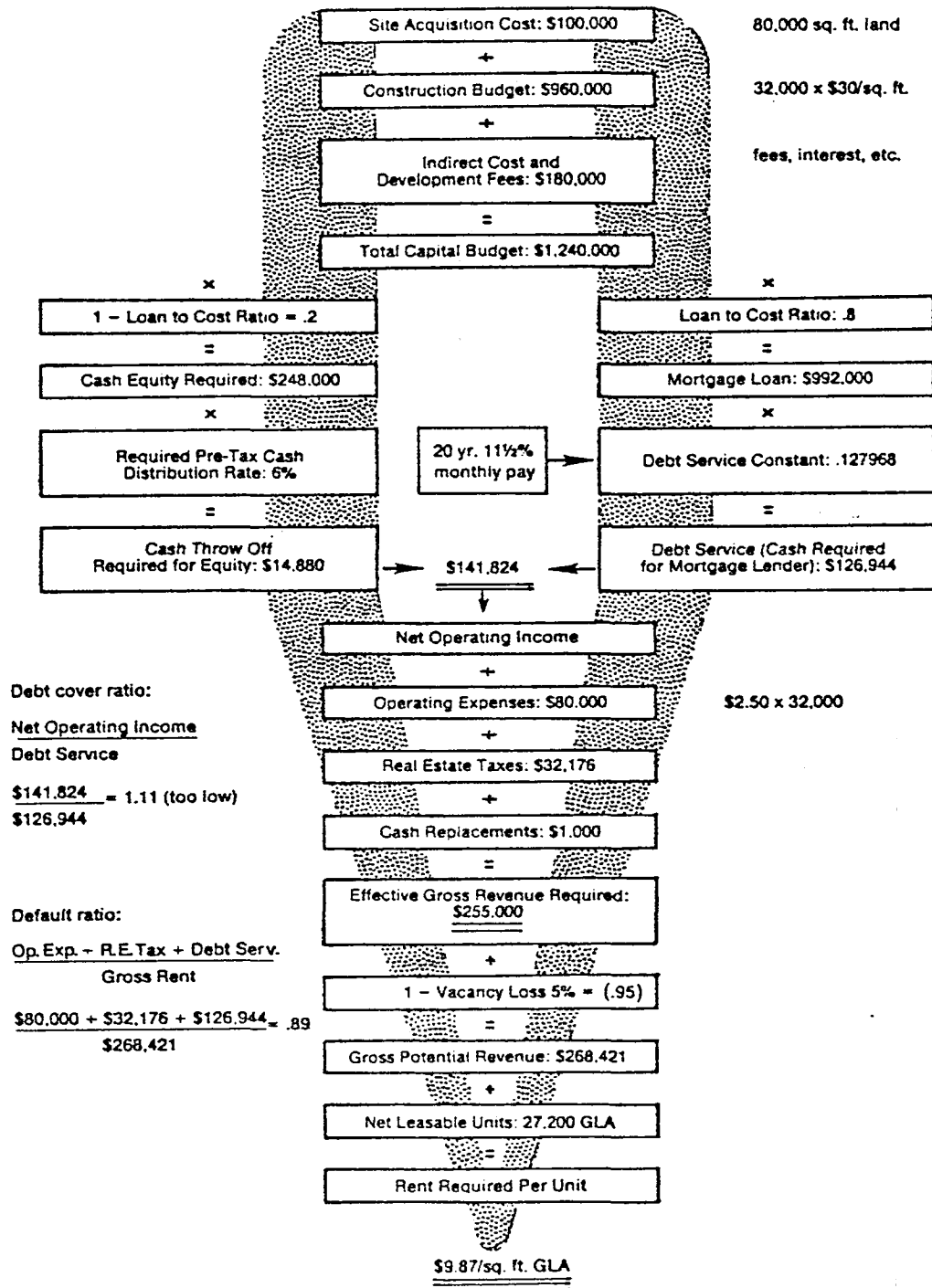
- 1. A given purchase price can be converted to a necessary rent level in the market (Front Door Approach, see Exhibit 1).
- 2. A given market rent level can be converted to a justified capital budget (Back Door Approach, see Exhibit 2).
- 3. While lenders prefer debt cover ratios for back door approach, equity investors should prefer risk orientated Default Ratio Approach (Exhibit 3).

E. Basic elements of proforma can then be expanded over time to include the following assumptions:

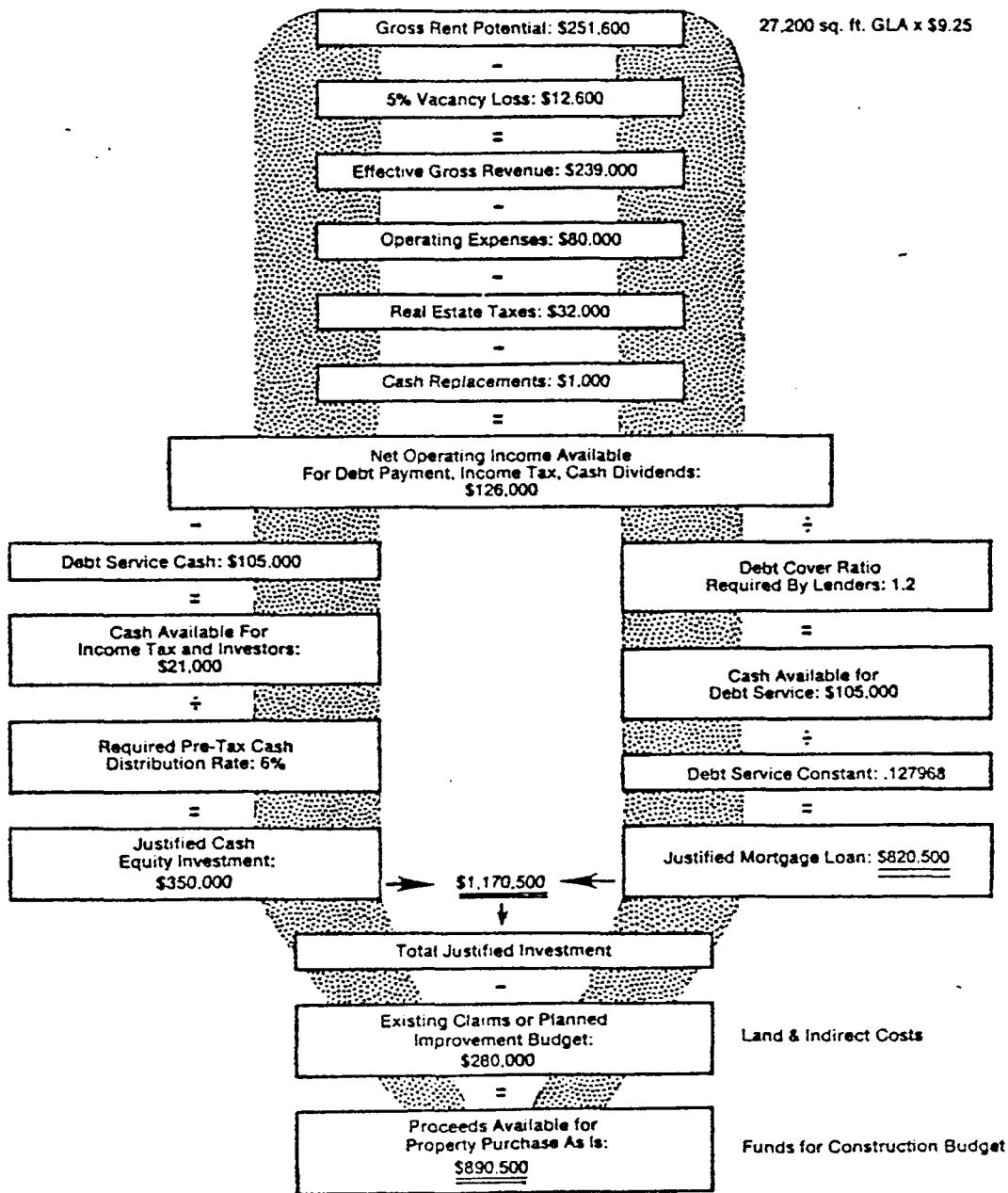
- 1. Definition of desired profit centers
- 2. Definition of time line over which events will still take place
- 3. Assumptions on the capital budget and sequence of source and application of funds.
  - a. Direct construction or purchase cost
  - b. Indirect and capitalized carrying cost
- 4. Financial plan
  - a. Credit amounts and terms
  - b. Equity amounts and terms
  - c. Holding power

EXHIBIT 1

Figure 8  
Loan to Cost Ratio Approach  
(Frontdoor Approach)

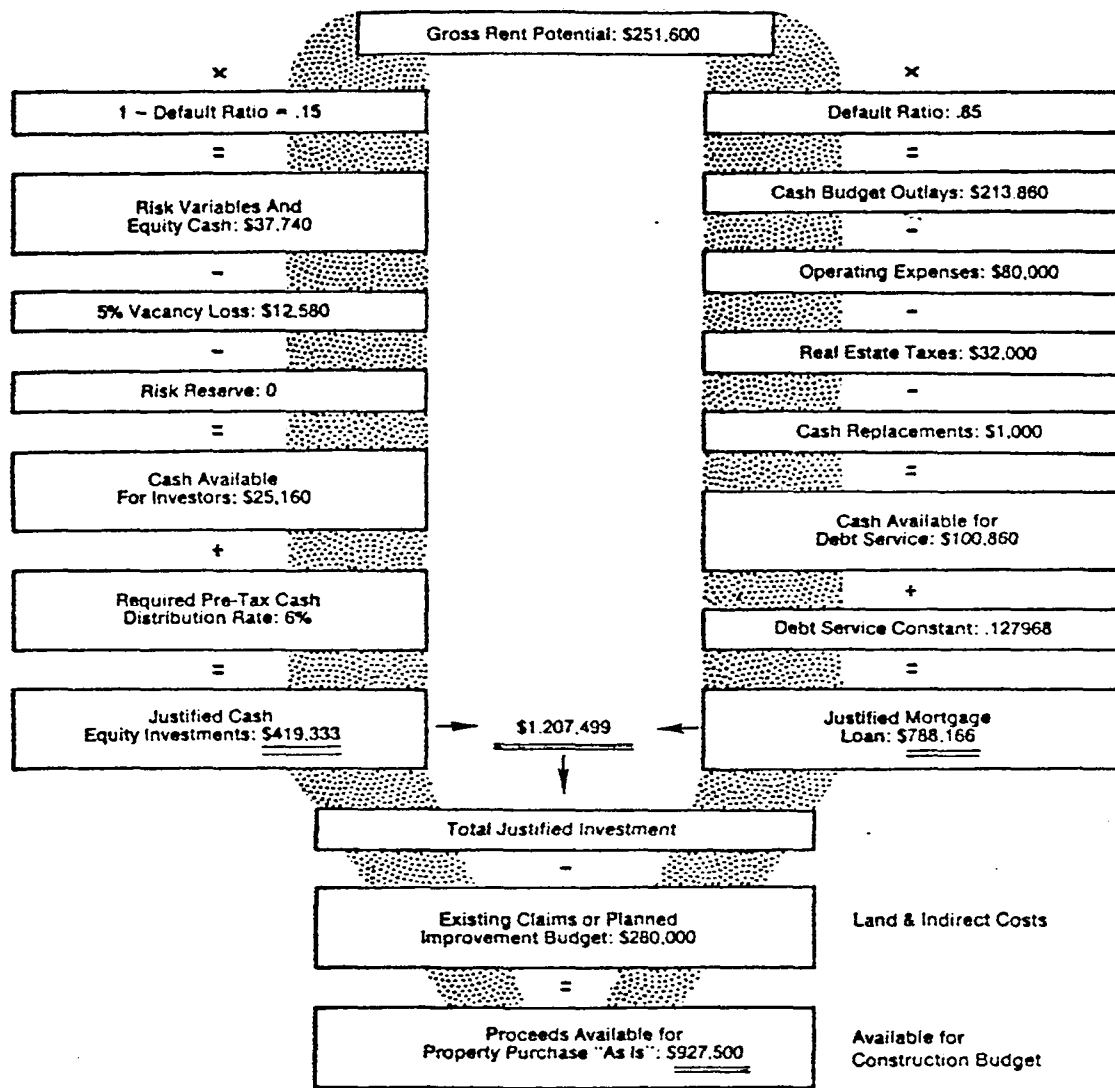


**Figure 9**  
**Debt Cover Ratio Approach**  
**(A Backdoor Approach)**  
**Lender's Point of View**



\$890,500 = \$27.80/sq. ft. justified building budget  
 32,000 sq. ft.

**Figure 10**  
**Default Ratio Approach**  
**(Another Backdoor Approach)**  
**Developer's Point of View**



\$37/sq. ft. of gross area for justified building budget

5. Profits classified as to type and tax
    - a. Cash from operations
    - b. Cash from capital gains
    - c. Cash surplus from financing
    - d. Cash from tax savings on other income
  6. Selected measures of profitability
    - a. Definition of investment
    - b. Definition of profit
    - c. Selected ratios of profit to investment
  7. Selected measures of risk
    - a. Payback periods
    - b. Capacity for variance
    - c. Variance controls
- E. For a rental investment property, the general format for determining after-tax cash flows for each period or year would generally be as follows:

PART I. ANNUAL (PERIODIC) RETURNS TO INVESTORS

1. Estimate potential gross cash income; Cash income from space sales
2. Deductions from potential gross
  - a. Normal vacancy
  - b. Seasonal income loss
  - c. Collection losses
  - d. Franchise fees, deposits returned, etc.
3. Add "other" income from service sales
4. Derive effective gross income
5. Deduct operating expenses (on expected cash outlay without accrual reserves)
  - a. Fixed expenses
  - b. Variable expenses
  - c. Repairs and maintenance
  - d. Replacements

6. Derive net\_operating\_income (NOI)
7. Deduct annual\_debt\_service
  - a. Contract interest
  - b. Supplementary variable interest
  - c. Principal amortization
8. Derive cash\_throw-off
9. Add back principal\_payments\_and\_replacements
10. Deduct tax\_depreciation\_allowance
11. Derive taxable\_income
12. Determine marginal\_income\_tax on real estate income
13. Deduct income tax from cash throw-off (H)
14. Derive after-tax\_cash\_flow
15. Add tax\_savings\_on\_other\_income (if K is negative)
16. Add surplus\_from\_refinancing
17. Derive spendable\_after-tax\_cash

PART II. RESALE (REVERSION) RETURNS TO INVESTOR

1. Estimated\_resale\_price (end of period)
2. Deduct broker's commission and other transaction\_costs
3. Derive effective\_gross\_proceeds from sale

- 4. Deduct all credit claims outstanding (end of period)
  - a. Short and long term note balances due
  - b. Prepayment penalties
  - c. Deduct equity shares to non-owner interest
- 5. Derive pre-tax reversion to equity
- 6. Deduct tax claims on ownership interest
  - a. Deduct capital gains tax
  - b. Deduct income tax on disallowed accelerated depreciation
  - c. Deduct surtax on taxable preferential income
- 7. Derive after-tax resale proceeds to investor

(See Exhibit 4)

- G. Financial risk is the variance between proforma budgets and historical accounting of results. Since loss of assets or of income expectations from static perils can be minimized by means of insurance devices for prediction and leveling of shock losses, financial risk management then becomes a matter of shaping incentives to reduce dynamic risks and provide a cushion or tolerance for surprise in the financial parameters of the enterprise.
- H. The first level of risk analysis are gross statements of the maximum potential loss and the cushion for partial losses.
  - 1. The loan to value ratio is an inexact measure of the maximum potential loss to the lender to a presumed salvage value of an asset. One minus the LTV plus the amount of personal guarantee is the measure of the borrower's maximum potential loss.
  - 2. Financial judgment expects that the maximum potential loss would be only a fraction of net worth of either party.



EXHIBIT 4

PROFORMA  
INVESTMENT ANALYSIS OF

FOR

DEMO.PROBLEM

REPORT SECTION NUMBER 1 PAGE 1  
=====

* GROSS RENT	\$ 74368.	* RATE OF GROWTH OF GROSS RENT	0.0000
* EXPENSES	\$ 4738.	* RATE OF GROWTH OF EXPENSES	0.0000
* R E TAXES	\$ 5868.	* RATE OF GROWTH OF R E TAXES	0.0000
* INCOME TAX RATE	0.5000	PROJECT VALUE GROWTH OF	5.0000
* VACANCY RATE	0.0688	WORKING CAPITAL LOAN RATE	0.1200
EQUITY DISCOUNT	0.0970	EXTRAORDINARY EXPENSES	\$ 0.
RESALE COST	0.0650	REINVESTMENT RATE	0.0700
WKG CAPITAL RS	\$ 0.	CAPITAL RESER INTEREST RATE	0.0000
INITIAL COST	\$ 429674.	INITIAL EQUITY REQUIRED	\$ 107419.

ALL '\*' VALUES ARE AVERAGE AMOUNTS FOR HOLDING PERIOD. OF 5 YRS.

REPORT SECTION NUMBER 2 PAGE 1  
=====

COMPONENT SUMMARY

TITLE	PCT. DEPR	BEGIN USE	USEFUL LIFE	DEPR METHOD	COST	SCH
LAND	0.00	1	0.	0	\$ 87304.	0
IMPROVEMENTS	0.90	1	33.	4	\$ 342370.	0

MORTGAGE SUMMARY

TITLE	INTR RATE	BEGIN YR.	END YR.	TERM	ORIG BALC	PCT VALUE
FIRST MORTGAGE	0.0962	1	27	27	\$ 322256	0.750

PRO FORMA  
INVESTMENT ANALYSIS OF

FOR  
DEMO.PROBLEM

REPORT SECTION NUMBER 3  
=====

PAGE 1

CASH FLOW ANALYSIS  
=====

	1979	1980	1981	1982
1 GROSS RENT	74368.	74368.	74368.	74368.
2 LESS VACANCY	5114.	5114.	5114.	5114.
3 LESS REAL ESTATE TAXES	5868.	5868.	5868.	5868.
4 LESS EXPENSES	4738.	4738.	4738.	4738.
5 NET INCOME	58648.	58648.	58648.	58648.
6 LESS DEPRECIATION	15562.	14855.	14180.	13535.
7 LESS INTEREST	30903.	30638.	30346.	30025.
8 TAXABLE INCOME	12183.	13155.	14122.	15088.
9 PLUS DEPRECIATION	15562.	14855.	14180.	13535.
10 LESS PRINCIPAL PAYMENTS	2634.	2899.	3191.	3512.
11 CASH THROW-OFF	25111.	25111.	25111.	25111.
12 LESS TAXES	6091.	6578.	7061.	7544.
13 LESS RESERVES AT 730.000	730.	730.	730.	730.
14 CASH FROM OPERATIONS	18290.	17803.	17320.	16837.
15 WORKING CAPITAL LOAN(CUM B)	0.	0.	0.	0.
16 DISTRIBUTABLE CASH AFR TAX	18290.	17803.	17320.	16837.
17 TAX SAVING ON OTHER INCOME	0.	0.	0.	0.
18 SPENDABLE CASH AFTER TAXES	18290.	17803.	17320.	16837.

CASH FLOW ANALYSIS  
=====

	1979	1980	1981	1982
MARKET VALUE				
19 BY METHOD - 5 - AT 0.0000	429674.	429674.	429674.	429674.
20 LESS RESALE COST	27929.	27929.	27929.	27929.
21 LESS LOAN BALANCES	319621.	316722.	313531.	310019.
22 PLUS CUM. CASH RESERVES	730.	1460.	2190.	2920.
23 B/4 TAX NET WORTH	82854.	86483.	90404.	94646.
24 CAPITAL GAIN (IF SOLD)	-18591.	-9254.	83.	9421.
25 CAPITAL GAINS TAX	-3718.	-1851.	17.	1884.
26 TAX PREFERENCE TAX	0.	0.	0.	0.
27 INCOME TAX ON EXCESS DEP	3112.	5871.	8292.	10391.
28 TOTAL TAX ON SALE	1253.	4946.	8309.	12275.
29 AFTER TAX NET WORTH	81601.	81537.	82095.	82370.

YEAR OF ANALYSIS  
=====

	1979	1980	1981	1982
BEFORE TAX RATIO ANALYSIS =====				
30 RETURN ON NET WORTH B/4 TAX	0.0051	0.3469	0.3357	0.3247
31 CHANGE IN NET WORTH B/4 TAX	-24565.	3629.	3921.	4242.
32 CASH RTN ON ORIG CASH EQUIY	0.2338	0.2338	0.2338	0.2338
33 PERCENT ORIG EQUITY PAYBACK	0.1703	0.3360	0.4972	0.6540
34 PRESENT VALUE OF PROJECT	420678.	437887.	453529.	467748.

YEAR OF ANALYSIS  
=====

1979 1980 1981 1982

AFTER TAX RATIO ANALYSIS  
=====

35	RETURN ON NEW WORTH AFT TAX	-0.0701	0.2174	0.2193	0.2084
36	CHANGE IN NET WORTH AFT TAX	-25818.	-63.	558.	276.
37	CASH RTN ON ORIG CASH EQUIY	0.1703	0.1657	0.1612	0.1567
38	PERCENT ORIG EQUITY PAYBACK	0.1703	0.3360	0.4972	0.6540
39	PRESENT VALUE OF PROJECT	413317.	421485.	429041.	435362.
40	NET INCOME-MARKET VALUE RTO	0.1365	0.1365	0.1365	0.1365
41	LENDER BONUS INTEREST RATE	0.0000	0.0000	0.0000	0.0000
42	DEFAULT RATIO	0.5936	0.5936	0.5936	0.5936

YEAR OF ANALYSIS  
=====

1979 1980 1981 1982

MODIFIED INTERNAL RATE OF RETURN ANALYSIS  
=====

RETURN ANALYSIS WITHOUT SALE  
=====

41	CUM. AFT TAX SPENDABLE CASH	18290.	37373.	57309.	78158.
44	MOD. I.R.R. ON ORIG EQUITY	-0.8297	-0.4102	-0.1889	-0.0764
45	MOD. I.R.R. ON CUM. EQUITY	-0.8297	-0.4102	-0.1889	-0.0764

RETURN ANALYSIS WITH SALE  
=====

46	CUM. CASH LESS ORIG EQUITY	-7528.	11492.	31985.	53110.
47	CUM. CASH LESS CUM. EQUITY	-7528.	11492.	31985.	53110.
48	MOD I.R.R. ON ORIG EQUITY	-0.0701	0.0521	0.0908	0.1057
49	MOD I.R.R. ON CUM. EQUITY	-0.0701	0.0521	0.0908	0.1057

R E P O R T   S E C T I O N

=====

SENSITIVITY ANALYSIS

=====

ANALYSIS YEAR IS    2 = 1980

DEFAULT RATE - NEEDED -	0.8300	0.8300	0.8300	0.8300
DEFAULT RATE - ACTUAL -	0.7979	0.7979	0.7979	0.7979
DIFFER -	0.0321	0.0321	0.0321	0.0321

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

CASH OUTLAYS		1979	1980	1981	1982
=====					
REAL ESTATE TAXES	BY	0.0917	0.0917	0.0917	0.0917
TOTAL EXPENSES	BY	0.1135	0.1135	0.1135	0.1135
FIXED EXPENSES	BY	0.1135	0.1135	0.1135	0.1135
VARIABLE EXPENSES	BY	0.0000	0.0000	0.0000	0.0000
TOTAL INTEREST PMTS.	BY	0.0181	0.0182	0.0184	0.0186
TOTAL PRINCIPAL PMTS.	BY	0.2119	0.1926	0.1750	0.1590
WORKING CAPITAL LOAN	BY	0.0000	0.0000	0.0000	0.0000
GROSS INCOME	BY	-0.0080	-0.0080	-0.0080	-0.0080
FIXED INCOME	BY	-0.0080	-0.0080	-0.0080	-0.0080
VARIABLE INCOME	BY	0.0000	0.0000	0.0000	0.0000

COMPONENTS		1979	1980	1981	1982
=====					
INITIAL INVESTMENT	BY	0.0917	0.0917	0.0917	0.0917
LAND	BY	0.4452	0.4452	0.4452	0.4452
IMPROVEMENTS	BY	0.1033	0.1033	0.1033	0.1033
ENTREPRENEURIAL SKIL	BY	-0.9866	-0.9866	-0.9866	-0.9866

MORTGAGES		1979	1980	1981	1982
=====					
FIRST MORTGAGE	BY	0.0166	0.0166	0.0166	0.0166

REPORT SECTION  
=====

SENSITIVITY ANALYSIS  
=====

ANALYSIS YEAR IS 2 = 1980

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

CASH OUTLAYS		1979	1980	1981	1982
REAL ESTATE TAXES	BY	0.0415	0.0415	0.0415	0.0415
TOTAL EXPENSES	BY	0.0514	0.0514	0.0514	0.0514
FIXED EXPENSES	BY	0.0514	0.0514	0.0514	0.0514
VARIABLE EXPENSES	BY	0.0000	0.0000	0.0000	0.0000
TOTAL INTEREST PMTS.	BY	0.0082	0.0082	0.0083	0.0084
TOTAL PRINCIPAL PMTS.	BY	0.0960	0.0872	0.0792	0.0720
WORKING CAPITAL LOAN	BY	0.0000	0.0000	0.0000	0.0000
GROSS INCOME	BY	0.0045	0.0045	0.0045	0.0045
FIXED INCOME	BY	0.0045	0.0045	0.0045	0.0045
VARIABLE INCOME	BY	0.0000	0.0000	0.0000	0.0000

COMPONENTS		1979	1980	1981	1982
INITIAL INVESTMENT	BY	0.0415	0.0415	0.0415	0.0415
LAND	BY	0.2015	0.2015	0.2015	0.2015
IMPROVEMENTS	BY	0.0468	0.0468	0.0468	0.0468
ENTREPRENEURIAL SKIL	BY	-0.4466	-0.4466	-0.4466	-0.4466

MORTGAGES		1979	1980	1981	1982
FIRST MORTGAGE	BY	0.0075	0.0075	0.0075	0.0075

- 3. Conventional wisdom of the lender is that the pain of loss for the equity position will be sufficient to generate payment in almost all events or that the guarantees will be adequate to reduce minimum loss to zero.
- 4. Net income ratio:

$$\frac{\text{Net income}}{\text{Purchase price} + \text{additional cost} - \text{Overall rate or cap rate}} \text{ should reveal danger of reversed leverage}$$

- 5. The fallacy of such first level, over-simplified regulatory ratios is that value is the same as cash, that paper capital is as significant as cash available to meet the monthly payment, and that investor incentives are found solely or primarily below the net income level.
- I. Second level ratios begin to analyze and measure the relationship of specific assumptions one to another and in a way which provides relative measures of incentive, importance, and contribution to financial insecurity.

- 1. Construction loan to marginal cash cost of the borrower is such a balance sheet test ratio. The increment in risk of maximum loss for the borrower is the increase in his maximum potential loss as a result of financing the project.

- 2. Debt cover ratio:

$$\frac{\text{Net operating income}}{\text{Debt service}}$$

- 3. Default ratio:

$$\frac{\text{Operating expenses} + \text{real estate taxes} + \text{short term debt} + \text{interest} + \text{principal payments}}{\text{Gross rent}}$$

4. Payback ratio:

$$\frac{\text{Cumulative spendable cash}}{\text{Original budget - original debt} + \text{amount of personal guarantees}}$$

5. Spendable cash = distributable cash from operations + refinancing surplus + tax savings to other income + cash profits for services rendered.

6. All of these second level ratios assume a revenue stream called effective gross rent will simply be reallocated by the natural heirarchy of the income statement. That premise involves the major assumption of any enterprise, i.e., there are an adequate number of customers who prefer and who can afford the enterprise product.

J. Third level risk ratios are those which link the space-time product to the money-time reflections in balance sheets and P & L statements. These ratios require some primary research.

1. Building efficiency ratio:

$$\frac{\text{Gross leasable area}}{\text{Gross building area}} \quad \text{or} \quad \frac{\text{Usable area}}{\text{Gross leasable area}}$$

or

$$\frac{\text{Gross leasable area}}{\text{Total site area}} \quad \text{or} \quad \frac{\text{Rentable area}}{\text{Usable area}}$$

or

$$\frac{\text{Building surface area}}{\text{Gross leasable area}}$$



2. Vacancy ratio:

$$\frac{\text{Space unit} \times \# \text{ of units} \times \text{rental payment periods per year} \times \text{turnover rate} \times \text{rental payments lost} \times \text{rent}}{\# \text{ of units} \times \# \text{ of payments} \times \text{rent per period}} = (\text{gross rent})$$

1-bedroom apartments x 20 x 50% turnover x 1 month lost x \$200/mo.

$$\frac{20 \times 50\% \times 1 \times 200}{20 \times 12 \times 200}$$

$$\frac{2000}{48000} = \frac{1}{24} = 4.2\%$$

3. Absorption rate:

$$\frac{\text{Units sold or leased per period}}{\text{Total supply of units available for sale or lease}}$$

4. Capture rate:

$$\frac{\text{Units in specific project sold or leased per period}}{\text{Total competitive units sold or leased per period}}$$

5. Sensitivity models or tables permit measurement of a change in one variable as compared to all other variables to establish the parameters of tolerance or to identify the most useful areas for further modification of the financial structure.

6. A significant weakness of second level ratios is the fact that they do not deal with time or the opportunity costs of money for comparison of investments with alternative patterns of cash outlays and receipts.

K. Third level ratios modify comparisons for the influence of time, between one period and another or for cumulative periods of time. Prospective rates of return compare one time period with another while retrospective rates are concerned

with cumulative results. Probability models display the frequency distribution over time of alternative outcomes when certain variables are permitted to vary according to some pattern and parameter.

Prospective rates

- 1. Return on net worth before tax:

$$\frac{\text{Cash throw-off} + \text{change in net worth}}{\text{Net worth at end of previous period}}$$

- 2. Return on net worth after tax:

$$\frac{\text{Spendable cash} + (\text{change in net worth} - \text{change in taxes on sale or transfer})}{\text{Net worth at end of previous period} - \text{taxes on sale or transfer}}$$

- 3. Cash on cash before taxes:

$$\frac{\text{Cash throw-off}}{\text{Total cash budget less original debt}}$$

- 4. Cash on cash after tax:

$$\frac{\text{Distributable cash} + \text{tax savings to other income}}{\text{Total cash budget less original debt}}$$

Retrospective rates

- 5. Internal rate of return is that rate which makes the net present value difference between the present value of outlays and the present value of receipts equal to zero.

- 6. The modified internal rate of return (weighted average portfolio return) is the internal rate of return which makes the net present value difference of the outlays discounted at the opportunity cost of money and the cumulative receipts compounded at the reinvestment rate equal to zero. (The only difference between MIRR and the financial management rate of return FMRR is that the latter uses an average cost of

capital rather than recognizing short-term financing of deficit operations.)

7. Profitability index:

$$\frac{\text{Net present value of return}}{\text{Total cost of acquisition}}$$

8. Net cumulative cash after taxes less original investment with and without resale proceeds after taxes on sale or transfer.

L. Sensitivity analysis involves fine tuning of controllable variables and testing of tolerance of project for variance or surprise. There are many computer systems which permit testing of physical plan (Exhibit 5) or tax and finance implications (Exhibit 6).

M. New attempts to create real estate indexes of performance by property type over time are now experimental.

1. Problems in accounting standardization.
2. Problems in accounting/appraisal interface.
3. Problems in appraisal standard practice.

EXHIBIT 5

INPUT DATA LISTING

BUILDING ID 1  
DATE 3 11 79

TITLES

TITLES SHOPPING CENTER CASE STUDY

SQ FT IN TRACT 255698.00

RUN NO. 1

CONSTRUCTION-SHELL	0. SQ FT AT \$	0.	\$
CONSTRUCTION-INTERIOR	0. SQ FT AT \$	0.	\$
TOTAL BUILDING COST	60242. SQ FT AT \$	19.69	\$
GRADE PARKING	654.55SQFT	275.00SPACES @ \$	0.50

STRUCT. PKING 0. SQFT 0. SPACES @ \$ 0.

LANDSCAPING 0.  
FF AND E 0.

RESTAURANT 74538.00

FEEs

ARCHITECTURE	0.
ENGINEERING	0.
LOAN FEES	20000.00
CLOSING COSTS	0.
TAXES AND INS	0.
OPTIONAL TITLE	OPTIONAL EXPENSES
LEASING FEES	10640.00

CONSTRUCTION INTERIM RATE	10.000 PCT
CONSTRUCTION PERIOD	8 MONTHS
LAND INTERIM RATE IS	0. PCT
255698.00 SQUARE FEET AT \$	1.30

INTERIM RATE 0. PCT FOR 0. MONTHS

COST PER MONTH 0. FOR 0. MONTHS

OTHER LAND COSTS 0.

CONSTRUCTION COST ESTIMATE

SHOPPING CENTER CASE STUDY

DATE: 3/11/ 79  
BLDG: 1  
RUN : 1

CONSTRUCTION COSTS		DOLLARS
TOTAL BUILDING COST	60242. SQ FT AT \$ 19.69	\$ 1186165.
GRADE PARKING	275. SPACES AT \$ 327.	90001.
RESTAURANT		74538.
SUBTOTAL CONSTRUCTION		----- 1350704.
LOAN ORIGINATION FEES	AT 1.5 PCT	20000.
LEASING FEES	AT 0.8 PCT	10640.
CUMULATIVE SUBTOTAL		----- 1381344.
INTERIM INTEREST-CONSTRUCTION		
	\$ 1381344. AT 10.0 PCT FOR 8 MONTHS COMPOUNDED	52820.
TOTAL CONSTRUCTION COSTS		----- 1434164.
LAND COSTS		
	255698. SQ FT AT \$ 1.30	332407.
INTERIM INTEREST-LAND		-----
TOTAL LAND COST		332407.
TOTAL LAND AND CONSTRUCTION COST		----- 1766571. =====

PRO FORMA CASH FLOW TABLE

SHOPPING CENTER CASE STUDY

FIXED PARAMETERS

PAGE 1 OF 12

SITE :	255698. SQUARE FEET	DATE	3-11- 79
BUILDING :	60242. SQUARE FEET	BLDG	1
EFFICIENCY:	100.00 PCT( 60242. SQ FT)		
LOAN RATIO:	75.00 PCT OF \$ 1766571.		
LOAN :	\$ 1324929.		
EQUITY :	\$ 441643.		
FINANCING :	27. YEARS 9.625 PCT		
OTR INCOME:	\$ 0. ANNUALLY	RUN	1
EXPENSES :	\$ 0.77 PER SQ FT		

ANNUAL CASH FLOWS

VACANCY ALLOWANCE

	3.00 PCT	3.77 PCT	4.00 PCT	5.00 PCT	6.00 PCT
	-----	-----	-----	-----	-----
RENTAL RATES					
ANNUAL \$/SQ FT					
\$ 3.25	5641.	4134.	3683.	1726.	-232.
\$ 3.50	20250.	18626.	18142.	16033.	13925.
\$ 3.67	30184.	28482.	27973.	25762.	23551.
\$ 3.75	34859.	33119.	32600.	30341.	28081.
\$ 4.00	49467.	47612.	47058.	44648.	42238.

BREAKEVEN RENTAL RATES

VACANCY ALLOWANCE

	3.00 PCT	3.77 PCT	4.00 PCT	5.00 PCT	6.00 PCT
	-----	-----	-----	-----	-----
RENTAL RATES					
ANNUAL \$/SQ FT					
	3.15	3.18	3.19	3.22	3.25

PRO FORMA CASH FLOW TABLE

SHOPPING CENTER CASE STUDY

FIXED PARAMETERS	PAGE	2 OF 12
SITE : 255698. SQUARE FEET	DATE	3-11- 79
BUILDING : 60242. SQUARE FEET	BLDG	1
EFFICIENCY: 100.00 PCT( 60242. SQ FT)		
LOAN RATIO: 75.00 PCT OF \$ 1766571.		
LOAN : \$ 1324929.		
EQUITY : \$ 441643.		
FINANCING : 27. YEARS 9.625 PCT		
VACANCY : 3.77 PCT OF LEASEABLE		
QTR INCOME: \$ 0. ANNUALLY	RUN	1

ANNUAL CASH FLOWS

	ANNUAL EXPENSE RATES PER SQ FT				
	\$ 0.70	\$ 0.77	\$ 0.80	\$ 0.90	\$ 1.00
	-----	-----	-----	-----	-----
RENTAL RATES					
ANNUAL \$/SQ FT					
\$ 3.25	8351.	4134.	2326.	-3698.	-9722.
\$ 3.50	22843.	18626.	16819.	10795.	4771.
\$ 3.67	32698.	28482.	26674.	20650.	14626.
\$ 3.75	37336.	33119.	31312.	25288.	19264.
\$ 4.00	51829.	47612.	45805.	39780.	33756.

BREAKEVEN RENTAL RATES

	ANNUAL EXPENSE RATES PER SQ FT				
	\$ 0.70	\$ 0.77	\$ 0.80	\$ 0.90	\$ 1.00
	-----	-----	-----	-----	-----
RENTAL RATES					
ANNUAL \$/SQ FT					
	3.11	3.18	3.21	3.31	3.42

PRO FORMA CASH FLOW TABLE

SHOPPING CENTER CASE STUDY

FIXED PARAMETERS		PAGE	3 OF 12
SITE :	255698. SQUARE FEET	DATE	3-11- 79
BUILDING :	60242. SQUARE FEET	BLDG	1
EFFICIENCY:	100.00 PCT( 60242. SQ FT)		
LOAN RATIO:	75.00 PCT OF \$ 1766571.		
LOAN :	\$ 1324929.		
EQUITY :	\$ 441643.		
VACANCY :	3.77 PCT OF LEASEABLE		
OTR INCOME:	\$ 0. ANNUALLY	RUN	1
EXPENSES :	\$ 0.77 PER SQ FT		

ANNUAL CASH FLOWS

FINANCING PARAMETERS

27. YEARS	27. YEARS	27. YEARS	30. YEARS	25. YEARS
9.62 PCT	9.75 PCT	10.00 PCT	10.25 PCT	9.50 PCT

RENTAL RATES  
ANNUAL \$/SQ FT

	-----	-----	-----	-----	-----
\$ 3.25	4134.	2716.	-135.	-453.	3109.
\$ 3.50	18626.	17208.	14358.	14039.	17601.
\$ 3.67	28482.	27063.	24213.	23894.	27456.
\$ 3.75	33119.	31701.	28851.	28532.	32094.
\$ 4.00	47612.	46194.	43343.	43025.	46587.

BREAKEVEN RENTAL RATES

FINANCING PARAMETERS

27. YEARS	27. YEARS	27. YEARS	30. YEARS	25. YEARS
9.62 PCT	9.75 PCT	10.00 PCT	10.25 PCT	9.50 PCT

RENTAL RATES  
ANNUAL \$/SQ FT

	-----	-----	-----	-----	-----
	3.18	3.20	3.25	3.26	3.20



PRO FORMA CASH FLOW TABLE

SHOPPING CENTER CASE STUDY

FIXED PARAMETERS	PAGE	4 OF 12
SITE : 255698. SQUARE FEET	DATE	3-11- 79
BUILDING : 60242. SQUARE FEET	BLDG	1
LOAN RATIO: 75.00 PCT OF \$ 1766571.		
LOAN : \$ 1324929.		
EQUITY : \$ 441643.		
FINANCING : 27. YEARS 9.625 PCT		
VACANCY : 3.77 PCT OF LEASEABLE		
QTR INCOME: \$ 0. ANNUALLY	RUN	1
EXPENSES : \$ 0.77 PER SQ FT		

ANNUAL CASH FLOWS

BUILDING EFFICIENCY (PCT OF GROSS)

99.60 PCT 100.00 PCT 102.92 PCT 106.24 PCT 109.56 PCT  
LOAN TO COST RATIO

70.00 PCT 72.00 PCT 75.00 PCT 78.00 PCT 80.00 PCT

RENTAL RATES  
ANNUAL \$/SQ FT

\$ 3.25	17708.	12993.	3563.	4134.	8278.
\$ 3.50	33586.	28390.	17998.	18626.	23194.
\$ 3.67	44383.	38860.	27813.	28482.	33336.
\$ 3.75	49464.	43787.	32432.	33119.	38109.
\$ 4.00	65342.	59184.	46867.	47612.	53025.

BREAKEVEN RENTAL RATES

BUILDING EFFICIENCY (PCT OF GROSS)

99.60 PCT 100.00 PCT 102.92 PCT 106.24 PCT 109.56 PCT  
LOAN TO COST RATIO

70.00 PCT 72.00 PCT 75.00 PCT 78.00 PCT 80.00 PCT

RENTAL RATES  
ANNUAL \$/SQ FT

2.97	3.04	3.19	3.18	3.11
------	------	------	------	------

PRO FORMA CASH FLOW TABLE

SHOPPING CENTER CASE STUDY

FIXED PARAMETERS	PAGE	5 OF 12
SITE : 255698. SQUARE FEET	DATE	3-11- 79
BUILDING : 60242. SQUARE FEET	BLDG	1
EFFICIENCY: 100.00 PCT( 60242. SQ FT)		
FINANCING : 27. YEARS 9.625 PCT		
VACANCY : 3.77 PCT OF LEASEABLE		
QTR INCOME: \$ 0. ANNUALLY	RUN	1
EXPENSES : \$ 0.77 PER SQ FT		

ANNUAL CASH FLOWS

LOAN TO COST RATIO

	70.00 PCT	72.00 PCT	75.00 PCT	78.00 PCT	80.00 PCT
	-----				
RENTAL RATES					
ANNUAL \$/SQ FT					
\$ 3.25	13326.	9649.	4134.	-1382.	-5059.
\$ 3.50	27819.	24142.	18626.	13111.	9434.
\$ 3.67	37674.	33997.	28482.	22966.	19289.
\$ 3.75	42312.	38635.	33119.	27604.	23927.
\$ 4.00	56804.	53127.	47612.	42096.	38420.

BREAKEVEN RENTAL RATES

LOAN TO COST RATIO

	70.00 PCT	72.00 PCT	75.00 PCT	78.00 PCT	80.00 PCT
	-----				
RENTAL RATES					
ANNUAL \$/SQ FT					
	3.02	3.08	3.18	3.27	3.34

PRO FORMA CASH FLOW TABLE

SHOPPING CENTER CASE STUDY

FIXED PARAMETERS	PAGE	6 OF 12
SITE : 255698. SQUARE FEET	DATE	3-11- 79
BUILDING : 60242. SQUARE FEET	BLDG	1
EFFICIENCY: 100.00 PCT( 60242. SQ FT)		
LOAN RATIO: 75.00 PCT OF \$ 1766571.		
LOAN : \$ 1324929.		
EQUITY : \$ 441643.		
REVENUE : \$ 3.67 PER SQ FT		
OTR INCOME: \$ 0. ANNUALLY	RUN	1
EXPENSES : \$ 0.77 PER SQ FT		

ANNUAL CASH FLOWS

FINANCING PARAMETERS

27. YEARS	27. YEARS	27. YEARS	30. YEARS	25. YEARS
9.62 PCT	9.75 PCT	10.00 PCT	10.25 PCT	9.50 PCT

VACANCY RATES

3.00 PCT	30184.	28766.	25915.	25597.	29159.
3.77 PCT	28482.	27063.	24213.	23894.	27456.
4.00 PCT	27973.	26555.	23704.	23386.	26948.
5.00 PCT	25762.	24344.	21494.	21175.	24737.
6.00 PCT	23551.	22133.	19283.	18964.	22526.

BREAKEVEN RENTAL RATES

FINANCING PARAMETERS

27. YEARS	27. YEARS	27. YEARS	30. YEARS	25. YEARS
9.62 PCT	9.75 PCT	10.00 PCT	10.25 PCT	9.50 PCT

VACANCY RATES

3.00 PCT	3.15	3.18	3.23	3.23	3.17
3.77 PCT	3.18	3.20	3.25	3.26	3.20
4.00 PCT	3.19	3.21	3.26	3.27	3.20
5.00 PCT	3.22	3.24	3.29	3.30	3.24
6.00 PCT	3.25	3.29	3.33	3.34	3.27

SHOPPING CENTER CASE STUDY

FIXED PARAMETERS		PAGE	7 OF 12
SITE :	255698. SQUARE FEET	DATE	3-11- 79
BUILDING :	60242. SQUARE FEET	BLDG	1
EFFICIENCY:	100.00 PCT(- 60242. SQ FT)		
LOAN RATIO:	75.00 PCT OF \$ 1766571.		
LOAN :	\$ 1324929.		
EQUITY :	\$ 441643.		
REVENUE :	\$ 3.67 PER SQ FT		
VACANCY :	3.77 PCT OF LEASEABLE		
OTR INCOME:	\$ 0. ANNUALLY	RUN	1

ANNUAL CASH FLOWS

FINANCING PARAMETERS

27. YEARS	27. YEARS	27. YEARS	30. YEARS	25. YEARS
9.62 PCT	9.75 PCT	10.00 PCT	10.25 PCT	9.50 PCT

EXPENSE RATES  
ANNUAL \$/SQ FT

	-----	-----	-----	-----	-----
\$ 0.70	32698.	31280.	28430.	28111.	31673.
\$ 0.77	28482.	27063.	24213.	23894.	27456.
\$ 0.80	26674.	25256.	22406.	22087.	25649.
\$ 0.90	20650.	19232.	16381.	16063.	19625.
\$ 1.00	14626.	13208.	10357.	10039.	13601.

BREAKEVEN RENTAL RATES

FINANCING PARAMETERS

27. YEARS	27. YEARS	27. YEARS	30. YEARS	25. YEARS
9.62 PCT	9.75 PCT	10.00 PCT	10.25 PCT	9.50 PCT

EXPENSE RATES  
ANNUAL \$/SQ FT

	-----	-----	-----	-----	-----
\$ 0.70	3.11	3.13	3.18	3.19	3.12
\$ 0.77	3.18	3.20	3.25	3.26	3.20
\$ 0.80	3.21	3.23	3.28	3.29	3.23
\$ 0.90	3.31	3.34	3.39	3.39	3.33
\$ 1.00	3.42	3.44	3.49	3.50	3.44

31

SHOPPING CENTER CASE STUDY

FIXED PARAMETERS

PAGE 8 OF 12

SITE	:	255698. SQUARE FEET	DATE	3-11- 79
BUILDING	:	60242. SQUARE FEET	BLDG	1
LOAN RATIO:		75.00 PCT OF \$ 1766571.		
LOAN	:	\$ 1324929.		
EQUITY	:	\$ 441643.		
FINANCING	:	27. YEARS 9.625 PCT		
REVENUE	:	\$ 3.67 PER SQ FT		
VACANCY	:	3.77 PCT OF LEASEABLE		
DTR INCOME:	\$	0. ANNUALLY	RUN	1

ANNUAL CASH FLOWS

BUILDING EFFICIENCY (PCT OF GROSS)

99.60 PCT 100.00 PCT 102.92 PCT 106.24 PCT 109.56 PCT  
LOAN TO COST RATIO

70.00 PCT 72.00 PCT 75.00 PCT 78.00 PCT 80.00 PCT

EXPENSE RATES  
ANNUAL \$/SQ FT

\$ 0.70	49003.	43340.	32013.	32698.	37676.
\$ 0.77	44383.	38860.	27813.	28482.	33336.
\$ 0.80	42403.	36940.	26013.	26674.	31476.
\$ 0.90	35803.	30540.	20013.	20650.	25276.
\$ 1.00	29203.	24140.	14013.	14626.	19076.

BREAKEVEN RENTAL RATES

BUILDING EFFICIENCY (PCT OF GROSS)

99.60 PCT 100.00 PCT 102.92 PCT 106.24 PCT 109.56 PCT  
LOAN TO COST RATIO

70.00 PCT 72.00 PCT 75.00 PCT 78.00 PCT 80.00 PCT

EXPENSE RATES  
ANNUAL \$/SQ FT

\$ 0.70	2.90	2.97	3.12	3.11	3.04
\$ 0.77	2.97	3.04	3.19	3.18	3.11
\$ 0.80	3.00	3.07	3.22	3.21	3.14
\$ 0.90	3.11	3.17	3.32	3.31	3.25
	3.21	3.28	3.43	3.42	3.35

PRO FORMA CASH FLOW TABLE

SHOPPING CENTER CASE STUDY

FIXED PARAMETERS	PAGE	9 OF 12
SITE : 255698. SQUARE FEET	DATE	3-11- 79
BUILDING : 60242. SQUARE FEET	BLDG	1
EFFICIENCY: 100.00 PCT( 60242. SQ FT)		
FINANCING : 27. YEARS 9.625 PCT		
REVENUE : \$ 3.67 PER SQ FT		
VACANCY : 3.77 PCT OF LEASEABLE		
QTR INCOME: \$ 0. ANNUALLY	RUN	1

ANNUAL CASH FLOWS

LOAN TO COST RATIO

	70.00 PCT	72.00 PCT	75.00 PCT	78.00 PCT	80.00 PCT
	-----	-----	-----	-----	-----
EXPENSE RATES					
ANNUAL \$/SQ FT					
\$ 0.70	41891.	38214.	32698.	27183.	23506.
\$ 0.77	37674.	33997.	28482.	22966.	19289.
\$ 0.80	35867.	32190.	26674.	21159.	17482.
\$ 0.90	29842.	26165.	20650.	15135.	11458.
\$ 1.00	23818.	20141.	14626.	9110.	5434.

BREAKEVEN RENTAL RATES

LOAN TO COST RATIO

	70.00 PCT	72.00 PCT	75.00 PCT	78.00 PCT	80.00 PCT
	-----	-----	-----	-----	-----
EXPENSE RATES					
ANNUAL \$/SQ FT					
\$ 0.70	2.95	3.01	3.11	3.20	3.26
\$ 0.77	3.02	3.08	3.18	3.27	3.34
\$ 0.80	3.05	3.11	3.21	3.31	3.37
\$ 0.90	3.16	3.22	3.31	3.41	3.47
\$ 1.00	3.26	3.32	3.42	3.51	3.58

PRO FORMA CASH FLOW TABLE

SHOPPING CENTER CASE STUDY

FIXED PARAMETERS		PAGE	10 OF 12
SITE :	255698. SQUARE FEET	DATE	3-11- 79
BUILDING :	60242. SQUARE FEET	BLDG	1
EFFICIENCY:	100.00 PCT( 60242. SQ FT)		
REVENUE :	\$ 3.67 PER SQ FT		
VACANCY :	3.77 PCT OF LEASEABLE		
OTR INCOME:	\$ 0. ANNUALLY	RUN	1
EXPENSES :	\$ 0.77 PER SQ FT		

ANNUAL CASH FLOWS

LOAN TO COST RATIO

70.00 PCT 72.00 PCT 75.00 PCT 78.00 PCT 80.00 PCT

FINANCING

27.YR 9.62PCT	37674.	33997.	28482.	22966.	19289.
27.YR 9.75PCT	36350.	32636.	27063.	21491.	17777.
27.YR 10.00PCT	33690.	29899.	24213.	18527.	14736.
30.YR 10.25PCT	33393.	29593.	23894.	18195.	14396.
25.YR 9.50PCT	36717.	33013.	27456.	21900.	18196.

BREAKEVEN RENTAL RATES

LOAN TO COST RATIO

70.00 PCT 72.00 PCT 75.00 PCT 78.00 PCT 80.00 PCT

FINANCING

27.YR 9.62 PCT	3.02	3.08	3.18	3.27	3.34
27.YR 9.75 PCT	3.04	3.11	3.20	3.30	3.36
27.YR 10.00 PCT	3.09	3.15	3.25	3.35	3.42
30.YR 10.25 PCT	3.09	3.16	3.26	3.36	3.42
25.YR 9.50 PCT	3.04	3.10	3.20	3.29	3.36

SENSITIVITY TABLE

SHOPPING CENTER CASE STUDY

FIXED PARAMETERS PAGE 11 OF 12

SITE : 255698. SQUARE FEET DATE 3-11- 79  
 BUILDING : 60242. SQUARE FEET BLDG 1  
 EFFICIENCY: 100.00 PCT OF GROSS  
 LOAN RATIO: 75.00 PCT OF \$ 1766571.  
 EQUITY : \$ 441643.  
 FINANCING : 27. YEARS 9.625 PCT  
 REVENUE : \$ 3.67 PER SQ FT  
 VACANCY : 3.77 PCT OF LEASEABLE  
 PARK/OTHER: \$ 0. ANNUALLY RUN 1  
 EXPENSES : \$ 0.77 PER SQ FT  
 CONSTRUCTION AND LAND COST 1766571.  
 CONSTRUCTION INTERIM RATE 10.000 PCT  
 CONSTRUCTION PERIOD 8 MONTHS  
 LAND INTERIM RATE IS 0. PCT

EFFECT OF SELECTED CHANGES IN PARAMETERS  
 PARAMETER CHANGE INCREASE IN EFFECT ON  
 CASH FLOW CONSTRUCTION

DECREASE CONSTRUCTION COST \$ 100,000 \$ 11050. \$ -106179.  
 DECREASE CONSTRUCTION \$ 1.00 PER SQ FT 6657. -63964.  
 INCREASE CONSTRUCTION PERIOD 1 MONTH -1198. 11511.  
 DECREASE CONST AND LAND INTERIM 1 PCT 590. -5673.  
 DECREASE TOTAL LAND COST BY \$ 332407. 34594.  
 INCREASE BUILDING EFFICIENCY 1 PCT 1664.  
 INCREASE RENTAL RATE \$ .10 PER SQ FT 5797.  
 DECREASE VACANCY RATE 1PCT 2211.  
 DECREASE OPERATING RATE \$ .10 PER SQ FT 6024.  
 DECREASE PERMANENT RATE .25PCT 2821.  
 DECREASE PERMANENT LOAN TERM BY 1 YEAR -1136.  
 DECREASE PERMANENT LOAN TERM BY 5 YEARS -7252.  
 DECREASE THE LOAN RATIO BY 5 PERCENT 9192.

EQUIVALENT EFFECT TO YIELD  
 A \$ 5000. INCREASE IN ANNUAL CASH FLOW

DECREASE CONSTRUCTION COSTS BY \$ 45249.  
 DECREASE CONSTRUCTION COST BY \$ 0.75 PER SQ FT  
 DECREASE LAND COST (NO INTERIM) BY \$ 48045.  
 DECREASE CONSTRUCTION PERIOD BY 4.2 MONTHS  
 DECREASE INTERIM INTEREST BY 8.47 PCT  
 INCREASE BUILDING EFFICIENCY BY 3.01 PCT  
 INCREASE RENT RATE BY \$ 0.09 PER SQ FT  
 DECREASE VACANCY BY 2.26 PCT  
 DECREASE EXPENSE RATE BY \$ 0.08 PER SQ FT  
 DECREASE PERMANENT RATE BY 0.44 PCT  
 INCREASE PERMANENT LOAN TERM BY 3.4 YEARS  
 DECREASE LOAN RATIO BY 2.7 PERCENT



SHOPPING CENTER CASE STUDY

DATE: 3/11/ 79  
 BLDG: 1  
 RUN : 1

GROSS SQUARE FEET IN BUILDING: 60242.  
 BUILDING EFFICIENCY : 100.0 PCT  
 NET LEASEABLE SQUARE FOOTAGE : 60242.

LAND AND CONSTRUCTION COST : \$ 1766571.  
 LOAN TO COST RATIO : 75.0 PCT  
 ORIGINAL LOAN AMOUNT : \$ 1324929.

EQUITY REQUIREMENT : \$ 441643.

PERMANENT INTEREST RATE : 9.625 PCT  
 TERM OF LOAN 27. YEARS

ANNUAL DEBT SERVICE : \$ 137885.

	ANNUAL DOLLARS
GROSS INCOME : 60242. SQ FT AT \$ 3.67	221088.
LESS: VACANCY OF 3.77 PCT	8335.
	-----
GROSS EFFECTIVE INCOME	212753.
OPERATING EXPENSES: 60242. SQ FT AT \$ 0.77	46386.
	-----
NET OPERATING INCOME	166367.
DEBT SERVICE (10.41 PCT CONSTANT)	137885.
	-----
PRO FORMA CASH FLOW	28482.

RETURN ON EQUITY 6.45 PERCENT

DEBT SERVICE COVERAGE: 1.207

DEFAULT RATIO : 83.35 PERCENT

PROGRAM STOP AT 17870

USED 17.97 UNITS  
 /COST OFF

ACCRUED CHARGES SINCE SIGNIN

\$ 3.82 COMPUTER

6.35 CONNECT

5.70 CHARACTERS

\$ 15.87 TOTAL

EFFICIENCY = 89.8

00028.09 CRU 0000.46 TCH 0041.46 KC

OFF AT 16:59CST 03/12/79

EXHIBIT 6

V A L T E S T

A DEMONSTRATION PACKET

PREPARED BY  
LANDMARK RESEARCH, INC.  
MADISON, WISCONSIN

PREPARED FOR  
THE REAL ESTATE ANALYSTS NORTHSTAR USERS GROUP

SEPTEMBER 24 AND 25, 1982  
COSTA MESA, CALIFORNIA

V A L T E S T

## DEMONSTRATION 1

## INPUT ASSUMPTIONS

\*\*\*\*\*

1. ENTER PROJECT NAME ? J
  2. ENTER PROJECTION PERIOD ? 5
  3. DO YOU WANT TO ENTER EFFECTIVE GROSS REVENUE INSTEAD OF NOI? N  
TO REPEAT PREVIOUS YEAR'S NOI/EGR FOR BAL OF PROJECTION ENTER 0  
N.O.I. YEAR 1? 5000  
N.O.I. YEAR 2? 5000  
N.O.I. YEAR 3? 6000  
N.O.I. YEAR 4? 6000  
N.O.I. YEAR 5? 7000
  4. ACQUISITION COST: ? 50000
  5. DO YOU WANT TO USE STANDARD FINANCING? Y OR N? Y  
MTG. RATIO OR AMOUNT, INT., TERM, NO PAY/YR ? .8, .12, 25, 12
  6. ENTER RATIO OF IMP #1/TOTAL VALUE. LIFE OF IMP #1? .8, 15  
IS THERE A SECOND IMPROVEMENT? Y OR N? N
  7. DEPRECIATION METHOD, IMPROVEMENT #1 ? 2  
ENTER D.B. Z: ? 175  
IS PROPERTY SUBSIDIZED HOUSING ? Y OR N ? N  
IS PROPERTY RESIDENTIAL? Y OR N? Y
  8. IS OWNER A TAXABLE CORPORATION? Y OR N ? Y  
CORPORATE FEDERAL ORDINARY TAX RATE COULD BE :  
17% - 46% (1978 LAW, EFFECTIVE 1979)  
16% - 46% (1981 LAW, EFFECTIVE 1982)  
15% - 46% (1981 LAW, EFFECTIVE 1983 & THEREAFTER)  
MAXIMUM CORPORATE CAPITAL GAIN ALTERNATIVE TAX RATE IS 28%  
  
(PLUS STATE RATE)
- ENTER:
- 1) EFFECTIVE ORDINARY RATE 2) EFFECTIVE ORDINARY RATE (YEAR OF SALE)  
? .46, .46
  9. RESALE PRICE (NET OF SALE COSTS) ? 60000
  10. IS THERE LENDER PARTICIPATION ? N
  11. ENTER OWNER'S AFTER TAX REINVESTMENT RATE (%) ? 9
  12. ENTER OWNER'S AFTER TAX OPPORTUNITY COST OF EQUITY FUNDS (%) ? 9

DEMONSTRATION 1 (Cont.)

AFTER TAX CASH FLOW PROJECTION

J

DATE 9/14/82

DATA SUMMARY

\*\*\*\*\*

ACQUISTN COST: \$50,000. MTG. AMT.: \$40,000.  
 NOI 1ST YR: \$5,000. MTG. INT.: 12%  
 ORG. EQUITY: \$10,000. MTG. TERM: 25. YRS  
 CTO 1ST YEAR: \$-55. DEBT SERVICE 1ST YEAR: \$5,055.  
 MTG. CONST.: .1263869  
 IMP. #1 VALUE: \$40,000. IMP. #1 LIFE: 15.  
 INC. TX RATE: 46%  
 SALE YR RATE: 46% OWNER: CORPORATION

DEPRECIATION IMPROVEMENT #1 : 175% D.B.  
 RESIDENTIAL PROPERTY

LENDER PARTICIPATION: CASH THROW-OFF: NONE REVERSION: NONE

NO REPRESENTATION IS MADE THAT THE ASSUMPTIONS PROVIDED BY JEAN ARE PROPER OR THAT THE CURRENT TAX ESTIMATES USED IN THIS PROJECTION WILL BE ACCEPTABLE TO TAXING AUTHORITIES. NO ESTIMATE HAS BEEN MADE OF MINIMUM PREFERENCE TAX. CAPITAL LOSSES IN YEAR OF SALE ARE TREATED AS ORDINARY LOSSES (SECTION 1231 PROPERTY) AND ARE CREDITED AGAINST TAXES PAID AT THE ORDINARY RATE AT THE TIME OF SALE. FOR THE PURPOSE OF THE MODIFIED INTERNAL RATE OF RETURN (M.I.R.R.) CALCULATION, NEGATIVE CASH IN ANY ONE PERIOD IS COVERED BY A CONTRIBUTION FROM EQUITY IN THAT PERIOD

YEAR	NOI	MTG INT & LENDERS %	TAX DEP	TAXABLE INCOME	INCOME TAX	AFTER TAX CASH FLOW
1.	5000.	4785.	4667.	-4453.	-2049.	1994.
2.	5000.	4751.	4122.	-3874.	-1783.	1728.
3.	6000.	4713.	3641.	-2355.	-1084.	2029.
4.	6000.	4669.	3216.	-1887.	-869.	1814.
5.	7000.	4620.	2841.	-462.	-214.	2159.
	\$29000.	\$23539.	\$18488.	\$-13031.	\$-5999.	\$9722.

DEMONSTRATION 1 (Cont.)

RESALE PRICE:	\$60,000.	1ST YR B4 TAX EQ DIV:	-.5548%
LESS MORTGAGE BALANCE:	\$38,261.	AVG DEBT COVER RATIO:	1.1473
PROCEEDS BEFORE TAXES:	\$21,739.		
LESS LENDER'S %:	\$0.		
NET SALES PROCEEDS			
BEFORE TAXES:	\$21,739.		
	=====		

RESALE PRICE:	\$60,000.
LESS LENDER'S %:	\$0.
NET RESALE PRICE:	\$60,000.
LESS BASIS:	\$31,512.
TOTAL GAIN:	\$28,488.
EXCESS DEPRECIATION:	\$5,155.
CAPITAL GAIN:	\$23,333.
ORDINARY GAIN:	\$5,155.
	=====

TAX ON ORDINARY GAIN:	\$2,371.
TAX ON CAPITAL GAIN:	\$6,533.
PLUS MORTGAGE BAL:	\$38,261.
TOTAL DEDUCTIONS FROM	
NET RESALE PRICE:	\$47,166.
	=====

NET SALES PROCEEDS	
AFTER TAX:	\$12,834.
	=====

IF PURCHASED AS ABOVE, HELD 5 YEARS & SOLD FOR \$60,000.  
 THE MODIFIED I.R.R. BEFORE TAXES IS 20.6487% AND AFTER TAXES IS 19.5605%  
 ASSUMING AN AFTER TAX REINVESTMENT RATE OF 9%, AND OPPORTUNITY COST OF 9%

DEMONSTRATION 1 (Cont.)

MORTGAGE ANALYSIS

J

\*\*\*\*\*

YEAR	NOI	MORT INT.	MORT AMORT	DEBT SERV	DCR	MTG. BAL.
1.	5000.	4785.	270.	5055.	.989	39730.
2.	5000.	4751.	304.	5055.	.989	39426.
3.	6000.	4713.	343.	5055.	1.187	39083.
4.	6000.	4669.	386.	5055.	1.187	38697.
5.	7000.	4620.	435.	5055.	1.385	38261.
AVG	\$5,800.				1.147	

DISTRIBUTION OF CASH THROW-OFF

J

YEAR	CASH THROW-OFF TOTAL	CASH THROW-OFF TO EQUITY	CASH BONUS TO LENDER
1.	-55.	-55.	0.
2.	-55.	-55.	0.
3.	945.	945.	0.
4.	945.	945.	0.
5.	1945.	1945.	0.
	----- 3723.	----- 3723.	----- 0.

RESALE PRICE: \$60,000.  
 LESS MORTGAGE BALANCE: \$38,261.  
 PROCEEDS BEFORE TAXES: \$21,739.  
 LESS LENDER'S %: \$0.  
 NET SALES PROCEEDS BEFORE TAXES: \$21,739.  
 =====

CASH THROW-OFF = 0% REVERSION = 0%

DEMONSTRATION 1 (Cont.)

DEPRECIATION SCHEDULE

J

IMPROVEMENT # 1

175% D.B.

RESIDENTIAL

\*\*\*\*\*

YEAR	TAX DEP.	S.L. DEP.	EXCESS DEP	BALANCE
1.	4666.7	2666.7	2000.0	35333.3
2.	4122.2	2666.7	1455.6	31211.1
3.	3641.3	2666.7	974.6	27569.8
4.	3216.5	2666.7	549.8	24353.3
5.	2841.2	2666.7	174.6	21512.1
	=====	=====	=====	
TOTAL	18487.9	13333.3	5154.6	

EQUITY ANALYSIS

J

\*\*\*\*\*

BEFORE TAX EQUITY DIVIDEND

YR	NOI	YR END EQUITY	CASH RETURN		
			AMOUNT	ORG EQ	CUR EQ
1.	\$5,000.	\$10,325.	\$-55.	-.0055	-.0054
2.	5,000.	10,685.	-55.	-.0055	-.0052
3.	6,000.	11,028.	945.	.0945	.0856
4.	6,000.	11,414.	945.	.0945	.0827
5.	7,000.	11,850.	1,945.	.1945	.1641

ORIGINAL EQUITY: \$ 10000

VALTEST

DEMONSTRATION 2

INPUT ASSUMPTIONS

\*\*\*\*\*

- 1. ENTER PROJECT NAME ? CARDINAL-2
- 2. ENTER PROJECTION PERIOD ? 5
- 3. DO YOU WANT TO ENTER EFFECTIVE GROSS REVENUE INSTEAD OF NOI? N  
 TO REPEAT PREVIOUS YEAR'S NOI/EGR FOR BAL OF PROJECTION ENTER 0  
 N.O.I. YEAR 1? 81745  
 N.O.I. YEAR 2? 81920  
 N.O.I. YEAR 3? 98910  
 N.O.I. YEAR 4? 108800  
 N.O.I. YEAR 5? 119680
- 4. ACQUISITION COST: ? 1007000
- 5. DO YOU WANT TO USE STANDARD FINANCING? Y OR N?Y  
 MTG. RATIO OR AMOUNT, INT., TERM, NO PAY/YR ? 647000, .15236, 30, 12
- 6. ENTER RATIO OF IMP #1/TOTAL VALUE, LIFE OF IMP #1? .149, 15  
 IS THERE A SECOND IMPROVEMENT? Y OR N? Y  
 ENTER RATIO OF IMP #2/TOTAL VALUE, LIFE OF IMP #2? .781, 15  
 ENTER REHABILITATION TAX CREDIT FOR IMP #2: 196625  
 IS STRUCTURE A CERTIFIED HISTORICAL LANDMARK? Y OR N?Y
- 7. DEPRECIATION METHOD, IMPROVEMENT #1 ? 1  
 DEPRECIATION METHOD, IMPROVEMENT #2 ? 1  
 IS PROPERTY SUBSIDIZED HOUSING ? Y OR N ?N  
 IS PROPERTY RESIDENTIAL? Y OR N? Y
- 8. IS OWNER A TAXABLE CORPORATION? Y OR N ?N  
 THE MAXIMUM FEDERAL INDIVIDUAL ORDINARY RATE COULD BE:  
 70% (PRE-1981 LAW)  
 50% (1981 LAW, EFFECTIVE 1982)

(PLUS STATE RATE)

ENTER:

- 1) EFFECTIVE ORDINARY RATE 2) EFFECTIVE ORDINARY RATE (YEAR OF SALE)  
 ? .5, .5
- 9. RESALE PRICE (NET OF SALE COSTS) ? 1258750
- 10. IS THERE LENDER PARTICIPATION ?N
- 11. ENTER OWNER'S AFTER TAX REINVESTMENT RATE (%)? 11
- 12. ENTER OWNER'S AFTER TAX OPPORTUNITY COST OF EQUITY FUNDS (%)? 11



DEMONSTRATION 2 (Cont.)

AFTER TAX CASH FLOW PROJECTION  
CARDINAL-2  
DATE 9/14/82

DATA SUMMARY  
\*\*\*\*\*

ACQUISTN COST:	\$1,007,000.	MTG. ANT.:	\$647,000.
NOI 1ST YR:	\$81,745.	MTG. INT.:	15.236%
ORG. EQUITY:	\$360,000.	MTG. TERM:	30. YRS
CTO 1ST YEAR:	\$-17,893.	DEBT SERVICE 1ST YEAR:	\$99,638.
		MTG. CONST.:	.15400037
IMP. #1 VALUE:	\$150,043.	IMP. #1 LIFE:	15.
IMP. #2 VALUE:	\$786,467.	IMP. #2 LIFE:	15.
INC. TX RATE:	50%		
SALE YR RATE:	50%	OWNER:	INDIVIDUAL

DEPRECIATION IMPROVEMENT #1 : STRAIGHT LINE  
 DEPRECIATION IMPROVEMENT #2 : STRAIGHT LINE  
 RESIDENTIAL PROPERTY  
 CERTIFIED HISTORICAL STRUCTURE  
 LENDER PARTICIPATION: CASH THROW-OFF: NONE      REVERSION: NONE

NO REPRESENTATION IS MADE THAT THE ASSUMPTIONS PROVIDED BY JEAN ARE PROPER OR THAT THE CURRENT TAX ESTIMATES USED IN THIS PROJECTION WILL BE ACCEPTABLE TO TAXING AUTHORITIES. NO ESTIMATE HAS BEEN MADE OF MINIMUM PREFERENCE TAX. CAPITAL LOSSES IN YEAR OF SALE ARE TREATED AS ORDINARY LOSSES (SECTION 1231 PROPERTY) AND ARE CREDITED AGAINST TAXES PAID AT THE ORDINARY RATE AT THE TIME OF SALE. THE FOR THE PURPOSE OF THE MODIFIED INTERNAL RATE OF RETURN (M.I.R.R.) CALCULATION, NEGATIVE CASH IN ANY ONE PERIOD IS COVERED BY A CONTRIBUTION FROM EQUITY IN THAT PERIOD

YEAR	NOI	MTG INT & LENDERS %	TAX DEP	TAXABLE INCOME	INCOME TAX	AFTER TAX CASH FLOW
1.	81745.	98500.	62434.	-79190.	-236221.	218328.
2.	81920.	98313.	62434.	-78828.	-39415.	21697.
3.	98910.	98097.	62434.	-61622.	-30812.	30084.
4.	108800.	97845.	62434.	-51480.	-25741.	34903.
5.	119680.	97552.	62434.	-40307.	-20154.	40196.
	<u>\$491055.</u>	<u>\$490307.</u>	<u>\$312170.</u>	<u>\$-311427.</u>	<u>\$-352343.</u>	<u>\$345207.</u>

NOTE: 1ST YEAR'S TAX REDUCED BY \$196,625. FOR TAX CREDIT (IMP #2)

DEMONSTRATION 2 (Cont.)

RESALE PRICE:	\$1,258,750.	1ST YR B4 TAX EQ DIV: -4.9703%
LESS MORTGAGE BALANCE:	\$639,115.	AVG DEBT COVER RATIO: .9857
PROCEEDS BEFORE TAXES:	\$619,635.	
LESS LENDER'S %:	\$0.	
NET SALES PROCEEDS		
BEFORE TAXES:	\$619,635.	
	=====	

RESALE PRICE:	\$1,258,750.
LESS LENDER'S %:	\$0.
NET RESALE PRICE:	\$1,258,750.
LESS BASIS:	\$694,830.
TOTAL GAIN:	\$563,920.
EXCESS DEPRECIATION:	\$0.
CAPITAL GAIN:	\$563,920.
ORDINARY GAIN:	\$0.
	=====

TAX ON ORDINARY GAIN:	\$0.
TAX ON CAPITAL GAIN:	\$112,784.
PLUS MORTGAGE BAL:	\$639,115.
TOTAL DEDUCTIONS FROM	
NET RESALE PRICE:	\$751,899.
	=====

NET SALES PROCEEDS	
AFTER TAX:	\$506,851.
	=====

IF PURCHASED AS ABOVE, HELD 5 YEARS & SOLD FOR \$1,258,750.  
 THE MODIFIED I.R.R. BEFORE TAXES IS 10.5005% AND AFTER TAXES IS 22.2744%  
 ASSUMING AN AFTER TAX REINVESTMENT RATE OF 11%, AND OPPORTUNITY COST OF 11%

### DEMONSTRATION 2 (Cont.)

#### DISTRIBUTION OF CASH THROW-OFF CARDINAL-2

YEAR	CASH THROW-OFF TOTAL	CASH THROW-OFF TO EQUITY	CASH BONUS TO LENDER
1.	-17893.	-17893.	0.
2.	-17718.	-17718.	0.
3.	-728.	-728.	0.
4.	9162.	9162.	0.
5.	20042.	20042.	0.
	-----	-----	-----
	-7136.	-7136.	0.

RESALE PRICE: \$1,258,750.  
 LESS MORTGAGE BALANCE: \$639,115.  
 PROCEEDS BEFORE TAXES: \$619,635.  
 LESS LENDER'S %: \$0.  
 NET SALES PROCEEDS  
 BEFORE TAXES: \$619,635.  
 =====

CASH THROW-OFF = 0% REVERSION = 0%

#### MORTGAGE ANALYSIS CARDINAL-2

\*\*\*\*\*

YEAR	NOI	MORT INT.	MORT AMORT	DEBT SERV	DCR	MTG. BAL.
1.	81745.	98500.	1139.	99638.	.820	645861.
2.	81920.	98313.	1325.	99638.	.822	644537.
3.	98910.	98097.	1541.	99638.	.993	642995.
4.	108800.	97845.	1793.	99638.	1.092	641202.
5.	119660.	97552.	2086.	99638.	1.201	639115.
AUG	\$98,211.				.986	

#### EQUITY ANALYSIS CARDINAL-2

\*\*\*\*\*

#### BEFORE TAX EQUITY DIVIDEND

YR	NOI	YR END EQUITY	AMOUNT	CASH RETURN ORG EQ	CUR EQ
1.	\$81,745.	\$379,032.	\$-17,893.	-.0497	-.0472
2.	81,920.	398,075.	-17,718.	-.0492	-.0445
3.	98,910.	400,345.	-728.	-.0020	-.0018
4.	108,800.	402,139.	9,162.	.0254	.0228
5.	119,660.	404,224.	20,042.	.0557	.0496

ORIGINAL EQUITY: \$ 360000

DEMONSTRATION 2 (Cont.)

DEPRECIATION SCHEDULE  
CARDINAL-2  
IMPROVEMENT # 1  
STRAIGHT LINE  
RESIDENTIAL

\*\*\*\*\*

YEAR	TAX DEP.	S.L. DEP.	EXCESS DEP	BALANCE
1.	10002.9	10002.9	.0	140040.1
2.	10002.9	10002.9	.0	130037.3
3.	10002.9	10002.9	.0	120034.4
4.	10002.9	10002.9	.0	110031.5
5.	10002.9	10002.9	.0	100028.7
	-----	-----	-----	
SUB-TOTAL	50014.3	50014.3	.0	

DEPRECIATION SCHEDULE  
CARDINAL-2  
IMPROVEMENT # 2  
STRAIGHT LINE  
RESIDENTIAL

\*\*\*\*\*

YEAR	TAX DEP.	S.L. DEP.	EXCESS DEP	BALANCE
1.	52431.1	52431.1	.0	734035.9
2.	52431.1	52431.1	.0	681604.7
3.	52431.1	52431.1	.0	629173.6
4.	52431.1	52431.1	.0	576742.5
5.	52431.1	52431.1	.0	524311.3
	-----	-----	-----	
SUB-TOTAL	262155.7	262155.7	.0	
	=====	=====	=====	
TOTAL	312170.0	312170.0	.0	

V A L T E S T - DEMONSTRATION 3

INPUT ASSUMPTIONS

\*\*\*\*\*

- 1. ENTER PROJECT NAME ? SELL AT LOSS TEST
- 2. ENTER PROJECTION PERIOD ? 5
- 3. DO YOU WANT TO ENTER EFFECTIVE GROSS REVENUE INSTEAD OF NOI? Y  
TO REPEAT PREVIOUS YEAR'S NOI/EGR FOR BAL OF PROJECTION ENTER 0

EFFECTIVE GROSS REVENUE YEAR 1? 13800  
 EFFECTIVE GROSS REVENUE YEAR 2? 14210  
 EFFECTIVE GROSS REVENUE YEAR 3? 1000  
 EFFECTIVE GROSS REVENUE YEAR 4? 15080  
 EFFECTIVE GROSS REVENUE YEAR 5? 15530

VAR OP EXPENSE (Z) YEAR 1? 6  
 VAR OP EXPENSE (Z) YEAR 2? 5  
 VAR OP EXPENSE (Z) YEAR 3? 0

FIXED OP EXPENSE YEAR 1? 3700  
 FIXED OP EXPENSE YEAR 2? 3920  
 FIXED OP EXPENSE YEAR 3? 4160  
 FIXED OP EXPENSE YEAR 4? 4410  
 FIXED OP EXPENSE YEAR 5? 4670

- 4. ACQUISITION COST: ? 66000
- 5. DO YOU WANT TO USE STANDARD FINANCING? Y OR N? Y  
MTG. RATIO OR AMOUNT, INT., TERM, NO PAY/YR ? 49500, .18, 25, 12
- 6. ENTER RATIO OF IMP #1/TOTAL VALUE, LIFE OF IMP #1? .25, 15  
IS THERE A SECOND IMPROVEMENT? Y OR N? Y  
ENTER RATIO OF IMP #2/TOTAL VALUE, LIFE OF IMP #2? .55, 15  
ENTER REHABILITATION TAX CREDIT FOR IMP #2: 9075  
IS STRUCTURE A CERTIFIED HISTORICAL LANDMARK? Y OR N? Y \*
- 7. DEPRECIATION METHOD, IMPROVEMENT #1 ? 2  
ENTER D.B. Z: ? 175 \*  
DEPRECIATION METHOD, IMPROVEMENT #2 ? 2  
ENTER D.B. Z: ? 175 \*  
IS PROPERTY SUBSIDIZED HOUSING ? Y OR N ? N  
IS PROPERTY RESIDENTIAL? Y OR N? N
- 8. IS OWNER A TAXABLE CORPORATION? Y OR N ? Y  
CORPORATE FEDERAL ORDINARY TAX RATE COULD BE :  
17% - 46% (1978 LAW, EFFECTIVE 1979)  
16% - 46% (1981 LAW, EFFECTIVE 1982)  
15% - 46% (1981 LAW, EFFECTIVE 1983 & THEREAFTER)  
MAXIMUM CORPORATE CAPITAL GAIN ALTERNATIVE TAX RATE IS 28%

\*For Illustrative Purposes Only

(PLUS STATE RATE)

ENTER:

- 1) EFFECTIVE ORDINARY RATE 2) EFFECTIVE ORDINARY RATE (YEAR OF SALE)  
? .4, .4
- 9. RESALE PRICE (NET OF SALE COSTS) ? 60000
- 10. IS THERE LENDER PARTICIPATION ? Y  
ENTER CASH THRU-OFF (%), PROCEEDS BEFORE TAXES (%): 5, 5
- 11. ENTER OWNER'S AFTER TAX REINVESTMENT RATE (%)? 9
- 12. ENTER OWNER'S AFTER TAX OPPORTUNITY COST OF EQUITY FUNDUS (%)? 9

DEMONSTRATION 3 (Cont.)

AFTER TAX CASH FLOW PROJECTION  
SELL AT LOSS TEST  
DATE 9/14/82

DATA SUMMARY

\*\*\*\*\*

ACQUISTN COST:	\$66,000.	MTG. AMT.:	\$49,500.
NOI 1ST YR:	\$9,272.	MTG. INT.:	18%
ORG. EQUITY:	\$16,500.	MTG. TERM:	25. YRS
CTD 1ST YEAR:	\$258.	DEBT SERVICE 1ST YEAR:	\$9,014.
		MTG. CONST.:	.1820916
IMP. #1 VALUE:	\$16,500.	IMP. #1 LIFE:	15.
IMP. #2 VALUE:	\$36,300.	IMP. #2 LIFE:	15.
INC. TX RATE:	40%		
SALE YR RATE:	40%	OWNER:	CORPORATION

DEPRECIATION IMPROVEMENT #1 : 175% D.B.  
 DEPRECIATION IMPROVEMENT #2 : 175% D.B.  
 NON-RESIDENTIAL PROPERTY  
 CERTIFIED HISTORICAL STRUCTURE  
 LENDER PARTICIPATION: CASH THROW-OFF: 5% REVERSION: 5%

NO REPRESENTATION IS MADE THAT THE ASSUMPTIONS PROVIDED BY JEAN ARE PROPER OR THAT THE CURRENT TAX ESTIMATES USED IN THIS PROJECTION WILL BE ACCEPTABLE TO TAXING AUTHORITIES. NO ESTIMATE HAS BEEN MADE OF MINIMUM PREFERENCE TAX. CAPITAL LOSSES IN YEAR OF SALE ARE TREATED AS ORDINARY LOSSES (SECTION 1231 PROPERTY) AND ARE CREDITED AGAINST TAXES PAID AT THE ORDINARY RATE AT THE TIME OF SALE. THE  
 FOR THE PURPOSE OF THE MODIFIED INTERNAL RATE OF RETURN (M.I.R.R.) CALCULATION, NEGATIVE CASH IN ANY ONE PERIOD IS COVERED BY A CONTRIBUTION FROM EQUITY IN THAT PERIOD

YEAR	NOI	MTG INT & LENDERS %	TAX DEF	TAXABLE INCOME	INCOME TAX	AFTER TAX CASH FLOW
1.	9272.	8914.	6160.	-5803.	-11397.	11643.
2.	9580.	8907.	5441.	-4770.	-1909.	2447.
3.	-3210.	8953.	4807.	-16870.	-6749.	-5475.
4.	9916.	8866.	4246.	-3197.	-1280.	2137.
5.	10084.	8837.	3750.	-2505.	-1003.	2019.
	-----	-----	-----	-----	-----	-----
	\$35641.	\$44377.	\$24404.	\$-33145.	\$-22338.	\$12771.

NOTE: 1ST YEAR'S TAX REDUCED BY \$9,075. FOR TAX CREDIT (IMP #2)

DEMONSTRATION 3 (Cont.)

RESALE PRICE: \$60,000.  
 LESS MORTGAGE BALANCE: \$48,670.  
 PROCEEDS BEFORE TAXES: \$11,330.  
 LESS LENDER'S %: \$567.  
 NET SALES PROCEEDS  
 BEFORE TAXES: \$10,764.  
 =====

1ST YR B4 TAX EQ DIV: 1.4881X  
 AVG DEBT COVER RATIO: .7908  
 AVG DEFAULT RATIO: 1.1581

RESALE PRICE: \$60,000.  
 LESS LENDER'S %: \$567.  
 NET RESALE PRICE: \$59,433.  
 LESS BASIS: \$41,596.  
 TOTAL GAIN: \$17,838.  
 TAX DEPRECIATION: \$24,404.  
 CAPITAL GAIN: \$0.  
 ORDINARY GAIN: \$17,838.  
 =====

TAX ON ORDINARY GAIN: \$7,135.  
 TAX ON CAPITAL GAIN: \$0.  
 PLUS MORTGAGE BAL: \$48,670.  
 TOTAL DEDUCTIONS FROM  
 NET RESALE PRICE: \$55,805.  
 =====

NET SALES PROCEEDS  
 AFTER TAX: \$3,629.  
 =====

IF PURCHASED AS ABOVE, HELD 5 YEARS & SOLD FOR \$60,000.  
 THE MODIFIED I.R.R. BEFORE TAXES IS -12.4777% AND AFTER TAXES IS 5.4951%  
 ASSUMING AN AFTER TAX REINVESTMENT RATE OF 9% AND OPPORTUNITY COST OF 9%

DEMONSTRATION 3 (Cont.)

DISTRIBUTION OF CASH THROW-OFF  
SELL AT LOSS TEST

YEAR	CASH THROW-OFF TOTAL	CASH THROW-OFF TO EQUITY	CASH BONUS TO LENDER
1.	258.	246.	13.
2.	566.	538.	28.
3.	-12224.	-12224.	0.
4.	902.	857.	45.
5.	1070.	1016.	53.
	----- -9427.	----- -9567.	----- 140.

RESALE PRICE: \$60,000.  
 LESS MORTGAGE BALANCE: \$48,670.  
 PROCEEDS BEFORE TAXES: \$11,330.  
 LESS LENDER'S %: \$567.  
 NET SALES PROCEEDS  
 BEFORE TAXES: \$10,764.  
 =====

CASH THROW-OFF = 5% REVERSION = 5%

EQUITY ANALYSIS  
SELL AT LOSS TEST

\*\*\*\*\*

YR	NOI	BEFORE TAX EQUITY DIVIDEND		CASH RETURN	
		YR END EQUITY	AMOUNT	ORG EQ	CUR EQ
1.	\$9,272.	\$16,613.	\$246.	.0149	.0148
2.	9,580.	16,747.	538.	.0326	.0321
3.	-3,210.	29,131.	-12,224.	-.7408	-.4196
4.	9,916.	29,324.	857.	.0520	.0292
5.	10,084.	29,554.	1,016.	.0616	.0344

ORIGINAL EQUITY: \$ 16500



DEMONSTRATION 3 (Cont.)

MORTGAGE ANALYSIS  
SELL AT LOSS TEST

\*\*\*\*\*

YEAR	NOI	MORT INT.	MORT AMORT	DEBT SERV	DCR	MTG. BAL.	DEFAULT RATIO
1.	9272.	8901.	113.	9014.	1.029	49387.	.981
2.	9580.	8879.	135.	9014.	1.063	49253.	.960
3.	-3210.	8853.	161.	9014.	-.356	49092.	13.224
4.	9916.	8821.	192.	9014.	1.100	48900.	.940
5.	10084.	8784.	230.	9014.	1.119	48670.	.931
AVG	\$7,128.				.791		1.158

REVENUE AND EXPENSE REPORT  
SELL AT LOSS TEST  
DATE 9/14/82

\*\*\*\*\*

YEAR	EFF GROSS REV	% RATE	% VAR OP.	\$ FIXED OP	NOI
1.	\$13,800.	6.2	\$828.	\$3,700.	\$9,272.
2.	\$14,210.	5.2	\$711.	\$3,920.	\$9,580.
3.	\$1,000.	5.2	\$50.	\$4,160.	\$-3,210.
4.	\$15,080.	5.2	\$754.	\$4,410.	\$9,916.
5.	\$15,530.	5.2	\$777.	\$4,670.	\$10,084.
	-----		-----	-----	-----
	\$59,620.		\$3,119.	\$20,860.	\$35,641.

DEMONSTRATION 3 (Cont.)

DEPRECIATION SCHEDULE  
SELL AT LOSS TEST  
IMPROVEMENT # 1  
175% D.B.  
NON-RESIDENTIAL

\*\*\*\*\*

YEAR	TAX DEP.	S.L. DEP.	TAX DEP	BALANCE
1.	1925.0	1100.0	1925.0	14575.0
2.	1700.4	1100.0	1700.4	12874.6
3.	1502.0	1100.0	1502.0	11372.5
4.	1326.8	1100.0	1326.8	10045.8
5.	1172.0	1100.0	1172.0	8873.7
	-----	-----	-----	
SUB-TOTAL	7626.3	5500.0	7626.3	

DEPRECIATION SCHEDULE  
SELL AT LOSS TEST  
IMPROVEMENT # 2  
175% D.B.  
NON-RESIDENTIAL

\*\*\*\*\*

YEAR	TAX DEP.	S.L. DEP.	TAX DEP	BALANCE
1.	4235.0	2420.0	4235.0	32065.0
2.	3740.9	2420.0	3740.9	28324.1
3.	3304.5	2420.0	3304.5	25019.6
4.	2919.0	2420.0	2919.0	22100.7
5.	2578.4	2420.0	2578.4	19522.2
	-----	-----	-----	
SUB-TOTAL	16777.8	12100.0	16777.8	
	=====	=====	=====	
TOTAL	24404.0	17600.0	24404.0	

## REAL ESTATE INVESTMENT ANALYSIS

Presented By

Professor James A. Graaskamp, Ph.D., CRE, SREA  
University of Wisconsin School of Business

THIRD HOUR

## III. FINANCIAL RISK MANAGEMENT

Investment is a real estate enterprise, as a 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 realization, 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 exposure 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 predictable and major become reserves or budget allowances.
  - 3. Infrequent, uncertain but very severe become issues of risk management.
  - 4. A 50/50 probability is the most uncertain outcome.

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. Given constant dollars and stable interest rates the mortgage agreement laid off the static risks of insurance and controlled the dynamic risks by providing adequate cash throw-off for the borrower, pain through foreclosure and loss of borrower equity dollars, and a bailout based on conservative loan to economic productivity value ratio.
- 2. Given inflation, devaluation of the dollar, and rising interest rates, the mortgage has become a risk management instrument for the borrower, particularly with common usage of the esculpatory clause and recognition of non-productive values in real estate ownership. The mortgage is a classic straddle in two commodity markets.
  - a. In the space-time commodity it is a call on appreciation, if any, and a put to the lender if appreciation or income in future markets becomes inadequate.
  - b. It is a short position in the money market which creates value should interest rates rise or dollars devalue.

c. The confusion of real estate as a productive economic asset with real estate as a speculative commodity has permitted the distortion of appraisal values. A high loan-to-value ratio mortgage is a purchase of a commodity on margin without giving the lender the right to call for additional collateral.

- 3. The cash profit centers in real estate are no longer available to secure the mortgage loan as they take the form of outlays for expertise and material rather than classic net income. Moreover the tax shelter is applied to other income which is not available as collateral for the mortgage loan even though present value of those tax savings contributes to the market value on which the loan is based.
- 4. Equity ownership is the degree to which cash flow can be willfully diverted by maintaining control while avoiding risk of variance beyond acceptable levels.

H. Long-term lenders have suddenly realized that:

- 1. They are selling puts in the commodity market of long-term real estate space, and in the case of construction loans, space for future delivery.
- 2. A mortgage is a long position in an unstable market when everybody is going short.
- 3. With rising prices, the penalties of risk are loss of credibility and loss of opportunity income due to the inability to roll invested dollars on time. There is a timing risk to income and to purchasing power in place of significant risk of loss to historical principal.
- 4. The ability of the banks to submerge losses in future income and the desires of the pension funds to submerge profits until future benefits must be paid is leading to significant rethinking of the real estate loan process and the dichotomy between credit and equity and

compensation for static versus dynamic risk taking.

- 5. Emerging concepts of risk management of the dynamic risks of time, interest, and money as compared to solvency and collateral are leading to strategic shifts in real estate capital markets.

I. Solvency risk was controlled with debt cover and default point, occupancy clauses and gap loans. Diversion of collateral was partially offset with letters of credit, escrows, and personal guarantees on construction loans, but what about commodity speculation and interest rate risk?

- 1. Interest cost plus a loading? - Variable interest in the solvency problem - residential and commercial.
- 2. Equity participation and the accounting problem of a submerged asset or killing the goose that laid the golden egg - market value accounting problems.
- 3. Inflation versus obsolescence of location and structure due to energy and demographics - enterprise or systems risks?
- 4. Portfolio concepts are now in vogue because risk management theory has come of age.

FIFTH MODULE

REAL ESTATE INVESTMENT ANALYSIS

Presented By

Professor James A. Graaskamp, Ph.D., CRE, SREA  
University of Wisconsin School of Business

FOURTH HOUR

IV. TAX MATTERS FOR FOREIGN REAL ESTATE INVESTORS

Tax matters for real estate investment in the United States distort all reasonable economic considerations for both domestic and foreign investors. It is important for the real estate investor to understand the real estate tax (which takes 15 - 20% gross income) as well as personal and corporate income taxes, state and federal estate and inheritance taxes, as well as the special registration laws and trade treaties which impact foreign investors.

A. The approach today will not bog down in detail but rather underscore current pitfalls and trends, recognizing that:

- 1. Tax planning is always best begun at the very initial stages of the foreign investor's approach to the U.S. market.
- 2. Tax planning is most effective when done in the context of programs, not transactions.
- 3. Tax planning is a continuous process and all tax plans should be reviewed periodically.
- 4. Tax planning is a detailed and complex process which should only be undertaken with the assistance of professional advice.

B. The real estate tax may cost you more dollars and be less understood than the more publicized federal income taxes because every municipality reflects an individual assessment program and philosophy about imposition of real estate taxes.



1. 70 to 85% of local government spending is financed by real estate taxes and in most states the school board receives 55 to 60% of all real estate taxes.
2. Assessment of investment properties is a way of shifting the real estate tax burden away from residential housing and large numbers of voters so that traditional assessment formulas are changing.
3. Assessments are supposed to be based on fair market value assuming cash sale without creative financing and assuming current economic rents. Market value is then multiplied by local equalization rate.
  - a. Equalization would be the ratio of actual sales to actual assessed value.
  - b. In some states, the law permits different ratios for different classes of property reflecting historical political attitudes about home ownership, big business, outsiders, etc.
4. Many local assessors are changing from market value to nominal price, ignoring impact of financing, sales, promotions, or confusion of revenue from business and real estate, personal property versus real property (hotel, shopping center, etc.)
5. Practice of passing through real estate taxes to the tenants with net leases causes increased vacancies, depresses net rents at time of renegotiating, and prevents property from inflating in value.
  - a. Since tax policies differ in an urban area among political subdivisions, demand and new construction shift across political boundaries causing significant changes in property value.
  - b. Assessment appeals may be too sophisticated for court juries on appeal boards to understand.

c. Computers have made annual reassessments very feasible based on sales inflated by syndicators and pension funds.

6. A real estate purchase/sale or a listing will trigger reappraisal so that many investors buy interests rather than title to avoid creating public record in a change of ownership.

- a. Partnership interests
- b. Corporate shares
- c. Land trusts with beneficial interests

7. Investors must research both the assessment policy and local revenue needs for schools, pensions, and safety forces such as police, fire, and public health as well as local welfare obligations.

8. Another factor is the increasing use of special tax districts for special tax assessments which fall on benefitted property.

- a. Special assessments for replacing infrastructure (older cities have not maintained public capital).
- b. Tax incremental financing (TIF) of urban redevelopment (incentive to understate and then overstate tax assessment).
- c. Special districts to finance urban activities as well as improvements to attract people downtown, etc.

9. Real estate taxes will be worse in older communities without vacant land for growth or new communities that are growing too fast or offer too many services.

C. In addition to local taxes, there are a variety of state and federal taxes which reflect the duality of regulation and reporting which are behind several special laws relating to foreign investment in an ownership of United States real estate, major federal laws are:

1. Alien Land Act (ALA) permits only U.S. citizens and foreign investors who have formally declared intention to become U.S. citizens, and foreign investors who have become bonafide U.S. residents to own or acquire title to real estate in U.S. territories including Puerto Rico, Virgin Islands, Guam, and other small Pacific Islands (Washington D.C. exempt).
  
2. Agricultural Foreign Investment Disclosure Act of 1978 (AFIDA) requires any foreign person who acquires or transfers any interest (other than security interest) of 5% or more in land, capable of agricultural use, to report such ownership within 90 days.
  - 7 a. Exemption <sup>for</sup> less than one (1) acre and \$1,000 produce sales.
  
  - b. Report requires legal description, transaction price, name, address, and relationship of investor's representative, and name, address, and country of all foreign persons or entities through third tier of ownership.
  
  - c. No confidentiality since forms are available ten (10) days after filing in D.C. and in county office of Agricultural Stabilization and Conservation Service, and treaty partner which requests information under mutual assistance treaty or fiscal evasion provision of a tax treaty.
  
  - d. Multi-tiered structuring can legally avoid or minimize reporting.

## SIXTH MODULE

### REAL ESTATE INVESTMENT PORTFOLIO MANAGEMENT

Presented By

Professor James A. Graaskamp, Ph.D., SREA, CRE  
University of Wisconsin School of Business

#### FIRST HOUR

#### I. OBJECTIVES OF A REAL ESTATE PORTFOLIO APPROACH

Theoretical development in stock and bond investment management relative to risk and return characteristics of an investment portfolio have made it stylish to focus institutional real estate investment strategies in terms of portfolio concepts. There is a tendency to shift the concern of fund managers from the evaluation of individual real estate projects to the portfolio impact of real estate investment.

- A. Security investors have been brainwashed with theories developed by Markowitz and Sharp to the effect that security markets are very efficient and that market price of a given security reflects a return for the use of capital plus a return for compensation of risk.
  - 1. Risk is defined as variance in terms of market price of a specific security relative to an index of market prices for all securities.
  - 2. Risk is caused by systematic changes which affect all securities as a result of market related risks and non-systematic risks which were inherent in specific industries and businesses.
- B. Since risk was variance in price or value and market price was present value of collective expectations of future income, variance could be controlled by diversification within industry to reduce the mean variance of all investments and market related risks could be mitigated by arbitraging among different investment markets if a variance/co-variance relationship could be shown to exist.

- C. Investors have always recognized that you shouldn't put all your eggs in one basket even though it may be possible to have a higher return if you put your eggs in one basket and then watch the basket very closely. Safety in numbers and averaging of offsetting errors through safety in numbers is described as naive diversification, and that generally describes the state of art of portfolio management for real estate.
  
- D. Portfolio people in securities distinguish between safety in numbers and efficient diversification in which there is a scientific statistical tradeoff between measures of return and measures of risk which maximizes investment returns for a given level of investment risk. Ideally portfolio management could theoretically neutralize business risk.
  
- E. To be relevant to real estate the efficient diversification concept would presumably require the following elements:
  1. Standardize time series data on net incomes and resale prices by property type.
  2. Efficient exchange of market information among knowledgable investors.
  3. Computed measures of systematic and non-systematic variance comparable to those available in the appropriate securities market.
  4. Availability of investment units representing a crossection of the real estate investment market.
  5. Liquidity of real estate investment to permit instant readjustment of the pricing model.
  6. All investors' choices based on expected return and risk relative to market means.
  7. Independent of business management from investment management for individual ownership interests.

- 3
- F. Naive diversification in real estate may, in fact, provide a high degree of co-variance between real estate investment and security investment, thereby stabilizing market related risks rather than business risks over intermediate periods of time. (Professor Miles and Professor McCue - preliminary data.)
  
  - G. Naive diversification may involve multiple levels of spreading of risks:
    - 1. Regional dispersion
    - 2. Urban neighborhoods
    - 3. Property type
    - 4. Property size
    - 5. Leasing mix
    - 6. Tenant mix by size and industry
    - 7. Age of property
    - 8. Duration of estimated holding period
    - 9. Percent of ownership
    - 10. Degree of leverage
  
  - H. Traditional methods of real estate risk management are from risk and insurance literature and include:
    - 1. Risk avoidance
    - 2. Combination of units to improve prediction of frequency and severity of gains and losses
    - 3. Shift by contract to insurance pool in exchange for small certain loss of premium
    - 4. Shift by contract to arbitrage skills or market position
    - 5. Limit liability by contract or ownership structure
    - 6. Hedge

- I. Thus, risk management in real estate has generally presumed active asset management by those contracting the web of agreements, contracts, and defined interests in any given project, or by means of naive diversification. The shift toward passive institutional investment and the conditioning of money managers to the fads of portfolio theory have led to the hope that real estate can be treated like other security interests.

## REAL ESTATE INVESTMENT PORTFOLIO MANAGEMENT

Presented By

Professor James A. Graaskamp, Ph.D., CRE, SREA  
University of Wisconsin School of Business

SECOND HOUR

### I. OBJECTIVES OF SCIENTIFIC PORTFOLIO SELECTION

Trustees of institutional funds need protection from losses from business and systematic upsets when those losses exceed the mean losses suffered for lack of clairvoyance by all trustees of the group. Trustees also want praise when they out-perform the average profitability of their fellow trustees who are competing to expand the base of assets managed.

- A. The first requirement of such a system is basic agreement on definition of the ingredients of average performance statistics and a vehicle or institution for maintaining the sacred scrolls of such an index.
- B. For the first time in real estate there is an attempt to create such an index - the FRC Property Index sponsored by the Frank Russell Company of Tacoma, Washington, and the National Council of Real Estate Investment Fiduciaries (NCREIF). (See Exhibit 1.)
- C. Efforts to construct such an index are confronting a variety of major problems that distinguish real estate from securities:
  1. Most prices are set by appraisal rather than by actual transaction.
  2. Appraisal is expensive and therefore occasional.
  3. Appraisal is futuristic while accounting is historic.
  4. Securities accounting is cost or market, whichever is less while real estate values are cost or market, whichever is more.
  5. Real estate accounting is controlled by the fund manager who controls operations.