JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS
VII. INDUSTRY EDUCATIONAL COURSES - LONG TERM
    F.   U.W. Extension And Executive Development
        1.   "Computers for the Real Estate Appraisal Office - A Workshop", University of Wisconsin Center, Madison, December 4-6, 1969: Includes course schedule, problem set, list of staff and participants, and correspondence

COMPUTERS FOR THE REAL ESTATE APPRAISAL OFFICE
A WORKSHOP
UNIVERSITY OF WISCONSIN CENTER
702 Langdon Street

December 4-6, 1969

Thursday evening, December 4th

5:30-7:30 P.M.   Buffet supper will be kept hot on the top floor of the
                        Madison Inn to accommodate a variety of arrival times
                        for the seminar members.

7:30-10:00 P.M.   Seminar will meet informally in the Business School
                        Computer Center room B-5 at the School of Business for
                        demonstration of the inter-facing problems with a straight
                        computer installation and of several statistical appraisal
                        models. Transportation from the Madison Inn to the School
                        of Business and back will be provided.

Friday, December 5th

8:30 SHARP-9:00 A.M. Room 109 - Outline of seminar objectives, schedules, and
                        group organization.

9:00-10:00 A.M.   Room 109 - Full group session - A standardized office
                        form for calculator procedures and after-tax income
                        analysis presented by M. B. Hodges, Jr.

10:00-10:15   Coffee break.

10:15-12:00   Room 325 Group A - Introduction to the Wang Calculator
                        System with Pete Ellwood, Chuck Clettenberg.

                        Room 211 Group B - Introduction to the Service Bureau
                        terminal with John Schneider, Tom Turk.

                        Room 205 Group C - Introduction to a Visual Terminal from
                        Dialogue System with Robert Knitter, Bob Gibson.

                        Room 109 Group D - Introduction to the Realmetrics System
                        with Ron Graybeal.

12:00-1:00   Luncheon - East dining room lower level of Center Building.

1:00-3:30   Room 325 Group D - Introduction to the Wang Calculator
                        System with Pete Ellwood, Chuck Clettenberg.

                        Room 211 Group A - Introduction to the Service Bureau
                        terminal with John Schneider, Tom Turk.

                        Room 205 Group B - Introduction to a Visual Terminal from
                        Dialogue System with Robert Knitter, Bob Gibson.

                        Room 109 Group C - Introduction to the Realmetrics System
                        with Ron Graybeal.

3:30-3:45	Coffee Break.
3:45-5:30	Room 325 Group C - Introduction to the Wang Calculator System with Pete Ellwood, Chuck Clettenberg.
	Room 211 Group D - Introduction to the Service Bureau terminal with John Schneider, Tom Turk.
	Room 205 Group A - Introduction to a Visual Terminal from Dialogue System with Robert Knitter, Bob Gibson.
	Room 109 Group B - Introduction to the Realmetrics System with Ron Graybeal.
5:30-7:00	Coctails and dinner break - Alumni lounge and East dining room on lower level of Center.
7:00-7:30	Full group session presentation in East dining room.
7:30-9:00	Room 325 Group B - Introduction to the Wang Calculator System with Pete Ellwood, Chuck Clettenberg.
	Room 211 Group C - Introduction to the Service Bureau terminal with John Schneider, Tom Turk.
	Room 205 Group D - Introduction to a Visual Terminal from Dialogue System with Robert Knitter, Bob Gibson.
	Room 109 Group A - Introduction to the Realmetrics System with Ron Graybeal.
After 9:00	Open

Saturday morning, December 6th

8:30-SHARP-9:30 A.M.	Room 109 Review of economics of systems displayed at the seminar by their proponents followed by unstructured group questions and discussion.
9:30-11:00	Room 109 Joint discussion of standardization, feasibility of educational coordination, and definition of areas for collaboration among professional organizations introducing computer techniques.
11:00-Till your plane leaves	Additional lab time where each member of the group may return to one or more of the systems demonstrated during the Friday sessions.

COMPUTERS FOR THE REAL ESTATE APPRAISAL OFFICE
WORKSHOP GROUP ASSIGNMENT LIST

December 4-6, 1969

GROUP A	GROUP B
L. W. Ellwood	**John S. Schneider**
Jered Benedict	Donald E. Snyder
Jerome Dasso	Carl J. Tschappat
Edmond Fisher	George L. Fisher
John E. Shanahan	Stanley E. Goode, Jr.
Wayne D. Hagood	T. C. Hitchings, Jr.
Felice A. Rocca, Jr.	Al Spalding

GROUP D	GROUP C
Dr. Ronald Graybeal	**Robert Knitter**
James Wasson	Robert L. Purnell
Norbert Stefaniak	Pere Soelberg
Roy Fisher	Douglas L. Gibson
M. B. Hodges, Jr.	John P. Sammon
Walter T. Potts, Jr.	Stephen G. Nardi
Dunlap Vanice	Stephen D. Messner

COMPUTERS FOR THE REAL ESTATE APPRAISAL OFFICE
A WORKSHOP
UNIVERSITY OF WISCONSIN CENTER
702 Langdon Street

December 4-6, 1969

LIST OF PARTICIPANTS

Jared Benedict	VP-American Appraisal Institute
Professor Jerome Dasso	University of Oregon
L. W. Ellwood*	MAI-Education Committee
Edmond Fisher	Appraiser and Consultant
George L. Fisher	Appraiser and Consultant
Roy Fisher	Appraiser and Consultant
Douglas L. Gibson	Appraiser and Consultant
Stanley E. Goode, Jr.	Appraiser and Consultant
Ronald S. Graybeal*	President of Realmetrics, Inc.
Wayne D. Hagood	Appraiser and Consultant
T. C. Hitchings, Jr.	Appraiser and Consultant
M. B. Hodges, Jr.*	Appraiser and Consultant
Robert Knitter*	Director, Business School Computer Center
Professor Stephen D. Messner	University of Connecticut
Stephen G. Nardi	Education Committee-Society of Industrial Realtors
Walter T. Potts, Jr.	Appraiser and Consultant
Robert L. Purnell	Chairman-IAAO Education Committee
Felice A. Rocca, Jr.	Appraiser and Consultant
John P. Sammon	Appraiser and Consultant
John S. Schneider*	Appraiser and Consultant
John E. Shanahan	Chairman-SRA Education Committee
Donald E. Snyder	Executive VP-Society of Real Estate Appraisers
Professor Pere Soelberg	University of Wisconsin, Milwaukee
Al Spalding	Appraiser and Consultant
Professor Norbert Stefaniak	University of Wisconsin, Milwaukee
Professor Carl J. Tschappat	Georgia State University
James G. Wasson	Education and Training-Mortgage Bankers' Association of America
Dunlap Vanice	Appraiser and Consultant

School of Business ▉ 1155 Observatory Drive, The University of Wisconsin, Madison 53706

Professor Richard B. Andrews
Professor Robert Knitter
Professor James Graaskamp
Instructor Karel J. Clettenberg
Instructor Thomas L. Turk
Instructor Robert Gibson
Workshop Administrator Colonel Fred Roberto U.S.A. (Ret.)
Professor Arthur Kahn*   U. W. Computer Science Department
And Graduate Students in Real Estate

* Speaker and Lab Session Instructor

I.   Introduction and development of a case history. Description of data required. Specification of a procedure for computation. Use of a calculator. *Multiple use programs.*

II.   Continuation of case history. Describing repetitive calculations. Principles of discounted cash flow (review). Use and limitations of tables. Calculator and computer computations using cash flows. Introduction of model for student use.

III.   Evaluation, modification and extension of ~~cash~~ *financial* model. Discussion of similar calculations. Elwood computations and the use of a computer or calculator. Exploring a problem using a model.

IV.   Basics of computational hardware. Basics of software. Evaluating hardware/software performance. The economics of hardware/software.

V.   The current scene for the real estate specialist. Hardware and services currently in use. Software for real estate: comparison and summary of features.

VI.   Changes to look for in hardware, software and economics. Changes to work for in applications. Bonus applications in accounting, planning, and coordinating, clerical procedures, special computations, etc.

VII.   God and the computer: social implications of technology. The impact of the computer on the role of the professional. *Course review & in perspective.*

UNIVERSITY OF WISCONSIN SCHOOL OF BUSINESS
Real Estate Investment Teaching Model
September , 1969
Instructions For Use of the Coding Form

GENERAL
1. Cards were designed to require no change in field spacing stops set on
    the keypunching machine so that large batches of input forms may be
    done at once and so that a <u>student</u> may keypunch single cards to alter
    one or more assumptions for a second or third run.
2. One character or number for each blank. Decimal points, "X's",
    "-s" may not be altered or written over.
3. All dollar amounts must be coded in the rightmost portion of the allowed
    space - do not include dollar signs. Decimal figures must be corrected
    to the left relative to pre-printed decimal point.
4. For numerical inputs blank spaces will be read as a zero (0); for
    alphabetical inputs, blank spaces will provide white space on the output.

CARD 1
1. Last two digits of social security number required to differentiate
    between those with the same name.
2. Course and section number required for internal school accounting.
3. The equity discount rate is the yield rate at which the investor wishes
    to determine the present value of the project, discounting all cash
    returns to the beginning of the first period.
4. The income tax rate is the marginal rate assumed by the investor.
5. "#Cards #3" indicates the number of component description cards (1-6) in
    column 61. "# cards #4" indicates the number of mortgage cards (1-4)
    in column 64. Failure to code these properly <u>will terminate processing</u>
    of your data and you will receive no output.

CARD 2
1. Project description can be an address, firm name, or description of
    project and run such as "24 Unit Apart. - 90% loan".
2. Extraordinary expenses can be used to deduct for high vacancies in
    first year, to eliminate excess rents in the first year, to recognize
    commissions for leasing space, to permit higher operating costs during
    a "shake down" year, etc.
3. The staging multiplier permits an optional increase in gross rent,
    expenses, and real estate taxes due to an increase in rentable area
    provided for in the Component Description and Mortgage Description
    cards Starting Year column. Indicate year increase is to take effect
    in column marked "staging year" (1-9) DO NOT STAGE IN TENTH YEAR!
    Both year and multiplier must be coded but if staging option is not
    used leave both coding spaced blank.

CARD 3
1. Component description might be land, structure, and furnishings and
    you would repeat these categories if you wished to build a second stage.
2. % depreciable is 100% minus % of salvage.
3. Depreciation method code:
                    0 = no depreciation
                    1 = sum of the digits
                    2 = straight line depreciation
                    3 = 150% declining balance
                    4 = 200% declining balance

4. Starting year is always a 1 for the original investment components and the staging year for any additions or replacement of such short-lived items as furniture.
5. Useful life is number of years over which component will be depreciated (0-99).

CARD 4
1. Mortgage description may include any type of financial instrument. For example, a land lease could be defined as a site worth $300,000, monthly payment would be 1/12 of annual rent and interest rate would be the annual rent divided by the indicated value of the land.
2. Interest rates are constant annual rates. 8.5% interest = .0850.
3. Starting and Ending years are the first and last years payments are to be made.
4. If mortgage term is longer than ten years or is not refinanced, place a 10 in the column "Ending Year."
5. Indicate full amortization term in years of mortgage in column "Term".
6. You must indicate which new mortgage will replace a specific old mortgage. Otherwise if a loan matures during a projection period, final balance will appear in cash flow statement as "Principal Payment" and if it succeeds available cash, there will be an automatic working capital loan.

CARD 5
1. Expenses do not include real estate taxes. Expenses may include only cash outlay items or may include reserves for replacement and redecorating. In the first case you may wish to include several incremental cost component outlays for remodeling and refurnishing as an alternative to regular maintenance and reserve allocation.
2. All growth rates are constant annual rates. 5% growth rate = .05
                                                - 5% growth rate = -.05
   Patterns of growth rates should be consistent; if rents are constant and expenses are expected to increase, project value rate of growth should probably decline.

CARD 6
1. Real estate taxes are for the first year. In Madison the average annual growth in real estate taxes is exceeding 6% and an average increase of 5% a year is the typical minimum rate of tax increase in cities throughout Wisconsin.

CARD 7
1. The vacancy rate is the percent of rent lost due to vacancy and turnover. For example, if an apartment has 10 units it has 120 monthly rental units. If 6 units turn over and are vacant 1 month the vacancy rate is 6/120 or 5%.
2. The working capital loan interest rate is either the 90 day note rate at the bank or the equity discount rate reflecting the yield required on short-term advances of equity money.

1) Current period return on Net Worth before taxes =

$$\frac{\text{Cash Throw-off + Change in Net Worth}}{\text{Net Worth at End of Previous Year}}$$

2) Current period return on net worth after taxes =

Spendable cash + tax savings on other income +

(change in net worth - change in cap. gains tax)

———————————————————————————

Net worth at the end of previous year less capital gains tax

3) Cash Return on original cash equity before taxes =

$$\frac{\text{Cash throw-off}}{\text{Total initial investment less initial Mortgage Debt}}$$

4) Cash Return on original equity cash after taxes =

$$\frac{\text{Spendable Cash after taxes + Tax savings on other income}}{\text{Total initial investment cost less initial mtge. debt}}$$

5) Net income - market value ratio

$$\frac{\text{Net Income}}{\text{Market Value for the same period}}$$

6) Expense Ratio =

$$\frac{\text{Operating Expenses Including R.E. Taxes}}{\text{Gross Income}}$$

7) Default ratio =

Operating Exp. + R. E. Taxes + Prin. & Interest on Mtge. + Working
Cap. Loan Princ. Repayment

———————————————————————————

Gross Income

8) Lender Bonus Interest Rate =

$$\frac{\% \text{ of effective gross (not to exceed cash throw-off for period)}}{\text{balance due on loan at beginning of period}}$$

9) Resale Market Value at End of year

Total Initial Investment cost + Additional staged investment X
$$\text{Index for Year}$$

10) Net worth of property =

Market value less balance of loans less working capital loans

11) Capital Gains =

Market value projection - (Total capital investment - cumulative depreciation taken)

12) Market value less (total investment less cumulative depreciation + disallowed excess depreciation)

13) Capital Gains Tax =

(1/2 Capital Gain X Income Tax Rate) + (disallowed excess depreciation X income tax rate)

14) Present value of project before taxes =

Original mortgage balance + PV of received stream of cash throw-off + PV of net worth if sold at end of year indicated by column number.

15) Present value of project after taxes =

Original mortgage balance + present value of received stream of spendable cash after taxes + PV of received tax savings on other income + PV of (net worth less capital gains tax) if sold at end of year indicated by column number.

Disallowed excess depreciation = cumulative accelerated depreciation less straight line depreciation for the same period minus 12% of accelerated depreciation in excess of straight line for each year after year 11.

ANALYSIS FOR PUCHASE OF APARTMENT HOUSE INVESTMENT

1. Assume you wish to analyze the Investment value at alternative purchase prices of a 24 unit apartment building, located at 2575 University Avenue, Madison, Wisconsin. The building has twelve two-bedroom apartments that each rent furnished for $140 per month and twelve one-bedroom apartments that rent each for $125 per month. The building Is five years old, unfurnished, In need of maintenance and available as Is for about $225,000.

2. The building Is well located and vacant land In the area Is selling for about $1700 per unit. This means that $40,000 of the purchase price could be designated as land value. In addition to the land and building, the purchase price could be allocated to Include $12,500 for the elevator and $7,200 to the parking stalls.

3. Market analysis indicates that the building would rent very well If all the units were carpeted and furnished. For this work It Is estimated that It would cost $600 per two-bedroom unit and $500 for each one-bedroom unit or a total investment of $13,200 by the prospective buyer.

4. The total capital expenditures could be allocated for depreciation purposes as follows, keeping In mind that the prospect would be a second user and therefore only entitled to a maximum of 150% declining balance except for his new investment In furnishing. The percent depreciable and the number of years of remaining useful life are reasonable estimates given some knowledge of the practices of the Internal Revenue Service and the condition of the building:

land	$40,000	No depreciation allowed		
parking	7,500	50%	10 years	150%
furnishings	13,200	100%	7 years	sum of the digits
building	177,500	100%	35 years	150%
transaction costs	1,800	100%	35 years	150%

5. After completion of repairs and refurbishing It Is anticipated that the two-bedroom apartments will rent for $170 a month and the one-bedrooms $150 per month. The gross rent roll of the building would then be:

$$\$170 \times 12 \times 12 = 24,480$$

$$\$150 \times 12 \times 12 = \underline{21,600}$$
$$\$46,080$$

6. During the first year of changeover In ownership, refurbishing and re-leasing you estimate that each unit will be vacant about two months, that Is about one-sixth of the time, (I.e. a vacancy of 17%) so that your average occupancy will

be 83% of potential for the first year. Thereafter you anticipate a normal vacancy rate of 5%, or an occupancy of 95%.

7. The current real estate and personal property taxes to be paid in the first year following purchase are estimated to be $9,000. The normal current operating expenses, excluding real estate taxes but including management fees, are determined to be $8,400.

8. The property has been poorly maintained and will require additional expenditures of $2100 in the first year to justify the new rent schedule. This deferred maintenance charge will be added to the normal operating expenses of the first year.

9. The buyer is considering this property because his accountant suggested that with his 30% tax bracket, including state and federal taxes, he should look for some tax shelter to offset some of his other current income. Using the accelerated method of depreciation, this real estate project should satisfy this requirement.

10. The investor feels that while the normal ratio of market value to income in his community ranges between 8% and 11%, proper financing should raise the pre-tax yield on his cash equity to at least 18%. The accountant suggest that if the investor considers the cash saved on deferred income taxes due to depreciation, the investor should seek at least 18% to 22% on his investment annually on an after-tax basis.

11. The financing available to the investor would initially combine the assumption of a first mortgage with a balance of $180,000 with 235 months to run and a second mortgage taken back by the seller to be repaid in ten years, in monthly payments. The investor would plan to refinance both loans at the end of the sixth year of ownership when the prepayment penalty would lapse on the first mortgage. The seller feels he should receive $1,000 as points on the second mortgage since that is the discount he will take when he sells the note.

> 1st Mortgage   180,000 20 year 7 3/4%
>   6 year balloon
> Private loan   15,000 10 year 8 1/2% $1000 discount
>   6 year balloon

12. While the seller will pay for title insurance, a survey, and related items the buyer expects to pay about $800 in professional appraisal and legal fees related to this transaction. These fees plus points in #11 equal transaction costs of $1800 which increase original cash required and must be amortized over life of structure.

13. Temporary cash deficits at the end of any month can be covered with bank notes at a rate of 9% per annum and repaid out of positive cash flows when available.

14. The financial plan is to maintain a highly leveraged position and therefore pay-off the original loans at the end of the fifth year by obtaining a new mortgage. To discover some measure of influence of such refinancing on yield to equity and cash flows, the investor will assume that in five years the best loan he could obtain would equal $190,000 for 20 year term at 8% interest. The age of the building at that time would require granting a bonus interest feature equal to 4% of gross rent as of the beginning of sixth year when the loan begins.

APARTMENT CASE STUDY #1

15. In the seventh year it is anticipated that additional refurbishing would be required in addition to ordinary annual replacement expenses. $10,000 is budgeted as additional refurbishing component to start for the eighth year and it is expected that appliance dealer terms will be at 9% interest and 18% constant, that is $150 a month.

16. With time, rents, expenses, real estate taxes, and resale value of the property could be expected to shift due to age of the property and inflation.

   a. Rents are determined to increase at a rate of 2% per year of first year rents thus indiating a relative loss of growth as the property ages.

   b. Operating expenses excluding real estate taxes have also generally increased in the community at a rate of 2% per year relative to first year costs.

   c. Real estate taxes, however, have increased at a rate of at least 5% per year for the last five years in the community and no relief is immediately in sight.

   d. Extraordinary expenses in the first year will include $2100 of deferred maintenance which can be deducted as an expense rather than capitalized. In addition rents are over-stated pending completion of remodeling in the first year and a return to normal vacancy of 5% of gross. The difference between an expected vacancy of 17% and 5% is 12% of gross or $5525. To adjust net income accordingly extraordinary expenses are therefore the sum of $2100 + $5525 or $7625.

17. A conservative expectation for resale price of this apartment building which will be 15 years old at the end of the ten-year forecast is $275,00 or about 115% of the original investment in the property. However, the cost of sale for brokers fees, etc. would be at least 5% so that the investor might receive net liquidating sale proceeds of about 110% of the original investment. Thus the growth rate in liquidating sale proceeds is assumed to be about 1% a year. For example at the end of the second year it is assumed tht the investor could sell at 106% but considering a 5% transaction cost he would realize a net market value of 101% of his original investment. It should be pointed out that while such a factor for inflation seems modest, in a highly leveraged position the impact of a optimistic resale price on equity yield can be very misleading in the early years. (Caveat: If the building is a good investment under conservative assumptions it is a better investment if more capital gains and income are realized than anticipated. It is less risky to make money with sound buys than with dreams of good sales.)

Card 1

Student's Name	Last 2 Digits of Social Security #	Course & Section #'s	Equity Discount Rate	Income Tax Rate	# Cards #3	# Cards #4
GRAASKAMP	X 77 X X X X X XX	520 - 1 X XX X	.1800 X	.3000 X	X X X 6	X X 4 X

Card 2

Project Description	Extraordinary Expenses		Staging Multiplier	Staging Year			
24 UNIT APT - CASE 1 X	7625 X		X .	X .	X	X X	X

Card 3

Component Description	Original Cost	Percent Depreciable	Depreciation Method	Starting Year	Useful Life
LAND	X 40000 X	X 0.0000 X	X 00	X X	1 X 00 X
BUILDING	X 177500 X	X 1.0000 X	X 03	X X	1 X 35 X
PARKING	X 7500 X	X 0.5000 X	X 03	X X	1 X 10 X
FURNISHINGS	X 13200 X	X 1.0000 X	X 01	X X	1 X 07 X
TRANSACTION COST	X 1800 X	X 1.0000 X	X 03	X X	1 X 35 X
7 TH YR REFERBISHING	X 10000 X	X 1.0000 X	X 01	X X	8 X 07 X

Card 4

Mortgage Description	Principal Amount	Monthly Payment	Interest Rate	Bonus Interest Rate	Start	End	Term	Refinanced By Mortgage #
FIRST ASSUMED MORTG. X	180000 X		X 0.0775 X	.	X 01	X 05	X 20	X 03 X
SELLERS 2ND MORTG.	X 15000 X		X 0.0850 X	.	X 01	X 05	X 10	X 03 X
REFINANCED FIRST X	190000 X		X 0.0800 X	0.0400 X 06	X 10	X 20	X	X
REFURBISH CHATTEL	X 10000 X	150 X	0.0900 X	.	X 08	X 10	X	X X

Card 5

	Gross Rent	Expenses	Rental Growth Rate	Expense Growth Rate
X	46080 X	8400 X	.0200 X	.0200 X

Card 6

	R E Taxes	R E Tax Growth Rate	Project Value Rate of Growth
X ... X	9000 X	.0500 X	.0100 X

Card 7

	Vacancy Rate	Working Capital Loan Interest Rate
X	.0500 X	.0900 X

To code Depreciation Method, use the following code no's.

0 = no depreciation
1 = sum of the digits
2 = straight line depreciation
3 = 150% declining balance
4 = 200% declining balance

GRAASKAMP
520 1   77

ANALYSIS OF
24 UNIT APT - CASE 1

PAGE 1
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COMPONENTS	PCT. DEPR	BEGIN USE	USEFUL LIFE	DEPR METHOD	COST			
LAND	.00	1	.	0	$ 40000.	GROSS RENT	$ 46080.	RATE OF GROWTH OF GROSS RENT .0200
BUILDING	1.00	1	35.	3	$ 177500.	EXPENSES	$ 8400.	RATE OF GROWTH OF EXPENSES .0200
PARKING	.50	1	10.	3	$ 7500.	R E TAXES	$ 9000.	RATE OF GROWTH OF R E TAXES .0500
FURNISHINGS	1.00	1	7.	1	$ 13200.	INCOME TAX RATE	.3000	RATE OF GROWTH OF PROJECT VALUE .0100
TRANSACTION COST	1.00	1	35.	3	$ 1800.	VACANCY RATE	.0500	WORKING CAPITAL LOAN RATE .0900
7 TH YR REFURBIS	1.00	8	7.	1	$ 10000.	EQUITY DISCOUNT RATE .1800		EXTRAORDINARY EXPENSES $ 7625.
TOTAL INITIAL INVESTMENT					$ 240000.			
CASH EQUITY REQUIRED					$ 45000.			

FINANCING PLAN

FIRST ASSUMED MORTG. $ 180000.

MONTHLY PAYMENT $ 1477.   INTEREST RATE .0775   STARTS 1 ENDS 5   BONUS INTEREST .0000 OF GROSS RENT

	1	2	3	4	5	6	7	8	9	10
PRINCIPAL	3919.	4234.	4574.	4942.	5339.	.	.	.	.	.
INTEREST	13812.	13497.	13157.	12790.	12393.	.	.	.	.	.
BALANCE	176080.	171845.	167270.	162328.	156989.	.	.	.	.	.

SELLERS 2ND MORTG. $ 15000.

MONTHLY PAYMENT $ 185.   INTEREST RATE .0850   STARTS 1 ENDS 5   BONUS INTEREST .0000 OF GROSS RENT

	1	2	3	4	5	6	7	8	9	10
PRINCIPAL	994.	1082.	1178.	1282.	1396.	.	.	.	.	.
INTEREST	1236.	1148.	1053.	949.	835.	.	.	.	.	.
BALANCE	14005.	12922.	11743.	10460.	9064.	.	.	.	.	.

REFINANCED FIRST $ 190000.

MONTHLY PAYMENT $ 1589.   INTEREST RATE .0800   STARTS 6 ENDS 10   BONUS INTEREST .0400 OF GROSS RENT

	1	2	3	4	5	6	7	8	9	10
PRINCIPAL	.	.	.	.	.	4016.	4349.	4710.	5101.	5524.
INTEREST	.	.	.	.	.	15054.	14721.	14360.	13969.	13546.
BALANCE	.	.	.	.	.	185983.	181634.	176924.	171822.	166298.

REFURBISH CHATTEL $ 10000.

MONTHLY PAYMENT $ 150.   INTEREST RATE .0900   STARTS 8 ENDS 10   BONUS INTEREST .0000 OF GROSS RENT

	1	2	3	4	5	6	7	8	9	10
PRINCIPAL	.	.	.	.	.	.	.	938.	1026.	1122.
INTEREST	.	.	.	.	.	.	.	861.	773.	677.
BALANCE	.	.	.	.	.	.	.	9061.	8035.	6913.

	1	2	3	4	5	6	7	8	9	10
GROSS RENT	46080.	47001.	47923.	48844.	49766.	50688.	51609.	52531.	53452.	54374.
LESS VACANCY ALLOWANCE	2304.	2350.	2396.	2442.	2488.	2534.	2580.	2626.	2672.	2718.
EFFECTIVE GROSS INCOME	43776.	44651.	45527.	46402.	47278.	48153.	49029.	49904.	50780.	51655.
LESS REAL ESTATE TAXES	9000.	9450.	9900.	10350.	10800.	11250.	11700.	12150.	12600.	13050.
LESS EXPENSES	16025.	8568.	8736.	8904.	9072.	9240.	9408.	9576.	9744.	9912.
NET INCOME	18751.	26633.	26891.	27148.	27406.	27663.	27921.	28178.	28436.	28693.
LESS DEPRECIATION	11546.	9954.	8835.	7996.	7329.	6771.	6282.	8428.	7212.	6377.
LESS INTEREST	15049.	14646.	14210.	13739.	13229.	17082.	16785.	17323.	16881.	16398.
TAXABLE INCOME	-7845.	2032.	3844.	5412.	6847.	3809.	4852.	2426.	4342.	5916.
PLUS DEPRECIATION	11546.	9954.	8835.	7996.	7329.	6771.	6282.	8428.	7212.	6377.
LESS PRINCIPAL PAYMENTS	4914.	5317.	5753.	6224.	6735.	4016.	4349.	5648.	6127.	6647.
CASH THROW-OFF	-1213.	6669.	6926.	7184.	7441.	6565.	6785.	5206.	5427.	5647.
LESS TAXES	.	609.	1153.	1623.	2054.	1142.	1455.	728.	1302.	1775.
CASH FROM OPERATIONS	-1213.	6059.	5773.	5560.	5387.	5422.	5330.	4478.	4124.	3872.
WORKING CAPITAL LOAN(CUM BALANCE)	1213.	.	.	.	.	.	.	.	.	.
SPENDABLE CASH AFTER TAXES	.	4737.	5773.	5560.	5387.	29368.	5330.	14478.	4124.	3872.
TAX SAVINGS ON OTHER INCOME	2353.	.	.	.	.	.	.	.	.	.

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	1	2	3	4	5	6	7	8	9	10
MARKET VALUE	240000.	242400.	244800.	247200.	249600.	252000.	254400.	256800.	259200.	261600.
BALANCE OF LOANS	191298.	184767.	179014.	172789.	166054.	185983.	181634.	185986.	179858.	173211.
NET WORTH OF PROPERTY	48701.	57632.	65785.	74410.	83545.	66016.	72765.	70813.	79341.	88388.
CAPITAL GAIN	7383.	9783.	12365.	14660.	16976.	19307.	21645.	25564.	27812.	30107.
CAPITAL GAINS TAX	2356.	2238.	2235.	2359.	2532.	2735.	2957.	3733.	3751.	3877.

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	1	2	3	4	5	6	7	8	9	10
NET INCOME-MARKET VALUE RATIO	.0781	.1098	.1098	.1098	.1098	.1097	.1097	.1097	.1097	.1096
RETURN ON NET WORTH BEFORE TAXES	.0552	.3203	.2616	.2403	.2227	-.1312	.2050	.0447	.1970	.1852
RETURN ON NET WORTH AFTER TAXES	-.0290	.2493	.2192	.1948	.1767	.1832	.1693	.1731	.1670	.1511
CASH RETURN ON ORIG CASH EQUITY BEF TAX	-.0269	.1482	.1539	.1596	.1653	.1313	.1357	.1301	.1356	.1411
CASH RETURN ON ORIG CASH EQUITY AFT TAX	.0523	.1052	.1282	.1235	.1197	.5873	.1066	.3619	.1031	.0968
DEFAULT RATIO	.9763	.8081	.8054	.8029	.8004	.8204	.8185	.8508	.8484	.8461
LENDER BONUS INTEREST RATE	.0000	.0000	.0000	.0000	.0000	.0122	.0110	.0115	.0114	.0120

| * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |

	1	2	3	4	5	6	7	8	9	10
PRESENT VALUE OF PROJECT BEFORE TAXES	229976.	234866.	237937.	240236.	241911.	234120.	234884.	232876.	233294.	233525.
PRESENT VALUE OF PROJECT AFTER TAXES	230278.	236083.	243130.	251819.	261810.	264257.	276367.	286899.	300590.	314456.

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AREA CODE 215 PEnnypacker 5-8614

September 15, 1969

Dr. James Graaskamp
University of Wisconsin
Madison, Wisconsin   53700

Dear Jim:

I would like to express my appreciation in your coming before
the SREA membership of the Society and presenting your thoughts
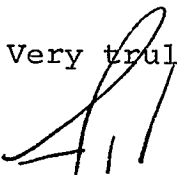on the use of computers in Real Estate Appraisals.

Jim, I would like to introduce you to the name of Dr. David R.
Levin, Deputy Director Office of Right of Way and Location,
Federal Highway Administration, Department of Transportation,
Washington, D.C.

At a joint meeting between the Philadelphia Chapter of the
Institute and the Society, Dr. Levin discussed the many facets
of Right of Way and in a subsequent discussion, I mentioned
some of the things you were doing with computers. He was
extremely interested and may be in touch with you. I advised
Dr. Levin that I would mention his name to you and am forwarding
him a copy of this letter.

As I recall, we had tentatively thought of setting up a meeting
out in Wisconsin some time in November. I would imagine it gets
a bit cold out there at this time of year, however, I can say
that for scheduling purposes, this suits me just fine.

Once again, thank you for such an excellent presentation and I
look forward to seeing you again.

Very truly yours,

Felice A. Rocca,Jr., SREA, MAI

FAR,Jr.,/ats

LOAN CORRESPONDENT, CONNECTICUT GENERAL LIFE INSURANCE COMPANY

REAL ESTATE APPRAISALS · FEASIBILITY STUDIES · PROPERTY MANAGEMENT

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P. O. BOX 1658 · PHONE 831-0775

SAN PEDRO, CALIFORNIA 90733

October 1, 1969

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

Dear Professor Graaskamp:

Your impact on the Colorado Springs Conference is a lasting
one on me and I wish to again thank you for your extraordinary
contribution.

I have just received an appraisal assignment which I believe
may benefit from the application of some form of computer
models.

You recommended a person to me and I misplaced his name.
I believe that he had offices in San Francisco and Los Angeles.
If you recall please send me his name and address on the
enclosed post card.

My very best wishes to you and if I can ever help you in the
Los Angeles Area please ask me.

Sincerely,

George L. Fisher, SREA

GLF:k

benedict appraisal company

2830 WHITNEY AVENUE • HAMDEN, CONN., 06518

TELEPHONE 248-5511

October 1, 1969

Mr. James Grasskamp
University of Wisconsin
School of Business
Room 101
Madison, Wisconsin 53706

Dear Mr. Grasskamp:

Due to other commitments I will be unable to attend the meeting you
mentioned to me in our telephone conversation. At some time in the
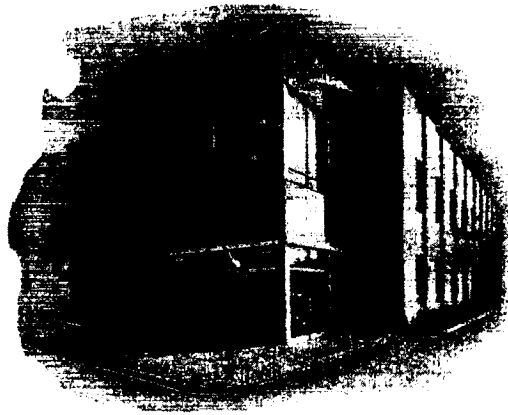future I hope it will be possible.

Very truly yours,

NORMAN R. BENEDICT, M.A.I.-C.R.E.
President of Benedict Appraisal Company

mmcc

APPRAISERS AND CONSULTANTS FOR REAL ESTATE

SACKMAN-GILLILAND

CORPORATION

260 - 68TH STREET
BROOKLYN, N. Y. 11220
TELEPHONE: 833-2700

October 2nd, 1969

Prof. James A. Grasskamp
Graduate School of Business
The University of Wisconsin
1155 Observatory Drive
Madison, Wisconsin 53706

Dear Jim:

I am enclosing the material prepared by Coldwell, Banker and Company. This is the information we discussed at our meeting in Colorado Springs.

I would greatly appreciate your comments and ideas.

Best wishes.

Cordially,

James S. Gibbons

mr

enc....

October 6, 1969

A few appraisal offices and universities have developed techniques and hard-
ware which may be within the means and technical skills of a large number of
real estate professionals. Introduction to these techniques has been greatly
hindered because:

1) Appraisers have not had a chance to experience actual use of the
   hardware and
2) Clients require considerable re-education on what they might expect
   to find in a professional appraisal.

Relative to problem #1 the University of Wisconsin Real Estate Department, in
conjunction with the research and education leaders of the various professional
appraisal societies and mortgage banking firms will offer a seminar which will
stress direct "hands-on-computer-time" for each participant for three alterna-
tive electronic computer systems within the means of small appraisal offices.
No programming is required! Anyone can operate any one of the systems with
20 minutes of instruction!

By special arrangement we will offer for the use of the participants a complete
Wang installation, together with the software and the expertise of Pete Ellwood.
There will be a teletype terminal installation developed and explained by
John Schneider in conjunction with Service Bureau Corporation. For our third
alternative we will use a graphic display and dialogue terminal developed here
at the University of Wisconsin by Robert Knitter and Dick McCoy of the Business
School.

In addition to 9 hours of time on the equipment for each of the participants,
there will be opportunity for discussion on the economics of each alternative
hardware setup and on the desirable attributes of unified courses for introducing
various professional groups to the use and advantages of such techniques. Ad-
mittedly the participants are guinea pigs whom we hope to infect with enthusiasm
and confidence for their own use of electronic computational aids and whom we
hope will suggest a prescription for contents and methodology of introductory
EDP courses for real estate.

Finally, for those with an interest in regression analysis or comparison of
the ready-to-use methods above with the more typical punch-card, computer
apparatus, we will have available the School of Business computer installations.

This seminar will be limited to 21 participants, 7 of whom are already noted
for their work in this subject area and the balance will be the first 14 of 30
invited because they are education directors in their particular field or
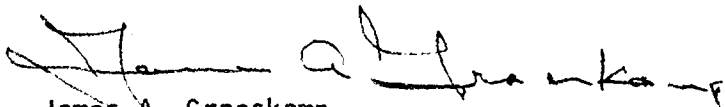are in the process of installing some form of EDP in their appraisal office.

Each participant must pay for his own transportation, motel accommodations, and breakfasts. The $70.00 fee for the course will pay for lunches and dinners at the Wisconsin Center, installation setup expenses and servicing costs, and instructional assistance and programming by graduate students. All of the professional appraisers and University faculty contributors will be serving at their own expense. The administrative costs have been donated by the School of Business.

Please indicate on the attached form whether you will be able to attend and if you will arrive by Thursday evening in time for an informal hour of discussion with some of our graduate students. Please attach your check for the $70.00 seminar fee to this form, payable to Urban Land Fund, Alumni Foundation. We have reserved a block of rooms at the Madison Inn and you should return the enclosed reservation card directly to the Inn before November 10th. If you cancel after the 21st of November we may reserve the right to refund only 50% of the fee unless we can maintain our group of 21 due to tight budget constraints.

This seminar is experimental and is intended to incubate more formal and more extensive courses by the professional societies or may be repeated in one form or another at the University at a later date. Advertisement after the meeting we hope will be desirable, but please refrain from extensive promotion prior to the experiment, or you will embarrass us by the necessity of turning away requests to attend from so many of our professional friends.

A preliminary schedule is attached and additional information will follow for registrants. Registrants will be encouraged to bring financial data of an investment case which they may wish to try out on some of the programs that will be available.

Sincerely yours,

James A. Graaskamp
Assistant Professor in Business

SEMINAR: COMPUTERS FOR APPRAISAL OFFICES

DATE: Friday, December 5, and Saturday, December 6, 1969

PLACE: Wisconsin Center Building
           702 Langdon Street
           Madison, Wisconsin 53706

Formal Seminar Begins 8:45 AM, Friday, December 5, 1969
Informal Seminar Begins 6:30 PM, Thursday, December 4, 1969
    With Supper Meal to be Served at the Madison, Inn,
Madison, Wisconsin

Seminar Fee Includes Lunch and Dinner and All Workshop Costs.
    Those Attending Responsible for Own Motel Accommodations.
    Space Has Been Reserved for Those Attending at the
    Madison Inn, 601 Langdon Street, Madison, Wisconsin,
    Phone 257-4391, Reservation Form Enclosed

TEAR OFF_ _

____ I WILL ATTEND

____ I WILL NOT ATTEND

____ WILL ARRIVE FOR SUPPER THURSDAY

____ WILL ARRIVE EARLY EVENING THURSDAY

____ WILL BE PRESENT FRIDAY MORNING

Please attach check for $70.00 with your acceptance notice. Please
make check payable to Wisconsin Alumni Fund - Land Economics
(qualifies as charitable deduction).

PLEASE NOTE: ONLY ONE PERSON CAN ATTEND PER REGISTRATION BECAUSE
               OF LIMITED OPENINGS.

Signed _____

Date _____

October 29, 1969

Mr. Robert Devenish
722 University Avenue
University of Wisconsin
Campus Mail

Dear Bob:

Please install unrestricted telephones in rooms 109, 205 and 211 of the Wisconsin Center for the conference on "Computers for Appraisal". This conference is under the direction of Professor James Graaskamp, School of Commerce and takes place in the Wisconsin Center during the period December 4-6, 1969. Please bill the cost of these telephones to the University of Wisconsin Foundation, Robert Rennebohm, Executive Director, 702 Langdon Street, Madison, Wisconsin.

Sincerely yours,

Robert P. Lee, Director

cc: John Feldt
    Prof. Graaskamp

L. W. ELLWOOD & COMPANY

169 DAYTON STREET · RIDGEWOOD, NEW JERSEY 07450

(201) 652-2141

November 5, 1969

Dr. James A. Graaskamp
Assistant Professor in Business
Graduate School of Business
The University of Wisconsin
1155 Observatory Drive
Madison, Wisconsin 53706

Dear D r. Graaskamp:

I am writing this letter for my father, at his request.

He is scheduled to arrive in Madison at 5 P. M. December 4th (North Central Flight #571 out of Chicago).

As to the Wang Equipment, the following will be required:

                2 - #371 Card Readers
                    #370 Keyboard
                    #362 Electronic Package
                    #372 Data Storage
                    #377 Teletype Control Package
                    #376 Teletype 33ASR

I would expect there might be some difficulty in obtaining the last two items. If this latter equipment is not available, the demonstration will necessarily be curtailed because many of our programs involve a print out. The Wang representative will understand and can perhaps contrive to make the best possible demonstration out of the available gear.

I'm particularly interested in other people's applications, so, if there is a record kept of the various programs demonstrated, an abstract of

this material would be appreciated.   The evolution of our library follows
three paths:

1. We have a recurring problem to solve. We write a
program.

2. Many of these above or calls from our clients spark an
idea for others.

3. Finally, we try to stay alert to applications other people
are developing.

I am convinced your seminar will be extremely stimulating. I'll be most
anxious to get a report from the boss.

Yours truly,

L. W. ELLWOOD & COMPANY

C. R. Ellwood

CRE:amk

NOTE: L.W. ELLWOOD

L.W. Ellwood (1895-1974) was a dean of the appraisal profession in the United States. He was an active and teaching member of the American Institute. Following his retirement from New York Life Insurance Company, he published the **"Ellwood Tables"**, founded the L.W. Ellwood Company, Inc. and pursued his profession actively until his death. His son, C. Russell Ellwood, MAI, was one of his many pupils.

Courtesy of Richard S. Ellwood
Son of L.W. Ellwood

REAL ESTATE APPRAISALS · FEASIBILITY STUDIES · PROPERTY MANAGEMENT

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P. O. BOX 1658 · PHONE 831-0775

SAN PEDRO, CALIFORNIA 90733

November 13, 1969

Professor James A. Grasscamp
Graduate School of Business
1155 Observatory Drive
University of Wisconsin

Dear Professor Grasskamp:

My plans are still directed to meeting with your
group barring any unforeseen emergencies involving
my being subpoenad as a witness in two very bother-
some trials being extended into the December 1st
area.

Could you please advise me if I have been accepted
into the group as per your letter of October 6, 1969;
and, if so, I will finalize my plans to the best of my
ability and hope to be with you on the dates specified.

I visited Ron Graybeal in Berkeley and as a result sent
him a few thoughts on my reactions of our meeting.
Perhaps you will find the comments of some interest.

Hoping to hear from you soon, cordially,

George L. Fisher, SREA

GLF:k

S.R.E.A. SOCIETY OF REAL ESTATE APPRAISERS · AMERICAN RIGHT OF WAY ASSOCIATION · INSTITUTE OF REAL ESTATE MANAGEMENT

The instantaneous mathematical magic of the modern computer when related to the analysis of the investment potential of income producing real estate, or the processing of an income approach to value, is rising like a new dawn in the east.

But - many of the same ugly variables which existed before this new dawn must now be examined even more closely than ever before, otherwise this great new gift may likewise have feet of clay.

There can be no doubt that this great genii can do wondrous things with lightning speed. However, without conscientious dedication to certain principles, those bidding the genii's magic may cloud the new dawn and perhaps discredit a great new service to the investing public, the real estate business, and the computer image.

The validity of capitalization of income into value ($\frac{I}{R}$ equals value) has always been in direct proportion to the integrity of the step by step procedure of processing a gross income into its true net income.

The elements of the procedure are gross income, vacancy and credit losses, the effective gross income, fixed expenses of taxes and insurance, operating expenses, repairs and maintenance, utilities, management, and reserves for depreciation. The result of the procedure is a true net income.

How valid is the owner's statement of rental income? The gross income should be related to the market place and should be stabilized to reflect the best possible capacity of the property to produce an income at a rate consistent with the market place as of the date of appraisal. Any adjustment of the market insofar as gross income is concerned requires a reevaluation of the rental income. It would seem that the gross income should be developed for the precise time of the analysis. Any presumption of future gross income becomes speculative and con-jectural because of a constantly changing supply and demand factor. Likewise rental rates are subject to influence by many exterior economic factors. Nothing is constant but change.

The gross income estimate is the first key element and the foundation upon which a proper net must be developed.

Next, the vacancy factor, plus credit loss, amounts to something versus nothing. Obviously, each property, each situation is different. However, one almost certain fact is that over a 10-year projection vacancy and credit loss will be some amount. The fallacy is to suggest a zero amount. Good management will include a vacancy factor for scheduled repair, maintenance and reconditioning, if for no other reason. Credit losses may be or may not be but it is doubtful if a 10-year income program could be obtained without some loss in rental collections.

The effective gross income is the mathematical difference between the gross income less vacancy and credit losses. This factor is important because management is an amount equal to a percentage times effective gross income and management is related to actual incomes collected rather than the gross rent anticipated.

The fixed expenses are taxes and insurance and these two elements are subject to the least fluctuation. The insurance rate is obtainable by actual quotation and is usually extended over a 3 to 5 year period. The taxes are reasonably stabilized; however, some investigation should be made to ascertain if there is a pending increase in assessment value, or tax rate, in the immediate area of the subject property. Don't be caught asleep at the switch or your clients would have a good cause to change advisors.

Those expenses related to common areas such as pools, exterior lighting, landscaping, hall areas, utilities, should be capable of reasonable estimate based upon historical records or prediction. Likewise maintenance and repairs are estimated either from records of actual expenditure or prediction. However, both of these elements

should be considered in the light of the 10-year projection period. Contingencies are to be considered when evaluating these elements.

Management is a proper charge against effective gross income and is expressed as a percentage of the effective gross income. It is an expense item payable for either professional management or payable to an owner for the performance of the management. Management collects rents, pays the mortgage, renews fire insurance, pays taxes on time without penalties, prevents excessive depreciation to the improvements, schedules preventive maintenance, controls good accounting procedures, checks expense items and oversees the on-premises management.

The Reserve for Depreciation is the expense item which accommodates the replacement or repair of those items such as carpeting, water heaters, roof replacement. These depreciation expenses may occur at a frequency greater than the overall structure depreciation and hence should be provided for by special reserve fund accounts.

Sometimes an all inclusive expense schedule is applied to the effective gross income to arrive at the net income amount. This all inclusive expense schedule may be an estimated percentage of the effective gross income, or gross income. This overall expense percentage may be somewhere between 35 to 50 percent, with industrial and commercial properties at the lower end of the range and multi family apartments and rental units at the upper end of the range. It seems inappropriate to procure a highly sophisticated computer analysis of an income property and estimate the expense schedule at 40, 45 or 50 percent with no breakdown or justification of the expense estimates. Each property deserves its own net income analysis because each property is a different problem.

Disregarding, or improperly estimating vacancy, management and reserves for depreciation could result in an error in the order of 10 percent or more of the actual net income. This could result in a substantial error in the final estimate of value.

Mr. Broker may proclaim that the data aren't available. This just isn't the case. The taxes and insurance elements are available. The management is available. Vacancies, reserves for depreciation, utilities, on-site management, landscaping, pool cleaning, and many other expense items are either available or capable of a reasonable estimate. So it is with all other repair and maintenance items; each must be analyzed, carefully estimated and checked with actual costs, industry rule-of-thumb costs, Institute of Real Estate Management literature, apartment owners' association literature and professional property managers.

It is very possible that the end answer will be identical with your first guess of an overall 45 percent expense ratio but you will know that you did a job to prove the 45 percent rather than guess at the 45 percent.

The brokers have a great responsibility to provide factual, complete and supported data resulting from a careful and demanding analysis of every probable income and expense item. But also the computer and its model master should demand reasonable attention to these facts before accepting partially completed information sheets. Poorly assembled data sheets may result in a disservice to the client and after all the client is paying both the broker and the computer.

This is a magnificent opportunity to start right, right now.

Now is the time to appreciate the new dawn in the area of income-producing real estate properties.

Now is the time to sophistocate the data as well as the system.

JOHN S. SCHNEIDER, M.A.I., C.R.E.

APPRAISER AND CONSULTANT

530 FULTON FEDERAL BUILDING

ATLANTA, GEORGIA 30303

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ECONOMIC FEASIBILITY STUDIES

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REAL ESTATE APPRAISERS

AMERICAN SOCIETY OF
REAL ESTATE COUNSELORS

JOHN T. BREEDLOVE
ASSOCIATE
—
TELEPHONE:
524-8477

November 24, 1969

Dr. James A. Graaskamp
Room 101
School of Business
University of Wisconsin
Madison, Wisconsin 53706

Dear Jim:

Enclosed is a set of the programs and print-outs which we propose to demonstrate on the SBC time-sharing system.

It would be greatly appreciated if you could have these reproduced in sufficient quantity for the number in attendance.

If, for any reason, this cannot be done, I can reproduce them here and carry them with me, so I would appreciate your advising whether they can be reproduced with your facilities.

I understand that Ken Hesinger of the Service Bureau Corporation has been in touch with you and Tom Turk and that the arrangements have been completed for the use of SBC's portable typewriter terminal and the necessary data-phone telephone line. Mr. Hesinger informs me that all is in order and that the necessary back-up facilities will be available through both the Cleveland and Chicago computer installations of the Service Bureau Corporation. If these arrangements have not been completed, or if you feel they will not be completed in time for the seminar, I would greatly appreciate your advising me in sufficient time, since a breakdown in this installation would, of course, make any presentation of mine impossible.

Looking forward to seeing you and participating in the seminar, I am with best regards

Very truly yours,

John S. Schneider

JSS/lr

Enclosure

December 2, 1969

Professor James A. Graaskamp
Room 101
School of Business
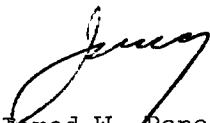University of Wisconsin
Madison, Wisconsin   53706

Dear Jim:

Many thanks for sending us an additional copy of your workshop program.
As I indicated in our phone conversation of last week, I wasn't certain
at that juncture whether someone from our staff would be able to come up.
As you know, we have just returned from our National Convention in
San Francisco and schedules are a bit tight here for one of us to arrange
to get away on short notice to make the Thursday and Friday sessions.

As I explained, John Schneider is Chairman of our Computer Research
Committee. Also, in conjunction with Pete Ellwood, the Institute will
be well represented from the standpoint of any discussions on educational
coordination which will take place on Saturday morning.

Again, many thanks for your invitation. I am sure your program will be
extremely informative and I am sorry that I will not personally be
able to attend.

Cordially yours,

Jared W. Benedict
Director of Education

JWB:kmg

cc: Mr. John Schneider

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              Service

SPALDING REALTY COMPANY

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Phone (216) 762-9228

Dec. 3, 1969

James A. Graaskamp,
Assistant Professor in Business
The University of Wisconsin
Graduate School of Business
1155 Observatory Drive
Madison, Wisconsin 53706

RE: Seminar on Computers

Dear Jim:

It is with extreme regret and disappointment that
I must inform you of my inability to make the
above mentioned seminar. I sincerely hope that
the opportunity will present itself again. In
the event that it does not, I am looking forward
to visiting you at the University of Wisconsin
within the next year.

Kind personal regards,

SPALDING REALTY CO.

AL SPALDING,
PRESIDENT

AS:jh

VINCENT J. O'FLAHERTY M.A.I., S.R.A.
&
JOHN D. O'FLAHERTY M.A.I., S.R.A.

REAL ESTATE APPRAISERS

4117 BROADWAY   KANSAS CITY, MO. 64111   LO 1-5300 (AREA CODE 816)

December 8, 1969

Professor J. A. Graaskamp
The University of Wisconsin
Graduate School of Business
Madison, Wisconsin   53706

Dear Professor Graaskamp:

I want to thank you, your graduate students and other members of
your staff for a very interesting and informative seminar. I was
greatly impressed by the presentation of the different methods of
computer use and also your instruction programs in the graduate
school.

As I mentioned to you on Saturday, I would like to send some of my
income projections to you to be put in the computer. I think
certain parts of the printouts will be very helpful in investment
analysis and I am planning to use them in my appraisal work.

John O'Flaherty and I will be interested in hearing of other semi-
nars or meetings you might have on computer use.

Sincerely,

Dunlap Vanice

DV:jc

MEMBERS: AMERICAN INSTITUTE OF REAL ESTATE APPRAISERS • SOCIETY OF REAL ESTATE APPRAISERS

VALUATION CONSULTANTS • REAL ESTATE COUNSELORS   1614 E. 17th St., Santa Ana, Calif. 92701 (AC 714) 547-5464

S. E. GOODE, SR., MAI
S. E. GOODE, JR., MAI
G. E. SCHMITZ, MAI

December 24, 1969

Professor James A. Graaskamp
School of Business
University of Wisconsin
Madison, Wisconsin 53706

Dear Jim:

As you know, a trip from California to Madison, Wisconsin, is an expensive
and time consuming event. You may rest assured that I received a full mea-
sure of reward as a result of the excellent manner in which you organized
and conducted the Computer Seminar.

I am deeply grateful for having been included in the group, and feel that I
learned a number of things of major importance which will contribute to my
professional advancement.

I am convinced that some of the systems displayed could be applied in my
office, and certainly within this area. Frankly, I was most impressed by
John Schneider's demonstration, and feel that it has the greatest applicability,
providing that a full set of real estate programs are made available with the
service.

In view of the short time available, I feel that you did just about the best possible
job of exposing us to the various systems. Improvement could only be made by
adding more time, utilizing certain set problems which would be fed to each
type of system for the purpose of comparison of results, together with the addi-
tion of a greater variety of real estate programs.

I am most enthusiastic about the future application of computers in our field,
and hope to hear more from you as your program develops.

It was a great privilege for me to spend the evening with you and enjoy the
opportunity of close personal contact. Your inspirational part in this activity,

together with your well organized problem assure us of the development of a means of disseminating information regarding computers to the members of our respective organizations.

Again, please accept my sincere thanks for being invited and for having the opportunity to visit with you.

Best personal regards,

Stanley E. Goode, Jr., MAI-CRE

SEGJr:mh