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"A Simulation Computer Model for
Investment Analysis of Capital Budget,
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Tangible Property", sponsored by
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Sheraton-Columbus Hotel, Columbus, Ohio

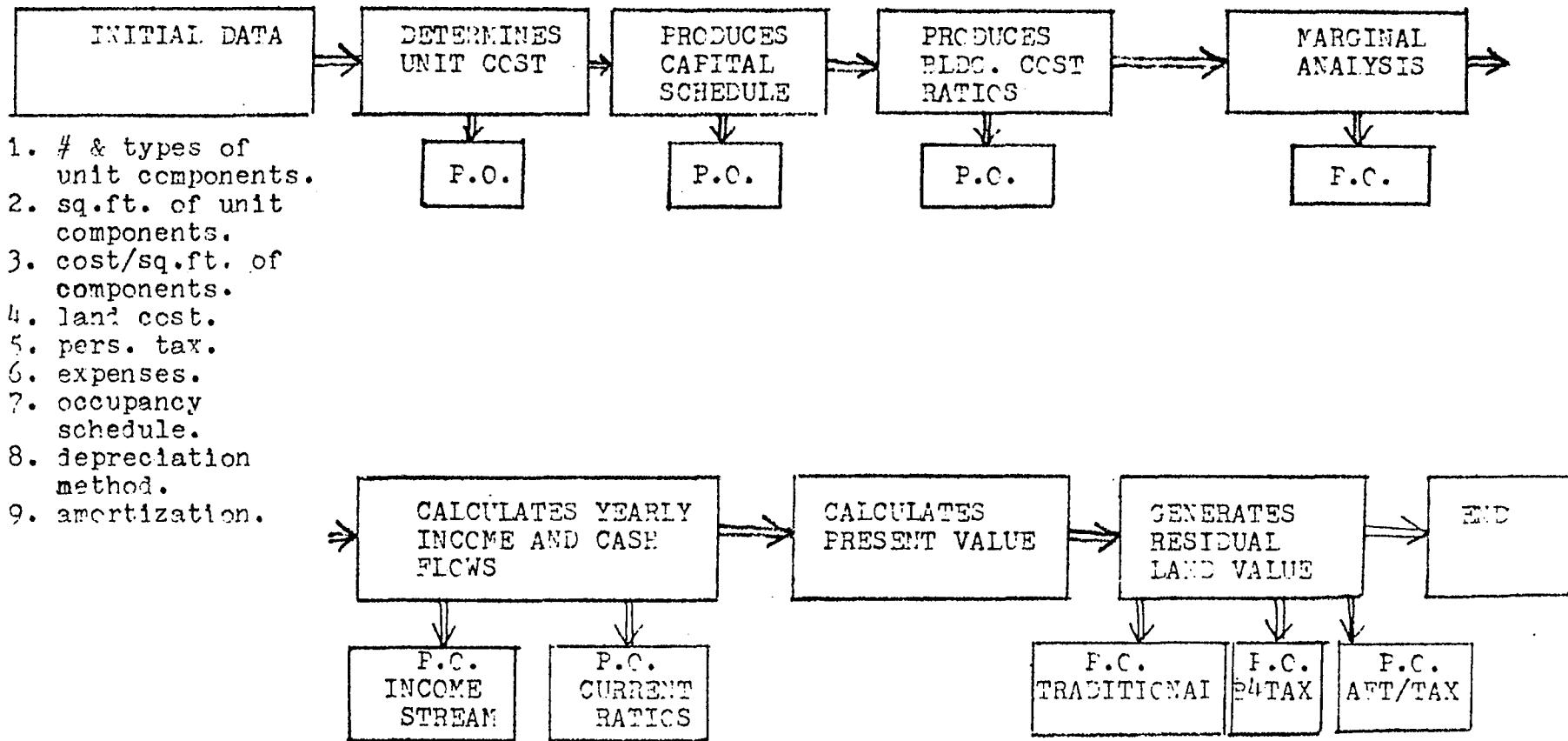
A SIMULATION COMPUTER MODEL FOR INVESTMENT ANALYSIS OF
CAPITAL BUDGET, CASH FLOW, INVESTMENT YIELD, AND APPRAISAL
OF INCOME PRODUCING REAL ESTATE OR OTHER TANGIBLE PROPERTY

Case #1: Analysis of 8-unit apartment MLS listing
as a prospectus and sales aid for the Realtor

Case #2: A proposed 40-unit apartment feasibility
analysis and appraisal for the developer-appraiser

EXPLANATORY NOTES AND DEFINITIONS FOR
INCOME REAL ESTATE INVESTMENT SIMULATION MODEL

- A. Until a detailed manual with instructions for operation of the computer is available, the following notes will suggest the capacities and applications of the model for the real estate appraiser, investor, or credit analyst. The two illustrations attached serve to illustrate how the model will adapt to whatever level of information may be available or appropriate to the purposes of the analyst.
1. In the first situation (the Evans Project) the information was taken from a multiple listing data sheet for an available eight-family building. The broker assumed an offering price, the allocation of this price between land and building, certain cash improvements to complete the existing structure, and operating expenses as reported and adjusted for the forecast period. The appraisal assuming resale in the fifth year would suggest the project offered a reasonable opportunity for an overall rated return of 20 per cent per annum if the offering price were accepted.
 2. In the second situation (a forty-unit apartment building) detailed costs of various features were available to the developer-investor-appraiser, and the presentation here suggests how the model will adapt to whatever level of information may be available predicting a 15 per cent return on equity before taxes and 12 per cent after taxes.
- B. The information can be handwritten by the appraiser or analyst on the simple forms which follow observing a few rules to identify input cards for the keypuncher, and to maintain consistency of data in regard to time periods. Note that the appraiser writes his own labels as necessary so that the output can be appropriate for characteristics of an apartment house, an office building, parking ramp, or warehouse, to name only a few examples. On the other hand the labels could be as concise as building rentable, non-rentable, land and fixtures.
1. As many as ten rental features expressed in any type of unit and five features which are constant for any run of the computer can be included. The ten variable features can then be combined in different amounts into packages called rental elements, such as efficiency or one-bedroom apartments. Alternative numbers of rental elements can be combined to test the best rental mix for a given project considering, rental rates, operating expenses, occupancy levels, and original cost.
 2. In the Evans model, the property is considered as one rental element, consisting of one building, one site, and one unit of special improvements. In the forty-unit example, various types of rental elements are created from specified quantities of living room space, closets, etc. and these are included with constant ratios of public space and units of parking to determine construction costs.



- C. Costs of features and the elements created from these features are direct capital or construction costs. The direct capital costs can be combined with indirect costs to determine the total capital budget. For new construction the indirect costs can include a fixed amount, carrying charges, a per cent of initial rent for rent-up expense, and a per cent of capital costs for professional fees. For existing buildings the indirect costs would consist of closing costs and working capital.
- D. Financing of the required capital budget is analyzed in the capital budget schedule where it is possible to assign each project feature to both a depreciation treatment for tax purposes and an amortization schedule for financing purposes.
 1. For depreciation purposes the analyst must make an assumption as to the per cent (100 per cent minus per cent salvageable) of the asset which can be depreciated, the useful life of the asset over which this percentage can be recovered, and the depreciation method. The computer will use straight-line unless instructed as to the per cent of straight line depreciation to be taken on the first year after which it calculates depreciation on a declining balance base. Thus depreciation can be accelerated but not on a sum of the digits basis.
 2. Financing terms must be assigned to each class of rental features which is distinguished for depreciation purposes. The analyst must make an assumption for the term of each credit in periods consistent with income periods chosen for cost and rental figures, for the interest rate per period, and for per cent of the capital budget item to be financed (the loan ratio). Provision is made for constant reduction mortgages or direct reduction mortgages.
- E. Miscellaneous data can also be put into the program in regard to real estate taxes, stated as a fixed amount for existing buildings or as a ratio of capital costs per period where one is testing alternative building projects. This latter ratio reflects the equalization rate, the tax rate per annum, and an adjustment for the income periods to be calculated. The marginal income tax rate can be a combination of federal and state ratios, weighted by the analyst to reflect an assumption of either corporate or individual ownership rates. In both cases capital gains taxes on taxable resale proceeds is calculated as one-half the marginal tax rate multiplied by the undepreciated balance of original cost subtracted from resale price. It does not make adjustment for depreciation in excess of straight-line depreciation disallowed as a result of sale during the first ten years of the project. The model is intended to be a forecasting tool rather than an accounting device and to fit within the limits of typical banking computer capacity for memory inputs.
- F. The appraiser is allowed to depart from the normalized income fiction by provision for period by period adjustments as to increase or decrease of expected rents, operating expenses, real estate taxes, and occupancy. These adjustments assume original inputs to be indexed 100, and the computer would be informed to adjust period calculations by separate index

(F.) numbers for each item, changing at selected points in time.

1. The occupancy factor index allows the appraiser to anticipate the impact on value of rent-up periods in the early stages, declining marketability in the later stages, or relative differences in vacancy rates for different types of rental elements. The present value of periods where there is a cash deficit is subtracted from the present value of positive cash returns. Thus the value derived adjusts for changes in working capital investment by assuming short-term money is as costly as the rate of return expected by the investor.
 2. By trending resale value with original cost as index 100, the investor allows the Ellwood approach to valuation to appear in the model. Real depreciation as it affects return of capital (as opposed to tax depreciation mentioned earlier) is built into the model at this point. If there were constant dollars and there were real depreciation at two per cent a year, this index would go 100, 98, 96, to the degree that resale value does not rise as quickly as the index based on rent, real depreciation is taking place despite some inflation on original cost in the early years.
- G. The computer can be instructed to produce an income statement as a summary of individual period calculations, an aggregate for any number of given periods. If rents, expenses, debt service, etc. is on a monthly basis, the analyst may choose income statements to be printed out for each six month period (as in the forty-unit model) or for each year (as in the Evans model). While most items in the income statement, net worth summary, and ratio analysis are self-explanatory, these definitions should be noted:
1. Current period return is positive cash plus change in net worth divided by net worth for the previous period.
 2. Project period return is the moving twelve-period average current return for the project, in order to give a smoother yield curve.
 3. Productivity rate is net income before taxes or debt service divided by the total capital budget.
 4. Period cash return is the positive cash from the income statement divided by the original cash equity required to put the project together.
- H. Finally the computer can be instructed to provide an appraisal valuation of the project on the basis of property residual and land residual approaches to value through capitalized income, following three different theories of income valuation and for as many as seven different cap rates.

1. The first appraisal value takes the traditional view of income before debt service or taxes.
 2. The second value takes the present value of income after debt service plus the present value of the residual and the original mortgage balance.
 3. Finally the after-tax approach to value takes the present value of net income after income taxes plus the present value of resale proceeds minus the capital gains tax minus outstanding mortgage balance. By looking for similar values in each approach the investor can see equivalent capitalization rates for before and after leverage and taxes.
- I. The printed output of the model provides a variety of data for different types of investment purposes. Any single run has information for the lender, the project designer-developer, and the equity investor.
1. The equity investor can review the property residual approach or the land residual approach to discover the rate of return which produces a capital value most nearly equal to the total capital budget or land costs estimated for the project. With information as to yield both before and after taxes he can compare a particular investment with other alternatives either in real estate or securities. By rerunning the model with different trends for those factors affecting income or resale value the investor can determine the degree to which his profit expectations are dependent on inflation or vulnerable to market, labor cost, or interest rate factors. Of course, the income statement will indicate financial risks, cash budgeting requirements, or size of possible tax umbrella inherent in the property - to suggest only a few guideline possibilities.
 2. The designer-developer can benefit by the opportunity to test different variations in the mix of rental features and elements as they affect the financial feasibility of the project. Of course the very big question of setting rents for various types of rental elements, of providing accurate construction costs figures, and of estimating operating cost levels is left to the judgment of the developer. The computer simply does the busy work of budgeting and income forecasting so that the prospect of manual accounting work sheets do not cause reluctance in the developer to refine a project by testing a great variety of alternatives. In addition the need to provide accurate data will cause the designer-developer to prepare better focused cost data from his past projects. As cost data is developed in a more meaningful way the marginal capital requirements and income affects of various rental element decisions become revealing guidelines for design balance in the project.

3. For the lender the opportunity to study cash flow during the rental period, under different income tax assumptions, or with alternative packages of credit should provide a more precise measure of the risk elements than a single set of ratios or income statements based on one point in time. And of course, anything which helps the designer and equity investor design a more financially viable project contributes to the quality of the security underlying the credit commitment.
- J. There are a number of things the computer model does not do which were deliberately omitted.
1. For example, outputs from some of the larger projects will not fit in the column space provided unless one or more digits are omitted from the inputs which might be in terms of rounded dollars, ten dollar units, or thousand dollar units. This was necessitated by the desire to print on a 8 1/2 by 11 format so that computer runs could be included in a standard report form. Moreover it was intended that this type of analysis be available for the smaller investor who would not otherwise have access to computer programs at acceptable cost.
 2. No attempt was made to create an optimizing linear program type of model as the number of alternatives open to the small developer in the financial framework of any one project are limited and subject to pre-selection within certain tolerance by the developer. Moreover a mathematical optimum mix of rents, expenses, and the like might not conform to the appropriate marketing mix or engineering constraints of a particular project unless a great amount of additional data were provided. This additional data would discourage the developer from using the program and greatly reduce the number of computer installations available to the user with sufficient capacity for all of the variations.
 3. Finally as many outputs as possible were formulated labeled in a general manner so that the model would have application to a broader array of tangible property investment decisions than just real estate.

Case #1
Investment Analysis
Existing 8-Unit Apartment
GENERAL PURPOSE CARD PUNCHING FORM

IBM

PAGE 1 OF 4

GENERAL PURPOSE CARD PUNCHING FORM

JCR

PUNCHING INSTRUCTIONS

WRITTEN AS:

ORIG. COST/ UNIT | C S E ADD L FEATURE UNITS CONSTANT PER RENT.

PUNCHING INSTRUCTIONS

WRITTEN AS:

12.1 EXIST. PROPERTY

Property Taxes		Annual	Periods of Projection		
\$/PRD.	% Cap. Cost/PRD	Inc.	Inc.	Inc.	Val.
		Tax Rate	Inc.	Loss Stat.	Stat.

Bases for Rates of Return-- annual rates
(As a percent)

Pd
pe
ve

1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80
1234367890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
17 2050	20	5	1133	6	7	10	12
89				14	16	20	1

IBM

GENERAL PURPOSE CARD PUNCHING FORM

PAGE 3 OF 4

JOB

PUNCHING INSTRUCTIONS

WRITTEN AS:

INITIAL FIXED \$ AMT.	EXPENSES % OF RENT COST	C S C
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1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80
1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0	1 2 3 4 5 6 7 8 9 0
15	3 0 0	-	5				

IBM

GENERAL PURPOSE CARD PUNCHING FORM

PAGE 4 OF 4

JOB

PUNCHING INSTRUCTIONS

WRITTEN AS:

E	P	PERCENT OF BASE			
N	R	RENT	TAX	EXPENSES	RE-
D	D	FIXED	VAR	SALE	

PERCENT OF OCCUPANCY
BY RENTAL ELEMENT

1 2 3 4 5 6 7 8 9

1-10 11-20 21-30 31-40 41-50 51-60 61-70 71-80

18°.1. 1.00 1.00 1.00 1.00 1.01 93.

18°.2. 1.02 1.02 1.02 1.02 1.02 93.

18°.3. 1.04 1.04 1.04 1.04 1.03 93.

18°.4. 1.06 1.06 1.06 1.06 1.04 93.

18°.5. 1.08 1.08 1.08 1.08 1.05 93.

18°.6. 1.10 1.10 1.10 1.10 1.06 93.

18°.7. 1.12 1.12 1.12 1.12 1.07 93.

18°.8. 1.14 1.14 1.14 1.14 1.08 93.

18°.9. 1.16 1.16 1.16 1.16 1.37 93.

18°.10. 1.18 1.18 1.18 1.18 1.10 93.

18°.11. 1.20 1.20 1.20 1.20 1.11 93.

18°.12. 1.22 1.22 1.22 1.22 1.12 93.

9.9.

REAL ESTATE CAPITAL STRUCTURE & BUDGET

PAGE 1

0	EVANS 3/67	19	
001	EXIST. BUILDING	650001	11
002	EXTERIOR IMPROVEMENTS	32004	11
003	LAND	53003	11
0 1	EXIST. PROPERTY	1 1 1 1	12
9 1	EXIST. BUILDING	100 351.5100 20 6.25	16
8 4	EXTERIOR IMPROVEMENTS	100 51.5	16
9 3	LAND		16
9 5	INITIAL EXPENSES		16
5	300 5		15
001	10300 1200	475	13
5	2050 20 5 1 3 6 8 10 12 14 16 20 1		17
1001100100100100101093			18
1002102102102102102093			18
1003104104104104103093			18
1004106106106106104093			18
1005108108108108105093			18
1006110110110110108093			18
1007112112112112107093			18
1008114114114114108093			18
1009116116116116109093			18
1010118118118118110093			18
1011120120120120111093			18
1012122122122122112093			18
			99

ARD NO,	1, CODE 19
ARD NO,	2, CODE 11
ARD NO,	3, CODE 11
ARD NO,	4, CODE 11
ARD NO,	5, CODE 12
ARD NO,	6, CODE 16
ARD NO,	7, CODE 16
ARD NO,	8, CODE 16
ARD NO,	9, CODE 16
ARD NO,	10, CODE 15
ARD NO,	11, CODE 13
ARD NO,	12, CODE 17
ARD NO,	13, CODE 18
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ARD NO,	20, CODE 18
ARD NO,	21, CODE 18
ARD NO,	22, CODE 18
ARD NO,	23, CODE 18
ARD NO,	24, CODE 18
ARD NO,	25, CODE 99

Case #1

Investment Analysis

Existing 8-Unit Apartment

PROJECT FEATURES - COMPONENTS

CODE	COST PER UNIT	ADDITIONAL UNITS CONST. PER REA	TOTAL UNITS	TOTAL COST
1 EXIST. BUILDING	65000.000	.000	.000	1.0 65000.0
2 EXTERIOR IMPROVEMENTS	3200.000	.000	.000	1.0 3200.0
3 LAND	5300.000	.000	.000	1.0 5300.0
TOTAL DIRECT CAPITAL COST				73500.0

RENTAL ELEMENTS

RENTAL CLASS	TYPE	1. NUM.	RENT	FIXED EXPENSES	VARIABLE EXPENSES
EXIST. PROPERTY		1.	10300.00	1200.00	.00
FEATURE - COMPONENT		#UNITS		COST	AREA
1 EXIST. BUILDING		1.00		65000.00	88.4%
2 EXTERIOR IMPROVEMENTS		1.00		3200.00	4.3%
3 LAND		1.00		5300.00	7.2%
	TOTAL			73500.00	1.00

CAPITAL SCHEDULE

ODE # - CAP. SCHED.	DEPREOIATION			MORTGAGE / FINANCING			TOT.COST
	%BASE TERM	METH	%BASE TERM	INTEREST	PAYMENT		
EXIST. BUILDING	100.	35.	1.50	100.	20.	6.25%	5782.54
	.	.	.00	.	.	.00%	.00
LAND	.	.	.00	.	.	.00%	.00
EXTERIOR IMPROVEMENTS	100.	5.	1.50	.	.	.00%	.00
INITIAL EXPENSES	.	.	.00	.	.	.00%	.00
	TOTAL PERIOD DEBT SERVICE					5782.54	
	TOTAL CAPITAL BUDGET					73800.00	

TOTALS**IMPORTANT RATIOS**

TOT BLDG AREA TBA	1.00	BLDG EFFICIENCY TRA/TBA	100.00%
TOT RENTABLE AREA TRA	1.00	GR PER UNIT AREA GR/TRA	\$10300.00
ERROR NO. 857 AT LOCATION	29691		
LAND COST LC	5300.00	BLG COST/UNIT TCB-LC/TBA \$*	.00
TOT IMPROV COST TCB-LC	68500.00	DEBT RATIO TM/TCB	88.0%
TOT CAP BUDGET TCB	73800.00	LAND RATIO LC/TCB	7.1%
TOT DEPRECIABLE BASE DB	68200.00		
TOT MORTGAGES TM	65000.00		

MISCELLANEOUS EXPENSE INPUTS

R&E. TAXES .00% OF TOTAL CAPITAL BUDGET PER PERIOD

PLUS \$ 2050. FIXED DOLLAR BASE

ANNUAL INCOME TAX RATE- 20.0%

INITIAL EXPENSES- \$ 300. FIXED, PLUS .00% OF FIRST PERIOD RENT

PLUS .00% OF DIRECT CAPITAL COST

MARGINAL ANALYSIS BY ELEMENT CLASS

	GR	TRA	TCB	%INC/%COST
TOTAL PROJECT	10300.00	1.00	73800.00	
AS A % OF TOTAL				
EXIST. PROPERTY	100.00%	100.00%	100.00%	100.00%
GROSS INCOME 1	10300.00	RESALE VALUE		74538.00
EFF. GROSS %OCC.OF 93.8%	9579.00	LESS PRIN.BAL.		63279.95
LESS FIX. EXP.	1200.00	NET WORTH		11258.04
LESS VAR. EXP.	475.00	CURRENT PD. RETURN		1.28744
LESS R.E. TAX	2050.00	PROJECT RETURN		.00000
NET INCOME	5854.00	PRODUCTIVITY RATE		.0785
LESS DEPREC.	3745.71	CASH RETURN		.0081
LESS INTEREST	4062.50	EXPENSE RATIO		.361
TAXABLE INCOME	-1954.21	DEFAULT RATIO		.923
TAX OFFSET	.00	DEBT COVER RATIO		1.012
LESS TAXES	.00	CUR. PRIN.PMT/CUR.DEPREC.		.459
PLUS DEPREC.	3745.71	TOT. AMOR./TOT. DEPREC.		.459
LESS PRIN. PMT.	1720.04			
CASH INCOME	71.45			

REAL ESTATE CAPITAL STRUCTURE & BUDGET

PAGE 6

GROSS INCOME 2	10506.00	RESALE VALUE	75276.00
EFF. GROSS % OCC.OF 93.%	9770.58	LESS PRIN.BAL.	61452.40
LESS FIX. EXP.	1224.00	NET WORTH	13823.59
LESS VAR. EXP.	484.50		
LESS R.E. TAX	2091.00	CURRENT PD. RETURN	.31296
NET INCOME	5971.08	PROJECT RETURN	.00000
LESS DEPREC.	3358.32	PRODUCTIVITY RATE	.0793
LESS INTEREST	3954.99	CASH RETURN	.0214
TAXABLE INCOME	-1322.24	EXPENSE RATIO	.361
TAX OFFSET	-1954.21	DEFAULT RATIO	.912
LESS TAXES	.00	DEBT COVER RATIO	1.032
PLUS DEPREC.	3358.32	CUR. PRIN.PMT/CUR.DEPREC.	.547
LESS PRIN. PMT.	1827.55	TOT. AMOR./TOT. DEPREC.	.500
CASH INCOME	188.53		

GROSS INCOME 3	10712.00	RESALE VALUE	76014.00
EFF. GROSS % OCC.OF 93.%	9962.16	LESS PRIN.BAL.	59510.63
LESS FIX. EXP.	1248.00	NET WORTH	16503.36
LESS VAR. EXP.	494.00		
LESS R.E. TAX	2132.00	CURRENT PD. RETURN	.33924
NET INCOME	6088.16	PROJECT RETURN	.00000
LESS DEPREC.	3022.45	PRODUCTIVITY RATE	.0800
LESS INTBREST	3840.77	CASH RETURN	.0347
TAXABLE INCOME	-775.07	EXPENSE RATIO	.361
TAX OFFSET	-3276.45	DEFAULT RATIO	.901
LESS TAXES	.00	DEBT COVER RATIO	1.052
PLUS DEPREC.	3022.45	CUR. PRIN.PMT/CUR.DEPREC.	.642
LESS PRIN. PMT.	1941.77	TOT. AMOR./TOT. DEPREC.	.543
CASH INCOME	305.61		

APPRaisal ANALYSIS OF PROJECT

INITIAL COSTS-	TOB	73800.00, LC	5300.00, TIC	68500.00
	TN	65000.00, CASH EQUITY REQUIRED		8800.00

VALUE BASED ON INCOME USING THREE DIFFERENT APPROACHES

PRESEnt VALUE OF RETURNS, LESS \$ 68500.00 TIC, EQUALS RESIDUAL LAND VALUE

%	PROPERTY APPRAISAL			LAND APPRAISAL		
	TRADITIONAL	B/4 TAX	AFT TAX	TRADITIONAL	B/4 TAX	AFT TAX
6.00	79771.43	79348.34	78692.26	11271.43	10848.34	10192.26
8.00	75714.94	78571.30	77951.00	7214.94	10071.30	9451.00
10.00	71941.16	77849.60	77262.52	3441.16	9349.60	8762.52
12.00	68425.58	77178.39	76622.20	-74.41	8678.39	8122.20
14.00	65146.25	76553.32	76025.90	-3353.74	8053.32	7525.90
16.00	62083.41	75970.50	75469.89	-6416.58	7470.50	6969.89
20.00	58537.74	74917.88	74465.68	-11962.26	6417.88	5965.68

GROSS INCOME	4	10918.00	RESALE VALUE	76752.00
EFF. GROSS % OCC.OF	93.8%	10153.74	LESS PRIN.BAL.	57447.49
LESS FIX. EXP.	1272.00		NET WORTH	19304.50
LESS VAR. EXP.	503.50		CURRENT PD. RETURN	.36634
LESS R.E. TAX	2173.00		PROJECT RETURN	.00000
NET INCOME		6205.24	PRODUCTIVITY RATE	.0808
LESS DEPREC.	2771.98		CASH RETURN	.0480
LESS INTEREST	3719.41		EXPENSE RATIO	.361
TAXABLE INCOME		-286.13	DEFAULT RATIO	.891
TAX OFFSET	-4051.52		DEBT COVER RATIO	1.073
LESS TAXES	.00		CUR. PRIN.PMT/CUR.DEPREC.	.744
PLUS DEPREC.	2771.96		TOT. AMOR./TOT. DEPREC.	.586
LESS PRIN. PMT.	2063.13	422.69		
CASH INCOME				

REAL ESTATE CAPITAL STRUCTURE & BUDGET

PAGE 8

GROSS INCOME 5	11224.00	RESALE VALUE	77490.00
EFF. GROSS %OCC.OF 93.%	10345.32	LESS PRIN.BAL.	55255.41
LESS FIX. EXP.	1296.00	NET WORTH	22234.58
LESS VAR. EXP.	523.00	CURRENT PD. RETURN	.37573
LESS R.E. TAX	2214.00	PROJECT RETURN	.00000
NET INCOME	6322.32	PRODUCTIVITY RATE	.0815
LESS DEPREC.	2568.49	CASH RETURN	.0427
LESS INTEREST	3500.46	EXPENSE RATIO	.361
TAXABLE INCOME	163.36	DEFAULT RATIO	.881
TAX OFFSET	-4337.66	DEBT COVER RATIO	1.093
LESS TAXES	.00	CUR. PRIN.PMT/CUR.DEPREC.	.853
PLUS DEPREC.	2568.49	TOT. AMOR./TOT. DEPREC.	.630
LESS PRIN. PMT.	2192.07		
CASH INCOME	376.41		

GROSS INCOME 6	11330.00	RESALE VALUE	78228.00
EFF. GROSS %OCC.OF 93.%	10536.90	LESS PRIN.BAL.	52926.33
LESS FIX. EXP.	1320.00	NET WORTH	25301.66
LESS VAR. EXP.	522.50	CURRENT PD. RETURN	.33815
LESS R.E. TAX	2255.00	PROJECT RETURN	1.36054
NET INCOME	6439.40	PRODUCTIVITY RATE	.0823
LESS DEPREC.	2237.79	CASH RETURN	-.0103
LESS INTEREST	3453.46	EXPENSE RATIO	.361
TAXABLE INCOME	748.14	DEFAULT RATIO	.872
TAX OFFSET	-4174.30	DEBT COVER RATIO	1.113
LESS TAXES	.00	CUR. PRIN.PMT/CUR.DEPREC.	1.040
PLUS DEPREC.	2237.79	TOT. AMOR./TOT. DEPREC.	.682
LESS PRIN. PMT.	2329.08		
CASH INCOME	-91.28		

APPRaisal ANALYSIS OF PROJECT

INITIAL COSTS- TCB 73800.00, LC 5300.00, TIC 68500.00

TN 65000.00, CASH EQUITY REQUIRED 8800.00

VALUE BASED ON INCOME USING THREE DIFFERENT APPROACHES

PRESENT VALUE OF RETURNS, LESS \$ 68500.00 TIC, EQUALS RESIDUAL LAND VALUE

PROPERTY APPRAISAL LAND APPRAISAL

	TRADITIONAL	B/F TAX	AFT TAX		TRADITIONAL	B/F TAX	AFT TAX
6.00	85275.32	84529.68	83173.27		16775.32	16029.68	14673.27
8.00	77591.30	82506.72	81292.15		9091.30	14006.72	12792.15
10.00	70787.18	80727.14	79637.35		2287.18	12227.14	11137.35
12.00	64746.45	79157.92	78178.14		-3753.54	10657.92	9678.14
14.00	59369.91	77780.98	76888.43		-9130.08	9270.98	8388.43
16.00	54572.77	76542.41	75745.97		-13927.22	8042.41	7245.97
20.00	46436.38	74481.54	73829.51		-22063.61	5981.54	5329.51

GROSS INCOME	7	11536.00	RESALE VALUE	78966.00
EFF. GROSS % OF	93.8%	10728.48	LESS PRIN.BAL.	50451.68
LESS FIX. EXP.	1344.00		NET WORTH	28514.31
LESS VAR. EXP.	532.00		CURRENT PD. RETURN	.32726
LESS R.E. TAX	2296.00		PROJECT RETURN	1.12560
NET INCOME		6556.48	PRODUCTIVITY RATE	.0830
LESS DEPREC.	2141.80		CASH RETURN	-.0378
LESS INTEREST	3307.89		EXPENSE RATIO	.361
TAXABLE INCOME		1106.69	DEFAULT RATIO	.862
TAX OFFSET	-2383.45		DEBT COVER RATIO	1.133
LESS TAXES	.00		CUR. PRIN.PMT/CUR.DEPREC.	1.155
PLUS DEPREO.	2141.89		TOT. AMOR./TOT. DEPREC.	.733
LESS PRIN. PMT.	2474.65			
CASH INCOME		-332.76		

IBM

Case #2

Feasibility Analysis and Appraisal

GENERAL PURPOSE CARD PUNCHING FORM

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JOB

PUNCHING INSTRUCTIONS

IBM

GENERAL PURPOSE CARD PUNCHING FORM

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PUNCHING INSTRUCTIONS

WRITTEN AS

<u>INITIAL EXPENSES</u>	C
FIXED \$	S
AMT.	C

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GENERAL PURPOSE CARD PUNCHING FORM

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JOB

PUNCHING INSTRUCTIONS

WRITTEN AS:

REAL ESTATE CAPITAL STRUCTURE & BUDGET

PAGE 1

11 8 66 90% L/V 2.0 D/B DEPN

APARTMENT RUN FURNISHED & UNFURNISHED 11-3-86 904 27V 200 BY 3 DEPT
 0 1 LIVING ROOM SF 6.501
 0 2 KITCHEN SF 15.001
 0 3 BEDROOM 1 SF 6.501
 0 4 BEDROOM 2 SF 6.501
 0 5 FOYER SF 6.001
 0 6 STORAGE SF 10.001
 0 7 FURNITURE EA PC 50.006
 0 8 BASEMENT STORAGE SF 4.501
 0 9 LAND SF 1.503
 010 BATHROOM SF 20.001
 011 PUBLIC AREA SF 7.002 .20
 012 OUTSIDE PARKING STL 300.004 40
 0 1 EFFICIENCY APT 4 300 50 20 25 800 48
 0 2 1 BEDROOM APT 14 216 108 161 24 50 501200 48
 0 3 2 BEDROOM APT 16 216 108 161 127 30 65 501600 60
 0 4 2 BEDROOM FURNISHED 6 216 108 161 127 30 65 12 501600 60
 0 1 110.00 1.20 .025 1.50 .020
 0 2 135.00 1.70 .025 1.50 .020
 0 3 150.00 2.20 .025 1.50 .020
 0 4 175.00 2.20 .025 4.00 .020
 0 2000 50 11 5
 0 1 BUILDING RENTABLE 1004802.0 80300 .58
 0 2 BUILDING NONRENTABLE 1004802.0 80300 .58
 0 3 LAND 0 80300 .58
 0 4 PARKING 901202.0 80300 .58
 0 5 INITIAL EXPENSES 904802.0 80300 .58
 0 6 FURNITURE 100 722.0080 60 .66
 0 .2 30 60 6 60 5.2 6.0 7.0 10.012.015.020.012.
 0003100100100100105010010010010
 0006100100100100105040040040040
 0009100100100100105075075075075
 0012100100100100105090090090090
 0018101101101101107095095095095
 0024102102102102107096096096096
 0048104104104104110096096096096
 0060105105105105112096096096096
 0120110110110110115096096096096
 0180115115115115118096096096096
 0240120120120120120096096096096
 Case #2
 Feasibility Analysis and Appraisal

Case #2

Feasibility Analysis and Appraisal

Proposed 40-Unit Apartment

CARD NO.	1,	CODE	19
CARD NO.	2,	CODE	11
CARD NO.	3,	CODE	11
CARD NO.	4,	CODE	11
CARD NO.	5,	CODE	11
CARD NO.	6,	CODE	11
CARD NO.	7,	CODE	11
CARD NO.	8,	CODE	11
CARD NO.	9,	CODE	11
CARD NO.	10,	CODE	11
CARD NO.	11,	CODE	11
CARD NO.	12,	CODE	11
CARD NO.	13,	CODE	11
CARD NO.	14,	CODE	12

REAL ESTATE CAPITAL STRUCTURE & BUDGET

PAGE 2

CARD NO, 15, CODE 12
CARD NO, 16, CODE 12
CARD NO, 17, CODE 12
CARD NO, 18, CODE 13
CARD NO, 19, CODE 13
CARD NO, 20, CODE 13
CARD NO, 21, CODE 13
CARD NO, 22, CODE 15
CARD NO, 23, CODE 16
CARD NO, 24, CODE 16
CARD NO, 25, CODE 16
CARD NO, 26, CODE 16
CARD NO, 27, CODE 16
CARD NO, 28, CODE 16
CARD NO, 29, CODE 17
CARD NO, 30, CODE 18
CARD NO, 31, CODE 18
CARD NO, 32, CODE 18
CARD NO, 33, CODE 18
CARD NO, 34, CODE 18
CARD NO, 35, CODE 18
CARD NO, 36, CODE 18
CARD NO, 37, CODE 18
CARD NO, 38, CODE 18
CARD NO, 39, CODE 18
CARD NO, 40, CODE 18
CARD NO, 41, CODE 99

PROJECT FEATURES - COMPONENTS

CODE		COST - PER UNIT	ADDITIONAL UNITS CONST. PER REA	TOTAL UNITS	TOTAL COST
1	LIVING ROOM	SF 6.500	.000	.000	8976.0 58344.0
2	KITCHEN	SF 15.000	.000	.000	4088.0 61320.0
3	BEDROOM 1	SF 6.500	.000	.000	5796.0 37674.0
4	BEDROOM 2	SF 6.500	.000	.000	2794.0 18161.0
5	FOYER	SF 6.000	.000	.000	996.0 5976.0
6	STORAGE	SF 10.000	.000	.000	2210.0 22100.0
7	FURNITURE	EA PC 50.000	.000	.000	72.0 3600.0
8	BASEMENT STORAGE	SF 4.500	.000	.000	1900.0 8550.0
9	LAND	SF 1.500	.000	.000	55200.0 82800.0
10	BATHROOM	SF 20.000	.000	.000	2184.0 43680.0
11	PUBLIC AREA	SF 7.000	.000	.200	5788.8 40521.6
12	OUTSIDE PARKING	STL 300.000	40.000	.000	40.0 12000.0
TOTAL DIRECT CAPITAL COST					394726.0

RENTAL ELEMENTS

RENTAL CLASS	TYPE	1	NUM.	RENT		FIXED EXPENSES		VARIABLE EXPENSES	
EFFICIENCY	APT	4.		110.00		1.20	.02	1.50	.02
	FEATURE - COMPONENT		#UNITS		COST			AREA	
1	LIVING ROOM	SF	300.00	1950.00	37.6%	300.00	67.7%		
2	KITCHEN	SF	50.00	750.00	14.4%	50.00	11.2%		
6	STORAGE	SF	20.00	200.00	3.8%	20.00	4.5%		
8	BASEMENT STORAGE	SF	25.00	112.50	2.1%	25.00	5.6%		
9	LAND	SF	800.00	1200.00	23.1%	.00	.0%		
10	BATHROOM	SF	48.00	960.00	18.5%	48.00	10.8%		
	TOTAL				5172.50		443.00		
RENTAL CLASS	TYPE	2	NUM.	RENT		FIXED EXPENSES		VARIABLE EXPENSES	
1 BEDROOM	APT	14.		135.00		1.70	.02	1.50	.02
	FEATURE - COMPONENT		#UNITS		COST			AREA	
1	LIVING ROOM	SF	216.00	1404.00	16.2%	216.00	32.8%		
2	KITCHEN	SF	108.00	1620.00	21.0%	108.00	16.4%		
3	BEDROOM 1	SF	161.00	1046.50	13.5%	161.00	24.5%		
5	FOYER	SF	24.00	144.00	1.8%	24.00	3.6%		
6	STORAGE	SF	50.00	500.00	6.4%	50.00	7.6%		
8	BASEMENT STORAGE	SF	50.00	225.00	2.9%	50.00	7.6%		
9	LAND	SF	1200.00	1600.00	23.3%	.00	.0%		
10	BATHROOM	SF	48.00	960.00	12.4%	48.00	7.3%		
	TOTAL				7699.50		657.00		
RENTAL CLASS	TYPE	3	NUM.	RENT		FIXED EXPENSES		VARIABLE EXPENSES	
2 BEDROOM	APT	16.		150.00		2.20	.02	1.50	.02
	FEATURE - COMPONENT		#UNITS		COST			AREA	
1	LIVING ROOM	SF	216.00	1404.00	14.7%	216.00	26.4%		
2	KITCHEN	SF	108.00	1620.00	16.9%	108.00	13.2%		
3	BEDROOM 1	SF	161.00	1046.50	10.9%	161.00	19.7%		
4	BEDROOM 2	SF	127.00	825.50	8.6%	127.00	15.5%		
5	FOYER	SF	30.00	180.00	1.8%	30.00	3.6%		
6	STORAGE	SF	65.00	650.00	6.8%	65.00	7.9%		
8	BASEMENT STORAGE	SF	50.00	225.00	2.3%	50.00	6.1%		
9	LAND	SF	1600.00	2400.00	25.1%	.00	.0%		
10	BATHROOM	SF	60.00	1200.00	12.5%	60.00	7.3%		
	TOTAL				9551.00		817.00		
RENTAL CLASS	TYPE	4	NUM.	RENT		FIXED EXPENSES		VARIABLE EXPENSES	
2 BEDROOM	FURNISHED	6.		175.00		2.20	.02	4.00	.02
	FEATURE - COMPONENT		#UNITS		COST			AREA	
1	LIVING ROOM	SF	216.00	1404.00	13.8%	216.00	26.4%		
2	KITCHEN	SF	108.00	1620.00	15.9%	108.00	13.2%		
3	BEDROOM 1	SF	161.00	1046.50	10.3%	161.00	19.7%		
4	BEDROOM 2	SF	127.00	825.50	8.1%	127.00	15.5%		
5	FOYER	SF	30.00	180.00	1.7%	30.00	3.6%		
6	STORAGE	SF	65.00	650.00	6.4%	65.00	7.9%		
7	FURNITURE	EA PC	12.00	600.00	5.9%	.00	.0%		
8	BASEMENT STORAGE	SF	50.00	225.00	2.2%	50.00	5.1%		
9	LAND	SF	1600.00	2400.00	23.6%	.00	.0%		
10	BATHROOM	SF	60.00	1200.00	11.8%	60.00	7.3%		
	TOTAL				10151.00		817.00		

CAPITAL SCHEDULE

CODE #-CAP. SCHED.	DEPRECIATION #BASE TERM METH	MORTGAGE / FINANCING #BASE TERM INTEREST	PAYMENT	TOT.CUST
1 BUILDING RENTABLE	100. 480. 2.00	80. 300. .58%	1441.16	255805.00
2 BUILDING NONRENTABLE	100. 480. 2.00	80. 300. .58%	228.29	40521.60
3 LAND	. . .00	80. 300. .58%	466.48	82800.00
4 PARKING	90. 120. 2.00	80. 300. .58%	67.60	12000.00
5 INITIAL EXPENSES	90. 480. 2.00	80. 300. .58%	272.17	48309.92
6 FURNITURE	100. 72. 2.00	80. 60. .66%	58.28	3600.00
TOTAL PERIOD DEBT SERVICE				2534.00
TOTAL CAPITAL BUDGET				443036.52

TOTALS

IMPORTANT RATIOS

TOT BLDG AREA	TBA	34732.80	BLDG EFFICIENCY	TRA/TBA	83.33%
TOT RENTABLE AREA	TRA	28944.00	GR PER UNIT AREA	GR/TRA \$.19
LAND COST	LC	82800.00	BLG COST/UNIT	TCB-LC/TBA \$	10.37
TOT IMPROV COST	TCB-LC	360236.52	DEBT RATIO	TM/TCB	80.0%
TOT CAP BUDGET	TCB	443036.52	LAND RATIO	LC/TCB	13.6%
TOT DEPRECIABLE BASE	DB	354205.53			
TOT MORTGAGES	TM	354429.22			

MISCELLANEOUS EXPENSE INPUTS

R.E. TAXES .20% OF TOTAL CAPITAL BUDGET PER PERIOD

PLUS \$.FIXED DOLLAR BASE

ANNUAL INCOME TAX RATE- 30.0%

INITIAL EXPENSES- \$ 2000. FIXED, PLUS 50.00% OF FIRST PERIOD RENT

PLUS 11.00% OF DIRECT CAPITAL COST

MARGINAL ANALYSIS BY ELEMENT CLASS

	GR	TRA	TCB	%INC/%COST
TOTAL PROJECT	5780.00	28944.00	443036.52	
AS A % OF TOTAL				
EFFICIENCY APT	7.61%	6.12%	6.06%	125.54%
1 BEDROOM APT	32.69%	31.77%	31.56%	103.59%
2 BEDROOM APT	41.52%	45.16%	44.77%	92.74%
2 BEDROOM FURNISHED	18.16%	16.93%	17.60%	103.20%
GROSS INCOME 6	34680.00	RESALE VALUE		465188.34
EFF. GROSS %OCC. OF	25.00	LESS PRIN. BAL.		351530.99
LESS FIX. EXP.	4803.60	NET WORTH		113657.35
LESS VAR. EXP.	3923.28	CURRENT PD. RETURN		-.21582
LESS R.E. TAX	5316.43	PROJECT RETURN		-.16321
NET INCOME	-5373.31	PRODUCTIVITY RATE		-.0115
LESS DEPREC.	10002.96	CASH RETURN		-.2322
LESS INTEREST	12305.74	EXPENSE RATIO		.404
TAXABLE INCOME	-27682.02	DEFAULT RATIO		.843
TAX OFFSET	-23970.65	DEBT COVER RATIO		-.353
LESS TAXES	.00	CUR. PRIN. PMT/CUR. DEPREC.		.289
PLUS. DEPREC.	10002.96	TOT. AMOR./TOT. DEPREC.		.289
LESS PRIN. PMT.	2898.25			
CASH INCOME	-20577.31			

REAL ESTATE CAPITAL STRUCTURE & BUDGET

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GROSS INCOME 12	34680.00	RESALE VALUE	465188.34
EFF. GROSS %OCC.OF 82.%	28611.00	LESS PRIN.BAL.	348529.26
LESS FIX. EXP.	4803.60	NET WORTH	116659.08
LESS VAR. EXP.	3923.28		
LESS R.E. TAX	5316.43	CURRENT PD. RETURN	1.29251
NET INCOME	14567.68	PROJECT RETURN	.01640
LESS DEPREC.	9608.52	PRODUCTIVITY RATE	.0313
LESS INTEREST	12202.22	CASH RETURN	-.0071
TAXABLE INCOME	-7243.07	EXPENSE RATIO	.404
TAX OFFSET	-34184.91	DEFAULT RATIO	.843
LESS TAXES	.00	DEBT COVER RATIO	.958
PLUS DEPREC.	9608.52		
LESS PRIN. PMT.	3001.77	CUR. PRIN.PMT/CUR.DEPREC.	.312
CASH INCOME	-636.31	TOT. AMOR./TOT. DEPREC.	.300

GROSS INCOME 18	35026.80	RESALE VALUE	474049.07
EFF. GROSS %OCC.OF 95.%	33275.46	LESS PRIN.BAL.	345420.31
LESS FIX. EXP.	4851.63	NET WORTH	128628.76
LESS VAR. EXP.	3962.51	CURRENT PD. RETURN	1.37805
LESS R.E. TAX	5369.60	PROJECT RETURN	.05146
NET INCOME	19091.71	PRODUCTIVITY RATE	.0402
LESS DEPREC.	9242.30	CASH RETURN	.0433
LESS INTEREST	12095.00	EXPENSE RATIO	.404
TAXABLE INCOME	-2245.60	DEFAULT RATIO	.839
TAX OFFSET	-36828.37	DEBT COVER RATIO	1.255
LESS TAXES	.00		
PLUS DEPREC.	9242.30	CUR. PRIN.PMT/CUR.DEPREC.	.336
LESS PRIN. PMT.	3108.99	TOT. AMOR./TOT. DEPREC.	.312
CASH INCOME	3887.71		

GROSS INCOME 24	35373.60	RESALE VALUE	474049.07
EFF. GROSS %OCC.OF 96.%	33958.65	LESS PRIN.BAL.	342200.29
LESS FIX. EXP.	4899.67	NET WORTH	131848.78
LESS VAR. EXP.	4001.74	CURRENT PD. RETURN	1.51989
LESS R.E. TAX	5422.76	PROJECT RETURN	.05513
NET INCOME	19634.47	PRODUCTIVITY RATE	.0414
LESS DEPREC.	8901.15	CASH RETURN	.0500
LESS INTEREST	11983.94	EXPENSE RATIO	.404
TAXABLE INCOME	-1250.63	DEFAULT RATIO	.834
TAX OFFSET	-38243.48	DEBT COVER RATIO	1.291
LESS TAXES	.00		
PLUS DEPREC.	8901.15	CUR. PRIN.PMT/CUR.DEPREC.	.361
LESS PRIN. PMT.	3220.05	TOT. AMOR./TOT. DEPREC.	.323
CASH INCOME	4430.47		

REAL ESTATE CAPITAL STRUCTURE & BUDGET

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GROSS INCOME 30	36067.20	RESALE VALUE	487340.17
EFF. GROSS %OCC.OF 96.%	34624.51	LESS PRIN.BAL.	338365.25
LESS FIX. EXP.	4995.74	NET WORTH	148474.92
LESS VAR. EXP.	4080.21		
LESS R.E. TAX	5529.09	CURRENT PD. RETURN	1.56123
NET INCOME	20019.46	PROJECT RETURN	.05218
LESS DEPREC.	8582.34	PRODUCTIVITY RATE	.0410
LESS INTEREST	11868.92	CASH RETURN	.0543
TAXABLE INCOME	-431.80	EXPENSE RATIO	.404
TAX OFFSET	-38810.58	DEFAULT RATIO	.826
LESS TAXES	.00	DEBT COVER RATIO	1.316
PLUS DEPREC.	8582.34		
LESS PRIN. PMT.	3335.08	CUR. PRIN.PMT/CUR.DEPREC.	.388
CASH INCOME	4815.45	TOT. AMOR./TOT. DEPREC.	.335

GROSS INCOME 36	36067.20	RESALE VALUE	487340.17
EFF. GROSS %OCC.OF 96.%	34624.51	LESS PRIN.BAL.	335411.04
LESS FIX. EXP.	4995.74	NET WORTH	151929.13
LESS VAR. EXP.	4080.21		
LESS R.E. TAX	5529.09	CURRENT PD. RETURN	1.74970
NET INCOME	20019.46	PROJECT RETURN	.05177
LESS DEPREC.	8283.51	PRODUCTIVITY RATE	.0410
LESS INTEREST	11749.77	CASH RETURN	.0545
TAXABLE INCOME	-13.82	EXPENSE RATIO	.404
TAX OFFSET	-38893.07	DEFAULT RATIO	.826
LESS TAXES	.00	DEBT COVER RATIO	1.316
PLUS DEPREC.	8283.51		
LESS PRIN. PMT.	3454.22	CUR. PRIN.PMT/CUR.DEPREC.	.417
CASH INCOME	4829.28	TOT. AMOR./TOT. DEPREC.	.348

GROSS INCOME 42	36067.20	RESALE VALUE	487340.17
EFF. GROSS %OCC.OF 96.%	34624.51	LESS PRIN.BAL.	331833.46
LESS FIX. EXP.	4995.74	NET WORTH	155506.71
LESS VAR. EXP.	4080.21		
LESS R.E. TAX	5529.09	CURRENT PD. RETURN	1.78482
NET INCOME	20019.46	PROJECT RETURN	.04861
LESS DEPREC.	8002.58	PRODUCTIVITY RATE	.0410
LESS INTEREST	11626.36	CASH RETURN	.0499
TAXABLE INCOME	390.51	EXPENSE RATIO	.404
TAX OFFSET	-38569.09	DEFAULT RATIO	.826
LESS TAXES	.00	DEBT COVER RATIO	1.316
PLUS DEPREC.	8002.58		
LESS PRIN. PMT.	3577.63	CUR. PRIN.PMT/CUR.DEPREC.	.447
CASH INCOME	4424.95	TOT. AMOR./TOT. DEPREC.	.360

GROSS INCOME 48	36067.20	RESALE VALUE	487340.17
EFF. GROSS %OCC.OF 96.%	34624.51	LESS PRIN.BAL.	328128.05
LESS FIX. EXP. 4995.74		NET WORTH	159212.12
LESS VAR. EXP. 4080.21		CURRENT PD. RETURN	1.82148
LESS R.E. TAX 5529.09		PROJECT RETURN	.04566
NET INCOME 20019.46		PRODUCTIVITY RATE	.0410
LESS DEPREC. 7737.76		CASH RETURN	.0455
LESS INTEREST 11498.54		EXPENSE RATIO	.404
TAXABLE INCOME 783.14		DEFAULT RATIO	.826
TAX OFFSET -37850.64		DEBT COVER RATIO	1.316
LESS TAXES .00		CUR. PRIN.PMT/CUR.DEPREC.	.478
PLUS DEPREC. 7737.76		TOT. AMOR./TOT. DEPREC.	.373
LESS PRIN. PMT. 3705.45			
CASH INCOME 4032.31			

GROSS INCOME 54	36414.00	RESALE VALUE	496200.90
EFF. GROSS %OCC.OF 96.%	34957.44	LESS PRIN.BAL.	324290.23
LESS FIX. EXP. 5043.78		NET WORTH	171910.67
LESS VAR. EXP. 4119.44		CURRENT PD. RETURN	1.85973
LESS R.E. TAX 5582.25		PROJECT RETURN	.04064
NET INCOME 20211.95		PRODUCTIVITY RATE	.0407
LESS DEPREC. 7487.49		CASH RETURN	.0411
LESS INTEREST 11366.15		EXPENSE RATIO	.404
TAXABLE INCOME 1358.30		DEFAULT RATIO	.822
TAX OFFSET -36587.57		DEBT COVER RATIO	1.329
LESS TAXES .00		CUR. PRIN.PMT/CUR.DEPREC.	.512
PLUS DEPREC. 7487.49		TOT. AMOR./TOT. DEPREC.	.387
LESS PRIN. PMT. 3837.85			
CASH INCOME 3649.64			

GROSS INCOME 60	36414.00	RESALE VALUE	496200.90
EFF. GROSS %OCC.OF 96.%	34957.44	LESS PRIN.BAL.	320315.30
LESS FIX. EXP. 5043.78		NET WORTH	175885.60
LESS VAR. EXP. 4119.44		CURRENT PD. RETURN	1.99960
LESS R.E. TAX 5582.25		PROJECT RETURN	.03823
NET INCOME 20211.95		PRODUCTIVITY RATE	.0407
LESS DEPREC. 7250.40		CASH RETURN	.0364
LESS INTEREST 11229.01		EXPENSE RATIO	.404
TAXABLE INCOME 1732.54		DEFAULT RATIO	.822
TAX OFFSET -34916.88		DEBT COVER RATIO	1.329
LESS TAXES .00		CUR. PRIN.PMT/CUR.DEPREC.	.548
PLUS DEPREC. 7250.40		TOT. AMOR./TOT. DEPREC.	.400
LESS PRIN. PMT. 3974.98			
CASH INCOME 3275.41			

APPRAISAL ANALYSIS OF PROJECT

INITIAL COSTS- TCB 443036.52, LC 82800.00, TIC 360236.52
TM 354429.22, CASH EQUITY REQUIRED 88607.30

VALUE BASED ON INCOME USING THREE DIFFERENT APPROACHES

PRESENT VALUE OF RETURNS, LESS \$ 360236.52 TIC, EQUALS RESIDUAL LAND VALUE

PROPERTY APPRAISAL				LAND APPRAISAL			
%	TRADITIONAL	B/4 TAX	AFT TAX	TRADITIONAL	B/4 TAX	AFT TAX	
5.20	527555.86	501237.59	481409.39	167319.34	141001.07	121172.87	
6.00	509333.63	495217.63	476145.65	149097.11	134981.11	115909.13	
7.00	487512.68	488017.44	469849.39	127276.16	127780.92	109612.87	
10.00	427929.90	468411.17	452701.17	67693.38	108174.65	92464.65	
12.00	392648.85	456844.74	442582.15	32412.33	96608.22	82345.63	
15.00	345568.13	441470.57	429128.18	-14668.39	81234.05	68891.66	
20.00	280346.35	420317.68	410608.56	-79890.17	60081.16	50372.04	

GROSS INCOME	66	38148.00	RESALE VALUE	509491.99
EFF. GROSS ZOCC.OF	96.30	36622.08	LESS PRIN.BAL.	316553.86
LESS FIX. EXP.	5283.96		NET WORTH	192938.13
LESS VAR. EXP.	4315.60		CURRENT PD. RETURN	2.04312
LESS R.E. TAX	5848.08		PROJECT RETURN	.03375
NET INCOME		21174.43	PRODUCTIVITY RATE	.0415
LESS DEPREC.	7025.27		CASH RETURN	.0368
LESS INTEREST	11092.79		EXPENSE RATIO	.404
TAXABLE INCOME		3056.36	DEFAULT RATIO	.794
TAX OFFSET	-14940.74		DEBT COVER RATIO	1.425
LESS TAXES	.00		CUR. PRIN.PMT/CUR.DEPREC.	.535
PLUS DEPREC.	7025.27		TOT. AMCR./TOT. DEPREC.	.411
LESS PRIN. PMT.	3761.49			
CASH INCOME		3263.77		