

Property Assumptions

Property and purchase assumptions

Property size	40,000	sf
Rent	\$6.00	psf
Vacancy allowance	10.00%	
Operating expense ratio	7.41%	
Purchase price	\$1,750,000	
Acquisition costs	\$50,000	
Date property will be put in service	1/1/2012	

Loan assumptions

Maximum LTV ratio	75.00%	
Minimum debt-coverage ratio	1.25	
Mortgage interest rate	6.00%	
Amortization length	25	years
Loan term	7	years
Loan fees	3.00	points

Depreciation assumptions

Depreciable life	39.0	years
Tax assessor building value	\$1,000,000	
Tax assessor land value	\$250,000	
Appraised building value	\$1,800,000	
Appraised land value	\$200,000	

Tax assumptions

Ordinary income tax rate	40.00%
Capital gains tax rates	15.00%
Depreciation recapture tax rate	25.00%

Sale assumptions

Cap rate at sale	10.00%
Sale costs	5.00%
Date property will be sold	12/31/2016
Year 6 NOI	\$226,281

Operating cash flow assumptions

ATCF in year 2	\$80,000
ATCF in year 3	\$80,000
ATCF in year 4	\$80,000
ATCF in year 5	\$80,000

Other assumptions

After-tax equity discount rate	18.00%
NOI growth rate	2.50%

Pro Forma Operating Statement (First Year)

Potential gross income	\$	240,000	= 40,000 sf x \$6.00 psf
– Vacancy & collection @ 10.00%	\$	24,000	
Effective gross income	\$	216,000	
– Operating expenses @ 7.41%	\$	16,000	
Net operating income	\$	200,000	
– Annual debt service	\$	101,477	
Before-tax cash flow	\$	98,523	
– Taxes from operations	\$	30,582	
After-tax cash flow	\$	67,941	

Capitalization rate	11.43%	= NOI ÷ purchase price
Cash-on-cash return	22.52%	= BTCF ÷ (purchase price – loan amount)

Mortgage Calculations

Property value	\$1,750,000	
Maximum loan-to-value ratio	75.00%	
LTV-based maximum loan amount	\$ 1,312,500	
Net operating income	\$ 200,000	
÷ Minimum debt coverage ratio	1.25	
Maximum annual debt service	\$ 160,000	
Maximum monthly payment	\$ 13,333	= Maximum ADS ÷ 12
DCR-based maximum loan amount	\$ 2,069,423	P/Y = 12, N = 25 x 12, I = 6.00%, PMT = –13,333, FV = 0
Maximum loan amount	\$ 1,312,500	= Minimum of LTV- and DCR-based calculations
Monthly payment	\$ 8,456	P/Y = 12, N = 25 x 12, I = 6.00%, PV = –1,312,500, FV = 0
Annual debt service	\$ 101,477	Monthly payment x 12
Debt coverage ratio	1.97	= NOI / ADS
Mortgage constant	7.73%	= ADS / loan amount
Total loan fees	\$ 39,375	= \$1,312,500 x 3.00 / 100

Tax Calculations

Taxable Income Calculations (First Year)

Net operating income	\$	200,000	
– Depreciation allowance	\$	39,807	
– Interest expense	\$	78,114	P1 = 1, P2 = 12
– Amortization expense	\$	5,625	
Taxable income	\$	76,454	
x Tax rate		40.00%	
Tax	\$	30,582	

Depreciation Calculations

Assessor's building value ratio	80.00%	= \$1,000,000 / (\$1,000,000 + \$250,000)	
Appraiser's building value ratio	90.00%	= \$1,800,000 / (\$1,800,000 + \$200,000)	
Purchase price	\$	1,750,000	
+ Acquisition costs	\$	50,000	
Initial basis	\$	1,800,000	
x Percent of value in building		90.00%	Maximum of assessor and appraiser ratios
Depreciable basis	\$	1,620,000	
÷ Depreciable life		39.0	
Annual depreciation allowance	\$	41,538	Depreciation allowance when held full year
First year depreciation allowance	\$	39,807	Normal allowance × 11.5 ÷ 12
Last year depreciation allowance	\$	39,807	Normal allowance × 11.5 ÷ 12
Total straight line depreciation	\$	204,228	= 3 × \$41,538 + \$39,807 + \$39,807

Amortization Calculations

Loan amount	\$	1,312,500	
x Points		<u>3.00</u>	
Total loan fees	\$	39,375	
÷ Term of loan		<u>7</u>	
Annual amortization expense	\$	5,625	Amortized expenses when loan is held full year
First year amortized expenses	\$	5,625	Normal expense × 12 ÷ 12
Last year amortized expenses	\$	5,625	Normal allowance × 12 ÷ 12
Total loan fees	\$	39,375	
– Amortized expenses claimed	\$	<u>28,125</u>	= 3 × \$5,625 + \$5,625 + \$5,625
Unclaimed amortized loan fees	\$	11,250	

Sale Calculations

Sale Cash Flows

Year 6 NOI	\$	226,281	= \$200,000 × (1 + 0.0250) ⁵
÷ Cap rate at sale		10.00%	
Sale price	\$	2,262,814	
– Costs of sale at 5.00%	\$	113,141	
Net sale price	\$	2,149,673	
– Mortgage balance due	\$	1,180,359	P2 = 60
Before-tax equity reversion	\$	969,314	
– Taxes from sale	\$	99,008	
After-tax equity reversion	\$	870,306	

Adjusted Basis Calculations

Initial basis	\$	1,800,000
– Straight-line depreciation	\$	204,228
Adjusted basis	\$	1,595,772

Capital Gains Calculations

Net sale price	\$	2,149,673	
– Adjusted basis	\$	1,595,772	
Total gain on sale	\$	553,901	
– Straight-line depreciation	\$	204,228	Limited to the greater of the total gain or 0
Gain due to appreciation	\$	349,673	

Taxes from Sale

Depreciation recapture at 25.00%	\$	51,057	= \$204,228 × 25.00%
Capital gains at 15.00%	\$	52,451	= \$349,673 × 15.00%
Unclaimed amortization at 40.00%	\$	(4,500)	= \$11,250 × 40.00%
Total taxes from sale	\$	99,008	

NPV and IRR Calculations

Initial Cash Flow Calculations

Purchase price	\$	1,750,000
+ Acquisition costs	\$	50,000
– Mortgage loan proceeds	\$	1,312,500
+ Mortgage loan fees	\$	39,375
Total date 0 cash flows	\$	526,875

Cash Flow Analysis

<u>Year</u>	<u>Cash Flow</u>	
Date 0	\$	(526,875)
Date 1	\$	67,941
Date 2	\$	80,000
Date 3	\$	80,000
Date 4	\$	80,000
Date 5	\$	950,306 = \$80,000 + \$870,306

NPV @ 18.00% = \$ 93,498 Invest, because NPV > 0.

IRR = 22.81% Invest, because IRR > discount rate.