CREATING THE MODERATE INCOME HOUSING INVESTMENT UNDER SECTION 221(d)4 OF THE NATIONAL HOUSING ACT

THESIS FOR THE DEGREE OF M.S.

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ABSTRACT

CREATING THE MODERATE INCOME HOUSING INVESTMENT UNDER SECTION 221(d)4 OF THE NATIONAL HOUSING ACT

BY

Thomas Erroll Bradley

The purpose of this research project is to create a housing investment under Section 221(d)4 of the National Housing Act, as amended. Notwithstanding the present Federal moratorium on subsidy funds for low and moderate income housing, Section 221(d)4 is currently funded and affords developers the opportunity to develop new rental housing which can be syndicated.

The housing investment is created through the formulation of a hypothetical housing development upon a site near the city of Saginaw, Michigan. The housing market is analyzed to determine the demand for market rate rental housing, a suitable site is selected within the market area and the project economics are structured such that the project is economically feasible and provides the developer and the investors with reasonable returns.

The author concludes that profitable housing investments can be structured under Section 221(d)4 and that developers would be prudent to consider housing developments under this federal housing program.

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Thomas Erroll Bradley

A THESIS

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To my parents whose inspiration and assistance
has made this work possible.

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INTRODUCTION

The purpose of this research project is to create a housing investment under Section 221(d)4 of the National Housing Act of 1968. There is a wide spread interest in the housing industry today in developing housing under FHA housing programs. However, developers feel that they must shift from developing new subsidized housing to new unsubsidized housing, due to the federal government's shift in preference from subsidized housing programs. Section 221(d)4 provides a developer with an excellent opportunity to produce new unsubsidized housing through creating an investment which can be syndicated.

Section 221(d)4 of the National Housing Act of 1968 is a FHA insured market rate housing program. Under this program FHA provides mortgage insurance of up to 90% of the estimated replacement cost of a housing project. Both the mortgagee and the mortgagor must be approved by FHA and the project must meet all FHA design standards, as well as other governmental requirements. Only profit motivated mortgagors are acceptable by FHA.[1]

A limited partnership is utilized as our investment vehicle and the limited partnership will own 100% of the housing project developed herein. Under this type of ownership, FHA disallows the typical cash builder's profit based upon the estimated construction cost in favor of a

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[1] U.S., Department of Housing and Urban Development, Digest of Insurable Loans and Summaries of Other Federal Housing Administration Programs (Washington, D.C.: Government Printing Office, 1970), pp. 59-60.

Builder Sponsors Profit and Risk Allowance,[2] and requires a 10% equity investment on the part of the developer.[3] However, through the principle of "financial leverage" it is possible to create a housing investment which, when syndicated, produces an excellent return to the developer as well as provides a handsome return to project investors.

This analysis of creating a housing investment was derived through the preparation of a model housing development, called the Village Green, upon a site located in the Saginaw, Michigan area. Saginaw, Michigan was chosen as the location of this study because of ease of access and the rapidly expanding suburban region to its north.

The key development determinants utilized were: (1) the housing market was analyzed to determine the demand for market rate housing, (2) a suitable site[4] was selected within the market area, and (3) the project economics were structured such that the project is economically feasible and provides the developer and investors a reasonable return.

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[2]The Builder Sponsors Profit and Risk Allowance is a credit allowed the developer in lieu of a cash profit.

[3]U.S., Department of Housing and Urban Development, Digest of Insurable Loans, pp. 59-60.

[4]A suitable housing site is considered to be a housing site which is served by those utilities and community facilities necessary to create a viable housing environment.

CHAPTER I

MARKET ANALYSIS

The following analysis of the Saginaw market area was compiled to determine the demand for market rate rental multifamily housing. The Saginaw Standard Metropolitan Sample Area is considered to be the same as the Saginaw market area.

Saginaw, Michigan is the home of several General Motors foundries and manufacturing plants as well as support facilities, which form the economic base of Saginaw and provide employment and security for a majority of the county's current residents.

It is evident from Table 1 that, in comparison with the State of Michigan as a whole, the market area has experienced a higher increase between 1960 and 1970 in the areas of population, labor force, nonfarm employment, and occupied dwelling units.

Population increase	28,991	(15.2% increase)
Employment increase	87,300	(27.6% increase)
Occupied dwelling units	52,870 to 63,143	(19.4% increase)

Saginaw appears to be a growing community with an increasing population due to increasing job opportunities.

The Saginaw County areas, as shown in Table 2, experienced a very strong increase in duplex and multifamily housing units in comparison to single family houses and mobile home units. Duplex and multifamily housing units increased by 3,381 units between 1960 and 1970 or 46.3%.

TABLE 1

POPULATION, EMPLOYMENT AND CONSTRUCTION TRENDS

	Year	Saginaw	Saginaw SMSA	Michigan
		Population		
	1960	98,265	190,752	7,823,194
	1970	91,849	219,743	8,875,083
Absolute increase		(6,416)	28,991	1,051,889
Percent increase		(6.5%)	15.2%	13.4%
		Employment		
	1960		68,400	2,959,000
	1970		87,300	3,618,700
Absolute increase			18,900	
Percent increase			27.6%	22.3%
		Nonfarm Employment		
	1960		62,500	2,665,200
	1970		78,000	3,272,700
Absolute increase			15,500	
Percent increase			24.8%	22.8%
		Occupied Dwelling Units		
	1960	28,563	52,870	2,239,079
	1970	28,309	63,143	2,653,059
Absolute increase		(254)	10,273	413,980
Percent increase		(.9%)	19.4%	18.5%

SOURCES: U.S. Department of Commerce, Bureau of the Census, *General Population Characteristics*, August, 1971, pp. 59, 61, 335; *Detailed Characteristics*, November, 1972, pp. 824, 829; *Housing Characteristics for States, Cities and Counties*, Vol. I, August, 1972, pp. 7-8 (Washington, D.C.: Government Printing Office).

TABLE 2

HOUSING COMPOSITION AND OCCUPANCY CHARACTERISTICS

	1960	1970	Absolute Change	Percent Change	Change Per Total Market
		SAGINAW COUNTY			
Total Units	55,899	65,629	9,730	17.4%	
Single Family	47,978	53,665	5,687	11.9%	(4%)
Duplex and Multifamily	7,307	10,688	3,381	46.3%	3%
Mobile Homes	614	1,276	662	107.8%	1%
Total Occupied	52,870	63,143	10,273	19.4%	
Owner Occupied	41,121	49,095	7,974	19.4%	0%
Renter Occupied	11,749	14,048	2,299	19.6%	0%
		SAGINAW			
Total Units	29,918	29,767	(151)	(.5%)	
Single Family	23,062	21,634	(1,428)	(6.2%)	(4%)
Duplex and Multifamily	6,852	8,144	1,262	18.4%	4%
Mobile Homes	4	19	15	37.5%	0%
Total Occupied	28,563	28,309	(254)	(.9%)	
Owner Occupied	19,603	19,162	(446)	(2.3%)	(.9%)
Renter Occupied	8,955	9,147	192	2.1%	.9%
		REMAINDER OF COUNTY			
Total Units	25,981	35,862	9,881	38%	
Single Family	24,916	32,031	7,115	28.6%	7%
Duplex and Multifamily	455	2,574	2,199	465.7%	5%
Mobile Homes	610	1,257	647	106%	1%
Total Occupied	24,307	34,834	10,527	43.3%	
Owner Occupied	21,513	29,933	8,420	39.1%	(2.6%)
Renter Occupied	2,794	4,901	2,107	75.4%	2.6%

SOURCE: Michigan State Housing Development Authority, "Feasibility Analysis, MSHDA No. 188, Waterside," Michigan State Housing Development Authority, 1972.

Compared to the total number of housing units, duplexes and multifamily units increased by 3% while single family homes decreased by 4% and mobile homes increased by 1%.

The City of Saginaw experienced a 4% decrease in single family homes, a 4% increase in multifamily homes and no change in mobile homes over the same period.

In the county outside the City of Saginaw, duplexes and multifamily units gained 5% of the housing market between 1960 and 1970 while single family units decreased by 7% with a 1% increase in mobile homes.

The percentage of owner occupied units compared to renter occupied units did not change between 1960 and 1970 in the county as a whole. However, there seems to have been a slight decrease in owner occupied units for both the City of Saginaw and the out-county area in favor of rental units.

These observations are strong indicators that duplex and multifamily are increasing at a faster rate than single family housing units, particularly outside the City of Saginaw.

Renter households, as indicated in Table 3, consist of 23.7% of the total households in the market area. In the City of Saginaw the number of renter households is 9,077 units as compared with 4,207 outside the City of Saginaw. The vacancy rate in the City of Saginaw is 7.1% as compared with 4% outside the City of Saginaw.

From Table 3 it is evident that although 32% of the renter households are located outside the City of Saginaw, there is a marked difference in rental rates. The median rent outside Saginaw is $109 or $22 higher than the median rent in Saginaw. The rental rates outside

TABLE 3

RENTER OCCUPANCY CHARACTERISTICS

	Saginaw		Remainder of Market Area		Total Market Area	
	Number	Percent	Number	Percent	Number	Percent
Total Occupied Units	26,661		28,036		54,697	
Owner Occupied	17,584	66%	23,829	85%	41,413	74%
Owner Vacancy Rate	288	1.6%	100	.04%	389	1%
Renter Occupied	9,077	34%	4,207	15%	13,284	23.7%
Renter Vacancy Rate	695	7.1%	176	4%	871	6.2%
Specified Contract Rent						
No Cash Rent	328	3.6%	387	1%	715	5%
Less than $40	249	2.7%	154	3.7%	403	3.8%
$40 - $59	1,231	13.6%	250	5.9%	1,481	9.5%
$60 - $79	2,074	22.9%	579	13.8%	2,653	20.6%
$80 - $99	2,055	22.6%	503	11.3%	2,558	20%
$100 - $119	1,568	17.3%	457	10.9%	2,025	15.7%
$120 - $149	1,237	13.6%	667	15.8%	1,904	14.2%
$150 - $199	310	3.4%	1,064	25.3%	1,374	8.8%
$200 and over	25	.3%	146	3.5%	171	1.0%
Median Rent	$87		$109		$92	

SOURCE: U.S. Department of Commerce, Bureau of the Census, Housing Characteristics For States, Cities, and Counties, Vol. I, pt. 24, Michigan (Washington, D.C.: Government Printing Office, 1971), p. 32.

the City of Saginaw are shifted toward the upper end where 44.6% of the renter households pay between $120 to over $200 per month, 25.3% pay between $150 to $199 per month, with 3.5% paying above $200 per month. In the City of Saginaw only 1,572 renter households pay between $120 to over $200 per month as compared with 1,877 renter households outside the City of Saginaw. Only 336 renter households in the City of Saginaw pay $150 or more per month for rent as compared with 1,210 renter households outside the City of Saginaw.

The larger increase in multifamily housing units outside the City of Saginaw, the lower vacancy rates outside the City of Saginaw and the greater number of rental housing units outside the City of Saginaw at substantially higher rental rates than units inside the City of Saginaw collectively indicate that the strongest market for market rate rental housing exists outside the City of Saginaw in the outlying marked area.

Two market rate housing developments were examined to determine what other developers were developing in the Saginaw area (See Appendix A). These two projects served as the design model for the rental rate parameters and unit mix of the Village Green as set forth in Table 4.

TABLE 4

RENTAL RATES AND UNIT MIX

Unit Type	No. of Units	Monthly Rent
1 - BR	45	$ 186
2 - BR	75	$ 220
3 - BR	30	$ 250

Gross Monthly Income $ 32,370

Gross Annual Income $ 388,400

CHAPTER II

PROJECT DESCRIPTION

The site selected for the Village Green is 12.5 acres located northeast of and contiguous with the intersection of McCarty Road and I-676 in Carrollton Township, Saginaw County, Michigan (See Figure 1).

The site is flat virgin land with no growth except for a roll of trees just to the east of the west property line (See Figure 2).

The development of property adjacent to the site has been at a rather slow pace. To the north of the site is an undeveloped parcel of land zoned agricultural and a small subdivision containing housing valued from 30,000 to 35,000 dollars. The area immediately to the east of the site is zoned agricultural and is undeveloped; east of this parcel is a small subdivision containing homes ranging from 30,000 to 35,000 dollars in value. The project site is bounded on the south by McCarty Road; south of McCarty Road is a strip of land approximately 200 feet deep followed by a subdivision containing homes in the $30,000 price range and a rental housing development. I-676 is directly west of the project site.

Sanitary, sewer, water, gas and electrical services are available to the project from Thorn Tree Road located to the north of the project site. It will be necessary to obtain access to Thorn Tree Road from the project site for the purpose of extending these utilities.

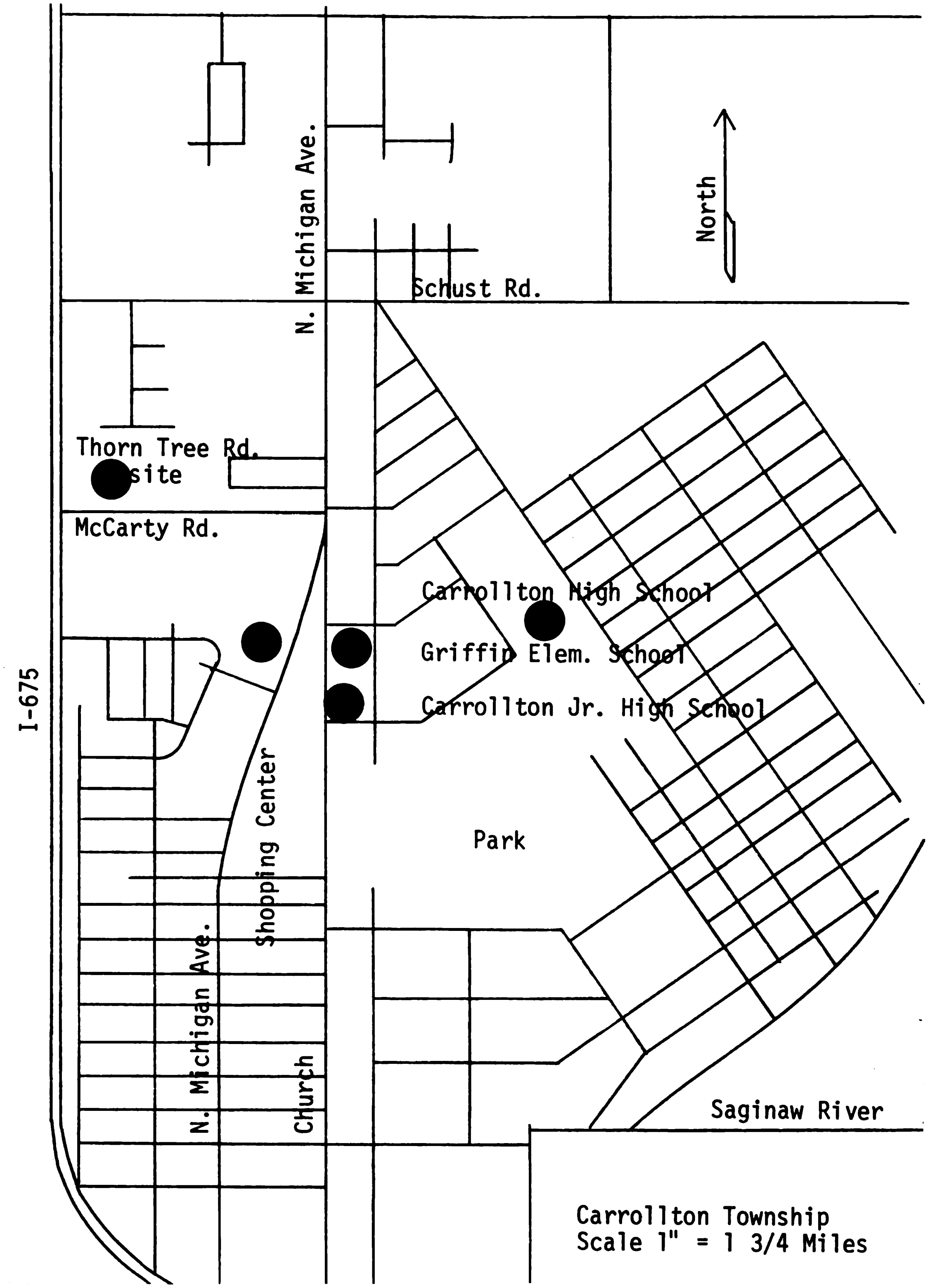

Fig. 1.--Site Location Map

(a) North View

(b) Northwest View

Fig. 1.--Site Photographs[a]

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[a]Photographs by Thomas E. Bradley.

Public facilities are provided by Carrollton Township which includes excellent educational facilities within three-quarters of a mile of the project site.

Two neighborhood and one regional shopping centers are located within a two mile radius of the project site.

In order to control the noise pollution created by heavy traffic along I-676, it will be necessary to construct an earth berm along the west boundary of the project site.

Since the site is presently zoned agricultural, rezoning to multi-family is required.

Land control was acquired for twelve months through a $2,000 option with a renewal clause providing for an additional six months upon the payment of an additional $2,000.

CHAPTER III

MORTGAGE AND INTERIM FINANCING

The initial working capital to develop the Village Green is to be provided by the developer and is considered as his financial investment. Table 5 is a projection of anticipated expenses before initial mortgage loan closing.

TABLE 5

DEVELOPERS WORKING CAPITAL REQUIREMENTS

Land Carrying Expense	$ 4,000
Soil Tests	1,000
Survey	1,000
Legal Expenses	5,000
Architect's Fee	5,000
FHA Commitment Fee	8,366
Office Overhead	20,000
Total Working Capital Requirement	$ 44,366

The developer's investment represents his maximum financial risk in undertaking the development of the Village Green other than construction risks.

Interim construction financing and permanent mortgage financing are assumed to be acquired from a private mortgage source and insured by FHA under Section 221(d)4 of the National Housing Act.

CHAPTER IV

ECONOMIC FEASIBILITY

To insure the economic soundness of the Village Green, Economic Feasibility[5] was determined through the use of the following formula which was derived from the Development Expense Schedule and the Development Cost Schedule of the Michigan State Housing Develpment Authority[6] (See Appendix B).

Where x = total development costs

y = total number of units

z = gross income = gross expenses

z = [x (.01 + .004 tax rate + .9 debt service factor) + ($400 + sewer and water charge) y + $3,100]/.905

By substituting the gross annual income from Table 4 into our feasibility equation, we obtain the following:

$388,440 = [x (.01 + .0004 tax rate + .9 debt service factor) + ($400 + sewer and water charge) y + $3,100]/.905

It is assumed that at the time of mortgage financing the FHA interest rate will be 7 3/4% and that the term of the mortgage loan

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[5]Economic Feasibility is the economic state of a housing development such that there is sufficient capital to construct the project and sufficient income to successfully operate the development with an economic return to the owners.

[6]Michigan State Housing Development Authority, "Users Guide to MSHDA Feasibility and Economic Analysis Program," Michigan State Housing Development Authority, January, 1973, pp. 14, 15, 16, 19.

will be forty years; therefore, a debt service factor of .0856976[7] will be utilized. The tax rate in Carrollton Township is $39 per $1,000 of assessed value and water and sewer charges are $50 per unit per year.[8]

After substituting these values into the feasibility equation and solving for x, we determine the total development cost of the Village Green to be $2,734,782.

Tables 6 and 7 were developed under the guide of the Development Expense Schedule and the Development Cost Schedule of the Michigan State Housing Authority and set forth the projection of development expenses and the projection of annual operating expenses.

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[7]The debt service factor is the ratio of the annual mortgage payment to the original face value of the mortgage loan at a given interest rate. The debt service factor utilized is actually for 8 1/4% to include 1/2 of 1% for annual mortgage insurance premium.

[8]Mr. George Arron, Carrollton Township, Saginaw, Michigan, June, 1973.

TABLE 6

PROJECTION OF DEVELOPMENT EXPENSES

Land:		
Cost of land	$ 150,000	
Landscaping and land improvements	225,000	
Buildings:		$ 375,000
Structural	1,693,362	
Architect's Fee	75,000	
Bond Premium	12,000	
		$ 1,780,362
Other Costs and Expenses Allocable to Land and Buildings:		
Builder Sponsor Profit and Risk Allowance	238,617	
General Requirements	57,551	
Builder's Overhead	29,639	
Title and Recording Expense	8,000	
Insurance during Construction	5,470	
FHA Inspection Fee	12,307	
FHA Examination Fee	7,384	
		$ 358,968
Total Land and Buildings		$ 2,514,330
Other Costs Incurred Prior to Final Mortgage Close:		
Interest	95,376	
Property Taxes	5,470	
FHA Mortgage Insurance	12,307	
Financing Fee	49,226	
Legal Expenses	15,000	
FNMA/GNMA	43,073	
Operating Expenses[a]	40,000	
		$ 260,452
Total Cash Requirements		$ 2,774,782

[a]This item has been added to meet operating deficits occuring in the first two years of operation.

TABLE 7

PROJECTION OF ANNUAL OPERATING EXPENSES

Real Estate Tax	$ 42,664
Maintenance	30,450
Fuel	17,250
Management	17,478
Water and Sewer	7,500
Insurance	4,500
Administration	3,000
Common Electricity	2,250
Legal	1,500
Audit	1,600
Miscellaneous	2,550
Operating Reserve	-0-
Replacement Reserve	10,939
Debt Service and Mortgage Insurance	210,929
Cash Flow Available for Distribution	16,408
Vacancy	19,422
Total Annual Expenses	$ 388,440

CHAPTER V

STRUCTURING THE SYNDICATE

The investment vehicle which is utilized in syndicating Village Green is a limited partnership. This arrangement very closely resembles a corporation in terms of the liability of its members with one exception, the limited partners (investors) have no liability beyond their capital contribution to the partnership, to a third party, and no voice in the management of the partnership. However, the managing (general) partner enjoys the right to the management of the project and is exposed to unlimited personal liability.[9]

Although there is no cash profit to the developer from the mortgage proceeds, it is possible to generate a profit through the sale of the project to a limited partnership in which the investors take a position as limited partners, while the developer assumes the position as the managing general partner.

Under this limited partnership arrangement, the partnership is exempt from taxation as a corporation, thus, losses from the project can be treated as ordinary personal income for tax purposes, in relation to each partner's pro rata share of the partnership interest.[10] In the

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[9]Len Young Smith and G. Gale Roberson, Business Law (2d ed.; St. Paul, Minn.: West Publishing Co., 1966), pp. 726-727. Under current FHA procedures there is no personal liability of members of limited dividend mortgagor on the mortgagor note.

[10]Internal Revenue Code Section 701, Section 704(A) and Section 706(A).

early years of the forty year mortgage the interest payments are relatively high as compared to payments to principal, this interest expense when combined with depreciation taken on a double declining balance results in a taxable income loss to the project. Thus, a return is realized by each partner not only from direct payments from the project but also from a reduced federal income tax expense resulting from offsetting other personal income with project operating losses.

Table 8 is a complete analysis of the income and expense projections of the Village Green from construction to year 22 and is utilized as the basis of establishing a sales price and value of the partnership interest to the limited partners (investors) and the net return to the developer.

The syndicate is to consist of one general partner and ten limited partners. The partnership interests are as follows: General Partner 5%, Limited Partners 95% (ten equal shares).

Table 9 is a projection of the cash generated over the first twenty-two years of operation of the Village Green based upon the 9.5% interest of a typical investor considered to be in the 50% income bracket. The total cash generated is a result of an investor's pro rata share of cash distributions plus income tax savings resulting from the investor using his pro rata share of the project's taxable income losses to offset the payment of income taxes on other income. The cash generated is positive in years 1 to 22 but in year 23 the cash generated becomes negative and increases geometrically each year negatively until the mortgage loan is fully amortized, thus it is advisable that the project be sold in year 22 to avoid an increasing tax liability with insufficient cash flow from the project to meet this liability.

TABLE 8

PROJECTION OF INCOME AND CASH FLOW

	1st Yr.	2nd Yr.	3rd Yr.
Rent at Full Occupancy	-0-	349,602	388,440
Less 5% Vacancy Allowance	-0-	17,480	19,422
Rental Income	-0-	332,122	369,018
Interest Earned on Funds Reserved for Replacement[a]	-0-	262	819
Total Income	-0-	332,384	369,837
FHA Mortgage Insurance	12,307	12,284	12,235
Property Taxes	5,470	42,664	42,664
Interest	95,307	190,102	188,391
Depreciation	-0-	150,864	140,908
Operating Expenses	20,000	88,078	88,078
Amortization	107,299	-0-	-0-
Total Expense	240,382	483,992	472,276
Taxable Income (loss)	(240,382)	(151,508)	(102,439)
Add:			
Depreciation[b]	-0-	150,864	140,908
Cash Flow from Operations	(240,382)	744	38,469
Less:			
Mortgage Principal Payment	-0-	9,543	10,303
Replacement Reserve	-0-	10,939	10,939
Interest on Funds in Replacement Reserve	-0-	262	819
Total Additional Cash Requirements	-0-	20,744	22,061
Net Cash Flow (deficit)			
Add:			
Funds Provided by Mortgage	220,382	-0-	-0-
Partners Contribution	20,000	20,000	-0-
Cash Flow Available for Distribution	-0-	-0-	16,408
Cumulative Cash Flow Available for Distribution	-0-	-0-	16,408
Cumulative Taxable Income (loss)	(240,382)	(391,990)	(494,429)
Mortgage Balance at End of Year	2,461,304	2,451,761	2,441,458

TABLE 8 (cont'd.)

4th Yr.	5th Yr.	6th Yr.	7th Yr.	8th Yr.
388,440	388,440	388,440	388,440	388,440
19,422	19,422	19,422	19,422	19,422
369,018	369,018	369,018	369,018	369,018
1,429	2,062	2,727	3,426	4,161
370,447	371,080	371,745	372,444	373,179
12,181	12,124	12,063	11,994	11,923
42,664	42,664	42,664	42,664	42,664
187,616	186,779	185,870	184,891	100,509
131,644	123,017	114,978	107,490	88,078
88,078	88,078	88,078	88,078	88,078
-0-	-0-	-0-	-0-	-0-
462,183	452,662	443,653	435,117	429,016
(91,736)	(81,582)	(71,908)	(62,673)	(53,837)
131,644	123,017	114,978	107,490	100,509
39,908	41,435	43,070	44,817	46,472
11,132	12,026	12,996	14,044	15,164
10,939	10,939	10,939	10,939	10,939
1,429	2,062	2,727	3,426	4,161
23,500	25,027	26,662	28,409	30,264
-0-	-0-	-0-	-0-	-0-
-0-	-0-	-0-	-0-	-0-
16,408	16,408	16,408	16,408	16,408
32,816	49,224	65,632	82,040	98,448
(586,165)	(667,747)	(739,655)	(802,328)	(856,165)
2,430,326	2,418,300	2,405,304	2,391,260	2,376,096

TABLE 8 (cont'd.)

9th Yr.	10th Yr.	11th Yr.	12th Yr.	13th Yr.
388,440	388,440	388,440	388,440	388,440
19,422	19,422	19,422	19,422	19,422
369,018	369,018	369,018	369,018	369,018
4,933	5,745	6,599	262	819
373,951	374,763	375,617	369,280	369,837
11,844	11,758	11,667	11,568	11,460
42,664	42,664	42,664	42,664	42,664
182,700	181,469	180,141	178,705	177,148
94,000	87,930	82,267	76,982	72,049
88,078	88,078	88,078	88,078	88,078
-0-	-0-	-0-	-0-	-0-
419,286	411,899	404,817	397,997	391,399
(45,335)	(37,136)	(29,200)	(28,717)	(21,562)
94,000	87,930	82,267	76,982	72,049
48,665	50,794	53,067	48,265	50,487
16,385	17,702	19,121	20,656	22,321
10,939	10,939	10,939	10,939	10,939
4,933	5,745	6,599	262	819
32,257	34,386	36,659	31,857	34,079
-0-	-0-	-0-	-0-	-0-
-0-	-0-	-0-	-0-	-0-
16,408	16,408	16,408	16,408	16,408
114,856	131,264	147,672	164,080	180,488
(901,500)	(938,636)	(967,836)	(996,553)	(1,018,115)
2,359,711	2,342,009	2,322,888	2,302,232	2,279,911

TABLE 8 (cont'd.)

14th Yr.	15th Yr.	16th Yr.	17th Yr.	18th Yr.
388,440	388,440	388,440	388,440	388,440
19,422	19,422	19,422	19,422	19,422
369,018	369,018	369,018	369,018	369,018
1,429	2,062	2,727	3,426	4,161
370,447	371,080	371,745	372,444	373,179
11,344	11,221	11,086	10,940	10,783
42,664	42,664	42,664	42,664	42,664
175,476	173,668	171,710	169,594	167,308
67,440	63,143	59,125	54,372	51,865
88,078	88,078	88,078	88,078	88,078
-0-	-0-	-0-	-0-	-0-
383,002	378,774	372,663	365,648	360,698
(14,555)	(7,694)	(918)	6,796	12,481
67,440	63,143	69,125	54,372	51,865
52,885	55,449	58,207	61,168	64,346
24,109	26,040	28,133	30,395	32,838
10,939	10,939	10,939	10,939	10,939
1,429	2,062	2,727	3,426	4,161
36,477	39,041	41,799	44,760	47,938
-0-	-0-	-0-	-0-	-0-
-0-	-0-	-0-	-0-	-0-
16,408	16,408	16,408	16,408	16,408
196,896	213,304	229,712	246,120	262,528
(1,032,670)	(1,040,364)	(1,041,282)	(1,034,486)	(1,022,005)
2,255,802	2,229,762	2,201,629	2,171,234	2,138,396

TABLE 8 (cont'd.)

19th Yr.	20th Yr.	21st Yr.	22nd Yr.	TOTAL YEARS 1 - 22
388,440	388,440	388,440	388,440	8,118,402
19,422	19,422	19,422	19,422	405,920
369,018	369,018	369,018	369,018	7,712,482
4,933	5,745	6,599	262	64,588
373,951	374,763	375,617	369,280	7,777,070
10,611	10,429	10,229	10,017	252,066
42,664	42,664	42,664	42,667	901,414
164,846	162,180	159,299	156,192	3,803,234
48,585	45,521	42,693	39,973	1,755,355
88,078	88,078	88,078	88,078	1,869,638
-0-	-0-	-0-	-0-	107,299
354,784	348,872	342,963	336,925	8,689,006
19,167	25,891	32,654	32,355	(911,936)
48,585	45,521	42,693	39,973	1,755,355
67,752	71,412	75,347	72,328	844,905
35,472	38,320	41,410	44,722	482,823
10,939	10,939	10,939	10,939	229,719
4,933	5,745	6,599	262	64,588
51,344	55,004	58,939	55,923	777,130
-0-	-0-	-0-	-0-	-0-
-0-	-0-	-0-	-0-	-0-
16,408	16,408	16,408	16,408	328,160
278,936	295,344	311,752	328,160	
(1,002,838)	(976,947)	(944,293)	(911,839)	
2,102,923	2,064,603	2,023,202	1,978,480	

TABLE 8 (cont'd.)

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[a]It is assumed that the funds for replacement reserve are invested each month at the rate of 5% per annum and that at the end of year 11 and year 21 the entire reserve is expended. This expenditure is not reflected in the operating expenses for the respective years.

[b]Depreciation is computed upon a double declining balance assuming a 33 1/3 year life for buildings and a 20 year life for land improvements.

TABLE 9

PROJECTION OF INCOME TAX LOSS, DISTRIBUTION AND CASH GENERATED PER UNIT OF INVESTMENT[a]

Year	Distribution	Taxable Income Loss	Estimated Federal Income % Of Savings	Cash Generated
1		22,836	11,418	11,418
2		14,403	7,201	7,201
3	1,559	9,732	4,866	6,425
4	1,559	8,715	4,357	5,916
5	1,559	7,750	3,875	5,434
6	1,559	6,831	3,415	4,974
7	1,559	5,954	2,977	3,426
8	1,559	5,115	2,557	4,116
9	1,559	4,307	2,016	3,575
10	1,559	3,528	1,764	3,323
11	1,559	2,774	1,387	2,946
12	1,559	2,728	1,364	2,923
13	1,559	2,048	1,024	2,583
14	1,559	1,383	692	2,251
15	1,559	731	366	1,925
16	1,559	87	43	1,602
17	1,559	(646)	(323)	1,236
18	1,559	(1,186)	(543)	1,016
19	1,559	(1,821)	(911)	648
20	1,559	(2,459)	(1,230)	329
21	1,559	(3,102)	(1,551)	8
22	1,559	(3,074)	(1,537)	22
Total	31,180	86,634	43,317	74,497

[a]Tax preference items have not been considered.

The limited partners are allowed a return of 20% from the project based upon their equity in the project. To determine the investment required by an investor to achieve a 20% return on equity the "Inwood method"[11] or internal rate of return of an investment was used, where the internal rate of return is the rate of discount that equals the present value of the future cash receipt to the cost of the project.[12] Expressed as:

$$-a = \sum_{t=o}^{n} \frac{at}{(1 + r)^{t}}$$

Where -a = the initial investment or present value

r = rate of return

t = number of years of ownership

at = annual cash generated

Thus, the value of the investment to a typical investor can be computed by summarizing the discounted value of the cash generated to arrive at their present value.

A special case exists in year 22 in that upon the sale of the project, capital gains tax must be paid and is considered to be a negative payment in that year. Assuming the sale of the project and liquidation of the partnership for approximately $1 over the mortgage per unit of investment at the end of year 22, the capital gains tax per unit of investment for a 50% tax bracket investor is computed as 30% of

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[11] Paul F. Wendt and Alan R. Cerf, Real Estate Investment Analysis and Taxation (New York: McGraw-Hill Book Company, 1969), p. 23.

[12] James C.T. Mao, Quantitative Analysis of Financial Decesions (London: The Macmillan Company, 1969), pp. 192-195.

the sum of the tax losses, the cash distribution and the proceeds of the sale of the project minus the initial investment as outlined below.[13]

Tax losses	$ 86,634
Cash distribution	31,180
Proceeds of sale	1
	$ 117,815
Less investments	(-a)
Capital gain	117,815 - (-a)
Capital gain tax	.3[117,815 - (-a)]
Less proceeds of sale	1
Cash needed to pay	.3[117,815 - (-a)] - 1

The initial investment for a typical 50% investor is found to be:

$$-a = \frac{11,418}{1.2} + \frac{7,201}{1.44} + \frac{6,425}{1.728} + \frac{5,916}{2.0736} + \frac{5,434}{2.48832} +$$

$$\frac{4,974}{2.98598} + \frac{4,536}{3.58318} + \frac{4,116}{4.299817} + \frac{3,575}{5.5515978} +$$

$$\frac{6,323}{6.191736} + \frac{2,946}{7.43008} + \frac{2,923}{8.9161} + \frac{2,583}{10.69932} +$$

$$\frac{2,251}{12.83918} + \frac{1,925}{15.40702} + \frac{1,602}{18.488} + \frac{1,236}{22.186111} +$$

$$\frac{1,016}{26.62333} + \frac{648}{31.94799} + \frac{329}{38.33759} + \frac{8}{46.0051} +$$

$$\frac{-[.3(117,815 - (a) - 1] + 22}{55.20614}$$

$$-a = 28,863 + \frac{-[.3[117,815 - (-a)] - 1] + 22}{55.20614}$$

[13]Mr. Hallison H. Young, Esq., Patmon, Young and Kirk, Attorneys, Detroit, Michigan, June, 1973. Internal Revenue Code Section 741.

$$-55.20614a = 1,593,415 - [.3[117,815 - (-a)] - 1] + 22$$

$$-55.20614a = 1,593,415 - [35,344.5 - .3(-a) - 1] + 22$$

$$-55.20614a = 1,593,415 - 37,344.5 - .3a + 1 + 22$$

$$-54.90614 = 1,556,093.5$$

$$-a = \$28,341$$

$$-a(10) = \$283,410$$

The value of one unit of investment is therefore $28,341. The total value of the investment and the sale prive to ten investors is $283,410.

The fee which the developer can charge the partnership for his efforts in creating the housing investment is the difference between all of the cash which is available to the partnership and the total cash which is required to complete the project. Table 10 is a statement of the total cash available to the partnership and the total cash requirements.

The next profit to the developer is $216,299 after deducting his original investment of $44,366 from his $260,665 development fee charged to the partnership.

TABLE 10

STATEMENT OF CASH REQUIREMENTS AND SOURCES OF FUNDS TO MEET CASH REQUIREMENTS

Builder Sponsors Profit and Risk Allowance	$ 238,617	
Prepaid Expenses	$ 18,366[a]	
Mortgage Proceeds	$2,461,304	
Capital Contribution of Limited Partners	$ 283,410	
Land Value	$ 150,000	
Total Cash Requirement		$2,774,782
Developers Fee		$ 260,665
Offsite Improvements		$ 40,000
Land Purchase		$ 76,250
TOTAL	$3,151,697	$3,151,697

Developers Fee	$260,665
Less: Investment	$ 44,366
Net Profit to Developer	$216,299[b]

[a]This includes payment for architect fees, legal fees and FHA commitment fees funded from mortgage proceeds.

[b]The net profit does not include those financial benefits arising to the developer from his pro rata share of operating losses and cash distribution. It is assumed that there is an identity of interest between the Developer and Builder.

CHAPTER VI

CONCLUSION

Developers would be wise to build new multifamily housing under Section 221(d)4 of the National Housing Act of 1968 during the current federal government's impediment of subsidized housing funds. Insurance under Section 221(d)4 is currently available and provides the developer with an excellent opportunity to develop economically feasible new multi-family housing with reasonable financial rewards.

Through the syndication of a housing project financed under Section 221(d)4 under a limited partnership arrangement, the developer is able not only to recapture his investment, but is also able to receive a substantial profit at the time of the sale of his equity, to tax shelter seeking investors, retain control of the property, and retain a small equity interest.

Developers wishing to create the housing investment must acquaint themselves with the status of pending tax ligislation which may limit accelerated depreciate losses to application only against project income. An untimely change in tax laws may severly reduce the syndication value of the housing investment.

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APPENDIX A

COMPARABLE PROPERTY #1

COMPARABLE PROPERTY #2

APPENDIX A

COMPARABLE PROPERTY #1

Name: Shattrick Arms

Location: Shattrick Road at Bay Road

No. of Units	Unit Type	Monthly Rents	Unit Size
22	1 - BR	$ 180	700 s.f.
36	2 - BR	$ 210	940 s.f.
52	3 - BR	$ 250	1,144 s.f.

Present Vacancy Rate: 18%

Amenities:

(1) Air conditioning

(2) Appliances including dishwashers

(3) Laundry facilities in each building

(4) Swimming pool

(5) Community building

(6) Carpet

(7) Balcony

This project is the first phase of a 440 unit development. The first units were completed in the spring of 1973 and the project has been well accepted by the market. Due to this favorable acception, the developer, F & I Contractors, have begun construction on an additional 110 units.

SOURCE: F & I Contractors, Saginaw, Michigan.

APPENDIX A

COMPARABLE PROPERTY #2

Name: Materials

Location: McCarty Road at Barnard Road

No. of Units	Unit Type	Monthly Rent	Unit Size
42	1 - BR	$ 180	800 s.f.
62	2 - BR	$ 213	950 s.f.
22	3 - BR	$ 240	1,100 s.f.

Present Vacancy Rate: No housing units are presently ready for occupancy.

Amenities:

(1) Air conditioning

(2) Appliances including dishwashers

(3) Carpet

(4) Community Building

This project contains a total of 168 dwelling units, 42 of the units are subsidized under Section 236 of the National Housing Act and are not considered as they have little or no effect upon the moderate market.

SOURCE: Michigan State Housing Development Authority.

APPENDIX B

Michigan State Housing Development Authority

Simplified Feasibility Formula

APPENDIX B

Michigan State Housing Development Authority
Simplified Feasibility Formula

The basic MSHDA Feasibility formula was simplified by equating all unknowns in terms of x, y and z.

x = total development cost

y = total number of units

x = annual expenses = annual gross income

$$z = [\text{tax rate } (.0004x)] + (\$400 + \text{sewer and water charge})\, y + \$3{,}100 + .006 \text{ structure cost} + .9x \text{ debt service factor} + .006x + .095z$$

$$.905z = [\text{tax rate } (.0004x)] = (\$400 + \text{sewer and water charge})\, y + \$3{,}100 + .006 \text{ structure cost} + .9x \text{ debt service factor} + .006x$$

$$.905z = x(.0004 \text{ tax rate} + .9 \text{ debt service factor} + .006) + (\$400 + \text{sewer and water charge})\, y + \$3{,}100 + .006 \text{ structure cost}^{a}$$

$$.905z = x(.01 + .0004 \text{ tax rate} + .9 \text{ debt service factor}) + (\$400 + \text{sewer and water charge})\, y + \$3{,}100$$

$$z = [x(.01 + .004 \text{ tax rate} + .9 \text{ debt service factor}) + (\$400 + \text{sewer and water charge})\, y + \$3{,}100]/.905$$

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[a] An adjustment is necessary in order to state all unknowns in terms of x and y directly; therefore, .004x is substituted for the quantity .006 structures cost.