DRAFT

MEMORANDUM

Date: December 3, 2001

To: The Honorable Chair and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator

Re: **Trends in Housing Costs and the Affordable Housing Development Policy**

I. Background

The draft *Comprehensive Land Use Plan Update* and draft *Regional Plan Policies, Rezoning Policies and Special Area Policies* call for County policies under which rezoning activity and other land uses shall promote affordable housing, inclusionary housing and mixed income subdivisions. This memorandum introduces an Affordable Housing development review standard and recommends that the Board adopt a policy which would promote conformity with the standard in the development proposals to which it applies. Highlights from the attached draft study on *Trends in Housing Costs and Affordability* are also included.

II. Trends in Housing Costs and Affordability

Trends in Housing Costs and Affordability follows on the heels of a series of Pima County housing market studies and provides focus to the issue of the impact of the market forces on low-income and minority residents. Recent studies demonstrate that the real estate market is geared toward the supply of higher-end homes. This results in a housing market that neglects lower income residents whose primary needs are safe, decent and affordable homes.

Trends in Housing Costs and Affordability reviews data going back to 1960 and confirms that an imbalance between job and housing opportunities exists in our community. The current pattern of uneven growth fails to benefit the low wage earners who fuel the economy. Over the past decades, wages on the lower pay scales have not kept pace with housing costs. The result is a housing market that shuts-out workers who are integral to the provision of services and the overall quality of life. *Trends in Housing Costs and Affordability* documents this problem in Pima County and the City of Tucson. An analysis of Census tract data indicates:

(1) When adjusted for inflation, the incomes of lower wage earners have declined;

(2) Simultaneously, poorer community members pay more for housing while affordable residential opportunities have decreased; and

(3) Therefore, a growing portion of this community's working family's income goes toward housing costs.

The draft study also includes a discussion of the causes and consequences of an affordable housing shortage. Recent studies on the state and national level are reviewed, and the well-documented evidence for a rental and home ownership affordability crisis is presented. The local pattern reflects trends that have been repeatedly identified by national and state level studies. Finally, the study includes a look at the evolving demographic, social and economic factors that impact the housing market. This information provides a contextual background of the forces playing out in the housing market, since current and projected demographic trends will impact housing preferences and residential location in the future. The available data shows that Pima County and the City of Tucson exhibit the following trends:

(1) A rapidly expanding population;

(2) A composition increasing in ethnic and racial diversity; and

(3) A growing service-based economy which is characterized by low-wages.

It has become critically important to address these trends through appropriate housing policies.

III. Components of the Affordable Housing Development Review Standard

Inclusionary housing or inclusionary zoning, refers to a program in which new residential developments include a specific percentage of affordable housing units within their developments. Affordable housing often refers to housing that is affordable for households with incomes below 50 to 80 percent of the median area income, and housing in which the tenants or owners pay no more than 30 percent of their household income for housing. Inclusionary housing policies often have the following elements:

- Minimum percent of residential units that must be affordable to households of a specific income level, to be applied to particular developments;
- A minimum number of years these affordable units must remain affordable;
- Incentives such as density bonuses, waivers of development fees, and fast track permitting;
- Phasing requirements that state the percentage of affordable units that must be constructed before a particular percentage of market rate units can be constructed;
- Requirement that affordable units are of a similar architectural style to market rate units, and that affordable units be dispersed through out the development; and
- Provisions that allow for payment in-lieu of constructing affordable units.

IV. Policy Establishing Guidance for Inclusionary Housing

Upon adoption of the Comprehensive Land Use Plan Update in December, I will recommend that the Board adopt a policy which includes the following provisions:

A. Purpose -- The purpose of this policy would be to ensure that new rezonings, specific plans, Comprehensive Plan amendments and conditional use permits approved conform with the Affordable Housing development standard.

B. Applicability -- Such a policy would govern applications for development approval where the proposed development would increase the number of permitted dwelling units by 10 or more over that permitted prior to approval, including new rezoning and specific plan requests; time extension requests for rezonings; requests for modifications or waivers of rezoning or specific plan conditions, including substantial changes; requests for Comprehensive Plan amendments; and requests for waivers of the subdivision plat requirement of a zoning plan.

C. Guidelines -- Under this policy the Board of Supervisors would require that new applications subject to the policy be evaluated against the following criteria to determine their appropriateness:

1. Required percent of affordable homes: 20 percent of all dwelling units shall be affordable units; however, if 35 percent of the market rate units are affordable to families earning 115 percent of the median income for Pima County, only 15 percent of the units need be dedicated as affordable units. An affordable unit is an owner-occupied unit that is affordable by a household with very low, low or moderate income. Very low income is defined as less than 50 percent of the median income for Pima County; Low income is defined as 50 to 80 percent of the median income for Pima County; and Moderate income is defined as 80 to 100 percent of the median income for Pima County.

2. Period of affordability: Units shall remain affordable units for a period of at least 30 years. The price of the unit may increase at the same rate as the median income plus additional permanent improvements made to the unit.

3. Cost of Dwelling Units: For low and very low income households, mortgage payments shall not exceed 25 percent of the gross income of the household. For moderate income households, mortgage payments shall not exceed 28 percent of the gross income. Mortgage payments shall include principle, interest, taxes and insurance.

4. Design and Distribution: The size or interior amenities of the affordable units may be reduced and the design amended as long as there are not significant identifiable differences and design is reasonably consistent. Distribution shall avoid over-concentration of affordable units.

5. In-Lieu Fees and Off-Site Units: At the discretion of the Board, units may be built at another site, or an in-lieu fee may be paid to satisfy the Affordable Housing development standard. A formula shall be used to determine the in-lieu fee, for example: Number of affordable units that would have been required x .2 (average price of unit in project - cost of affordable unit for moderate income family) = amount of payment in-lieu. Payment is required at the time the building permit is issued. Fees shall be reserved for affordable housing program uses only.

6. Incentives: At the discretion of the Board, density bonuses may be granted and fees, including impact fees, may be waived for affordable units.

D. Phasing Requirements -- Phasing requirement criteria shall be established that state the percentage of affordable units that must be constructed before a particular percentage of market rate units can be constructed.

E. Eligibility and Program Enforcement -- Eligibility criteria shall be established for program participation by qualified buyers. Program Enforcement criteria shall also be established.

V. Timeline for Consideration and Adoption

The Planning and Zoning Commission held a study session to discuss the Comprehensive Plan, which includes proposed policy for affordable housing, on November 28. The Plan is before the Commission for hearing on December 12, 2001. The Plan and associated policy proposals will be before the Board on December 18, 2001.

c: Chairman and Members, Pima County Planning and Zoning Commission

Pima County and City of Tucson Housing Market Study
Part I: Trends in Housing Costs and Affordability

INTRODUCTION

Housing is a fundamental necessity that plays a critical role in a community's quality of life. For the low- and moderate-income residents of Pima County[1], the cost of housing is a key factor that determines their disposable household income. The rental and mortgage costs are in turn a function of the local housing market.

A recent set of housing studies[2] analyzed the situation in Pima County and found that the real estate and homebuilding interests are not adequately responding to a demand for homes affordable to those in the lower wage scales. A housing market that disregards the construction and rehabilitation of homes for its most vulnerable residents places a heavy burden on both the lower income housing consumer and the public sector assigned to provide community services.

This study analyzes some trends in the local housing market with a close look at the situation faced by the majority of area residents that are unable to afford the average priced home. The evidence for a widening gap in local housing costs and incomes is presented in the first section of this study. The second section looks at wider geographical trends to provide the context for interpreting the local evidence. This is followed by a discussion of important social and economic trends unfolding in Pima County that have critical impacts on the local housing market.

The present work constitutes the first part of a three part housing study, and it will be followed by a discussion of inequities in the housing market (Part II) and a presentation of policies and programs available to address these disparities (Part III).

LOCAL ANALYSIS OF HOUSING PROBLEMS AND AFFORDABILITY

The priority of safe and sound housing is at the foundation of all viable communities. At its extreme, a lack of affordable housing options contributes to homelessness. For the County's many low- and moderate-income families, however, housing problems are usually associated with one or both of the following:

- The residents are cost-burdened in that they pay more than 30% of their income for housing costs (rent, mortgage, and utilities)[3]
- The current housing situation presents overcrowded and/or substandard housing conditions

The root causes of these problems show up when we examine the inputs and outputs of households in a community. That is, either a) income shortfalls or b) inflated housing costs lead to a housing cost-burden as well as overcrowded and/or substandard conditions. Poverty and a growing shortage of housing affordable to low-income residents are the key factors. This dilemma constitutes a growing affordable housing crisis.

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[1] HUD Defines very-low income as below 50% of Area Median Income (AMI). Lower income is defined as 50-80 percent of AMI and moderate income as 80-100 percent of AMI. Extremely low income is 30% or less of AMI.

[2] *Housing in Pima County*; *Impact Fee and Affordable Housing Study*; *Inclusionary Housing Study*; and *Trends in Housing Affordability, 1975 through 2001*

[3] The "30% rule" is the standard applied by HUD.

Tucson has historically been considered an affordable community. However, the important findings of the recent series of Pima County housing studies (see footnote 2) show that the housing market is inclined to serve higher income residents with the production of higher end homes. This trend disregards the demand from lower income buyers, which leads to a shortage of affordable housing options. *The current complacency of the housing market can lead to severe shortcomings as this community continues to grow.*

The following is an analysis of the current evidence available for income and housing costs in the area. It is a detailed look at Census Tract data, which are relatively permanent statistical subdivisions within the region. These geographical divisions of the County allow us to track income and cost changes through time. Both rental and homeownership costs are assessed, and discouraging trends for lower and moderate-income residents are uncovered.

Rental Housing Costs in Tucson

Purpose, Scope and Study Procedures:

Do the signs of a pending affordable housing crisis in Pima County exist? What are the effects of a real estate market geared toward higher income residents on the poorer income community members? This study sets out to assess these issues.

The evidence to document how the housing market has served lower income residents during Tucson's recent history is available from the U.S. Bureau of Census. The variables of household income and housing costs can be followed through time and in specific geographical units. Twenty-five census tracts from the central urban core area of the City of Tucson have been analyzed. Currently, the only available census tract data is up to 1990[4], so this analysis anticipates the release of 2000 income and housing census data.

This investigation set out to answer whether or not the "widening gap" in housing affordability discussed by HUD[5] on the national level and the "impending crisis" seen on the

Selected Tracts to be Analyzed In Ascending Order According to 1960-1990 MHI Index

Census Tract #	Area Reference	Quintile Ranking
10	Barrio Viejo/Santa Rosa (w)	Lowest 1960-90 MHI Quintile
9	Armory Park/Santa Rita Park (w)/Santa Rose (e)/ West Ochoa	
5	Rincon Heights/University	
23	City of South Tucson	
3	Barrio Anita/Dunbar Spring/El Presidio	
8	Barrio San Antonio/South Park/Santa Rita Park (e)	2nd 1960-90 MHI Quintile
4	West University/Pie Allen	
14	Feldman's/Northwest/El Cortez/Mountain 1st Ave (w)	
24	Wakefield/Fairgrounds (w)	
15	North University/Jefferson Park/Mountain 1st Ave (e)/Samos	
28	North Dodge/La Madera (e)	Middle 1960-90 MHI Quintile
11	Barrio Hollywood	
38	National Cities/Sunnyside/Irvington	
36	Davis-Monthan	
21	Western Hills II/Las Vistas	
22	South Park/Bravo Park Lane/Fairgrounds (e)	4th 1960-90 MHI Quintile
18	Miramonte/Palo Verde/North Dodge (s)	
2	Menlo Park	
7	Miles/Broadmoor-Broadway/Tucson Plumer/Barrio Centro (n)	
20	Parkway Terrace/Barrio Centro (s)/Julia Keen	
6	Sam Hughes/Blenman-Elm	Highest 1960-90 MHI Quintile
32	Miramonte/Peter Howell/Swan Lake/Swan Way Park	
16	Catalina Vista/Jefferson Park (e)/Campbell-Grant	
34	San Clemente/Rosemont West	
19	Sam Hughes (e)/Miramonte/El Montevideo	

Figure 1

[4] The release of 2000 Census Tract data is expected in August 2002

[5] Recent HUD reports on this topic include: *A Report on Worst Case Housing Needs in 1999* (2001), *Rental Housing Assistance—The Worsening Crisis* (2000), and *The Widening Gap: New Findings on Housing Affordability in America* (1999)

state level by the Arizona Housing Commission[6] can be found in Tucson. The analysis first set out to document the change in incomes and median rents at the tract level.

Methodology:

In order to ensure that census tract comparisons are between wealthier and poorer tracts—and that changes through time are measured—two indices were calculated. The "1960-1990 Median Household Income Index" (1960-90 MHI Index) allows comparison of different income level tracts. An "Income-to-Rent Payment-Ratio Index" (IRPR Index) follows the median percentage of renter income spent on housing through time.

Twenty-five census tracts from central Tucson were selected[7]. To classify these tracts along lines of relative income wealth, the 1960-90 MHI Index uses the means of median incomes from each tract. For example, median household incomes from each decennial were averaged, and the results were ordered from least to highest. This index reveals census tracts that have demonstrated consistently lower or higher median household incomes over the 1960 to 1990 time span. The tracts were then grouped into quintiles according to this index (see Figure 1 and Appendix A for Map of Area).

The second index, the IRPR Index, illustrates to what extent incomes have kept pace with rents. The advantage of the IRPR Index is that it measures the percentage of a hypothetical renter's income needed to pay rent relative to previous or later years. An increasing IRPR Index shows that a greater share of household income is going to housing costs. This reflects an area's shortage of affordable rental options, and the concomitant "squeeze" upon household budgets.

Findings:

The results of this study show that on a constant dollar basis, the rents at the tract level stay relatively stable while incomes vary. This variation in adjusted incomes furthermore appears to differ according to the relative income rates of census tracts. In fact, adjusted incomes in poorer tracts decrease relative to rents while the incomes in wealthier tracts stay constant or actually increase relative to rents. *This finding leads to the conclusion that heavier cost-burdens are being increasingly felt by the most vulnerable sectors of the community: lower-income renters.*

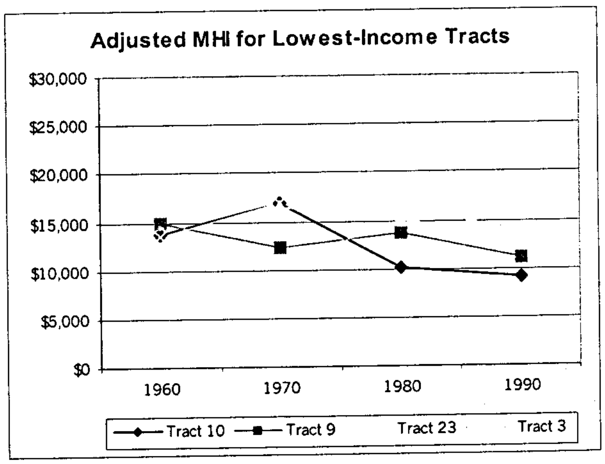

Figure 2

The first exhibit, Figure 2, shows the constant dollar income for the lowest-income tracts investigated[8] according to the 1960-90 MHI Index. The evidence here illustrates unambiguous and discouraging news for the lowest income-earning census tracts in Tucson: that is, from around 1970 until the latest available data (1990), actual income-earnings have decreased in the poorest census tracts.

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[6] *The State of Housing in Arizona: 2000* (1999)

[7] These tracts were chosen because they do not get partitioned throughout the sampled census years. Conveniently, these twenty-five tracts offer a picture of central Tucson; however, this baseline study is not a random sample and, therefore, only presents the empirical evidence from the census tracts analyzed.

[8] Figure 2 leaves out the corresponding data for Tract 5 (Rincon Heights/University) due to the anomalous effects of the student population in this area.

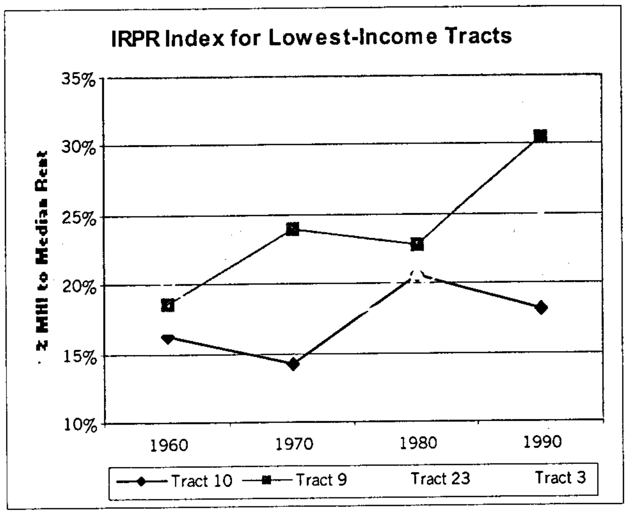

Figure 3

Figure 3 shows the IRPR Index for the lowest-income tracts. An increasing IRPR Index from 1970 to 1990 is seen, with the exception of Tract 10—which shows a leveling-off between 1980 and 1990. *Taken together, this evidence demonstrates that a general trend of declining real-wages relative to inflation is exacerbated by an increasing percentage of incomes being committed to rent payments in the poorest tracts analyzed. These factors lead to a squeeze in housing costs for the area's most vulnerable residents, and this situation drastically inhibits their ability to make ends meet.*

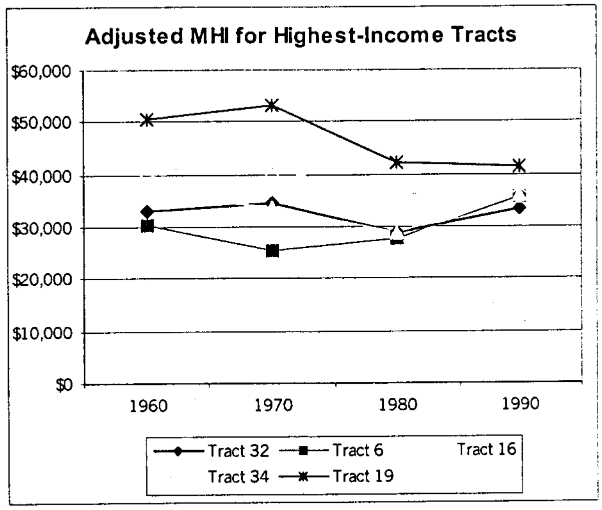

Figure 4

This research suggests that a hypothetical renter in these poorer tracts is losing ground as time proceeds between income inputs and rental payment outputs. This, however, is not the case for the higher-income census tracts analyzed. In these areas, more level inflationary effects upon incomes are seen (Figure 4). In fact, a number of these tracts have increases in household incomes relative to inflation during the eighties.

Figure 5 offers the corresponding IRPR Index for the higher-income census tracts. This illustrates a different trend than that found for the lower-income tracts in Figure 3. In fact, the wealthier census tracts experience a decrease in the IRPR Index. This evidence shows that the hypothetical renter in one of the higher income tracts is actually paying less of their income for rental payments[9].

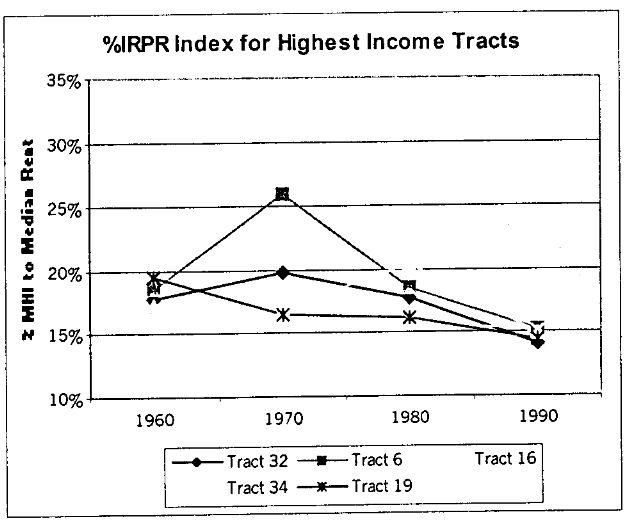

Figure 5

This research illustrates the disparate relationships between income and housing costs in lower and higher income areas of central Tucson. A general trend has been shown, on one hand, that illustrates the rental housing cost "squeeze" for residents of poorer tracts in Tucson. The growth of real incomes in these tracts has lost ground to housing costs. On the other hand, incomes have kept pace with steadily increasing rents to the extent that some have exceeded inflationary effects in wealthier tracts.

The evidence presented here reflects national and state trends at the local level. The rental housing market of

[9] For the sake of brevity, the 2nd-, Middle-, and 4th-Quintile census tracts have not been discussed here. Appendix B contains the adjusted MHI, and IRPR graphs of these middle-income ranges.

central Tucson is failing lower-income families by placing a growing burden on this community's most vulnerable residents. The following section looks at the housing ownership market under a similar light.

Costs of Homeownership

As a basis of the "American Dream," homeownership plays a significant role in improving community, family and individual pride. Homeownership offers residents an equity share in their communities, and the investment often corresponds to strong neighborhood relationships. As a private economic good, homeownership has a unique role in the creation and retention of family wealth. Housing equity is the single largest component of nonpension household wealth in the U.S.[10] Accordingly, homeownership is often a key ingredient in determining residential living standards.

These factors have long been recognized by government policies intended to provide increased opportunities for more families to gain ownership occupancy-tenure. The rationale is that up-front down payment assistance for families unable to attain these costs will be multiplied down the line by the benefits of homeownership.

This government intervention in the housing market is limited to the extent that affordable housing options exist for lower income residents. This section analyzes the trends regarding homeownership affordability for central Tucson census tracts. The evidence bodes poorly for lower- and moderate-income families striving to reach this form of the American Dream.

Local Homeownership Costs Analysis:

Census Tract	Home Purchase Affordability Index:	1970	1980	1990	Quintile Ranking
	Pima County	118.39%	53.99%	80.41%	
	City of Tucson	119.75%	53.89%	78.67%	
10	Barrio Viejo/Santa Rosa (w)	137.01%	41.23%	38.04%	Lowest 1960-90 MHI Quintile
9	Armory Park/Santa Rita Park (w)/Santa Rose (e)/ West Ochoa	120.67%	45.75%	41.23%	
5	Rincon Heights/University	121.39%	28.61%	48.53%	
23	City of South Tucson	197.08%	69.21%	67.54%	
3	Barrio Anita/Dunbar Spring/El Presidio	157.33%	66.44%	59.26%	
8	Barrio San Antonio/South Park/Santa Rita Park (e)	121.83%	52.83%	57.41%	2nd 1960-90 MHI Quintile
4	West University/Pie Allen	148.11%	35.98%	46.95%	
14	Feldman's/Northwest/El Cortez/Mountain 1st Ave (w)	158.18%	44.64%	53.20%	
24	Wakefield/Fairgrounds (w)	151.14%	79.37%	83.61%	
15	North University/Jefferson Park/Mountain 1st Ave (e)/Samos	141.40%	42.59%	55.51%	
28	North Dodge/La Madera (e)	171.79%	51.37%	67.00%	Middle 1960-90 MHI Quintile
11	Barrio Hollywood	254.24%	96.86%	91.49%	
38	National Cities/Sunnyside/Irvington	199.25%	90.66%	86.64%	
36	Davis-Monthan	N/A	41.28%	89.68%	
21	Western Hills II/Las Vistas	176.34%	67.93%	111.25%	
22	South Park/Bravo Park Lane/Fairgrounds (e)	163.12%	63.10%	91.21%	4th 1960-90 MHI Quintile
18	Miramonte/Palo Verde/North Dodge (s)	133.05%	43.50%	68.76%	
2	Menlo Park	203.10%	63.86%	73.66%	
7	Miles/Broadmoor-Broadway/Tucson Plumer/Barrio Centro (n)	162.99%	56.77%	76.70%	
20	Parkway Terrace/Barrio Centro (s)/Julia Keen	174.29%	72.88%	101.86%	
6	Sam Hughes/Blenman-Elm	155.60%	41.16%	73.21%	Highest 1960-90 MHI Quintile
32	Miramonte/Peter Howell/Swan Lake/Swan Way Park	163.35%	51.36%	91.70%	
16	Catalina Vista/Jefferson Park (e)/Campbell-Grant	162.61%	43.70%	82.41%	
34	San Clemente/Rosemont West	166.93%	64.60%	105.04%	
19	Sam Hughes (e)/Miramonte/El Montevideo	158.98%	45.43%	62.47%	

Figure 7

[10] Collins, William J. and Robert A. Margo. 2001. "Race and Homeownership: A Century-Long View." *Explorations in Economic History* 38: 68-92.

Figure 7 shows the twenty-five census tracts—in order of the 1960-90 MHI Index and divided into quintiles—that were analyzed in the rental costs assessment above. In the columns labeled 1970, 1980 and 1990, an index percentage is given. These figures are the Home Purchase Affordability Index, and they indicate the relationship between median incomes and median home values of an area. *This index shows an overall decline in homeownership affordability for the years analyzed.*

The method employed to investigate the homeownership affordability for Tucson is similar to the National Association of Realtors® (NAR)—Affordability Index[11]. NAR's Index is founded upon the relationship between the median income and median value home of an area. An index value of 100 implies that a median-income family has the exact amount of income to purchase a median-priced existing home. This method was modified in accord with a technique utilized by the Arizona Housing Commission[12] for assessing statewide homeowner affordability. The results are a comparison of the income needed to afford an area's median home price to that of the reported median home value.

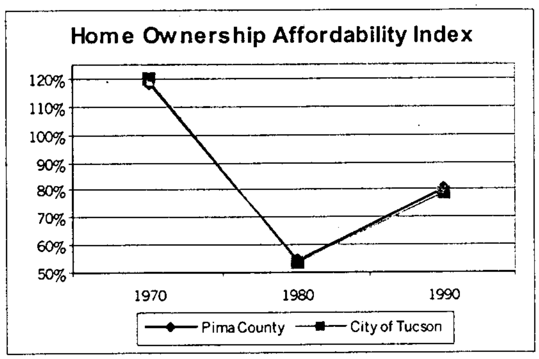

Figure 8

Findings:

The first and most striking observation is the fact that between 1970 and 1990, virtually every tract undergoes a precipitous decline in homeownership affordability. The most serious decrease in home purchase affordability—according to this index—occurred between 1970 and 1980. Slight improvements were made during the decade of the 80's, while unfortunately the results for these individual tracts during the 90's are still unavailable.

The next exhibit, Figure 8, graphically represents the overall home purchase affordability index for Pima County and the City of Tucson. At these scales, a declining trend in affordability is clearly seen

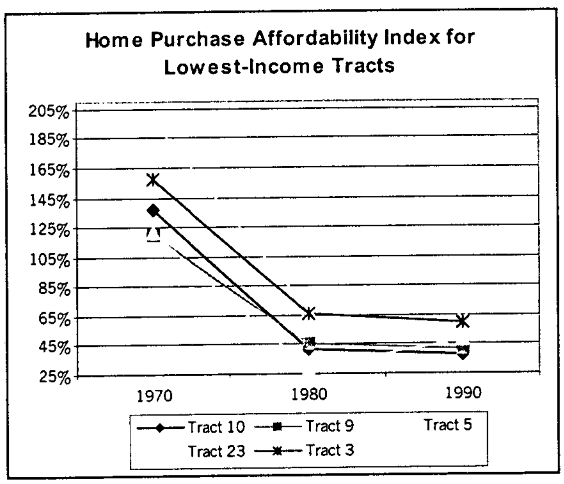

Figure 9

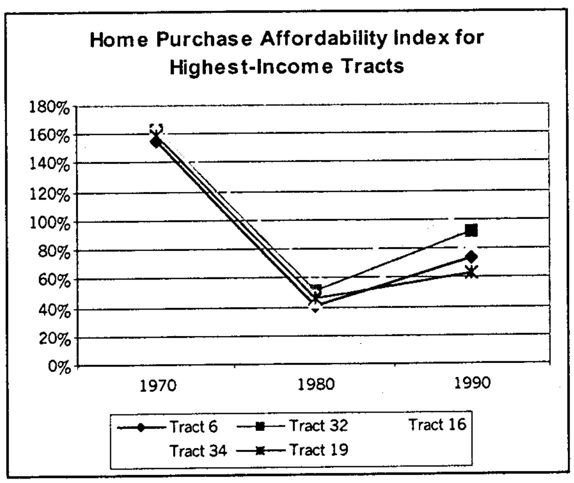

Figure 10

[11] Gyourko (1998) discusses the limitations of this methodology. To a large extent, these include the fact that measuring affordability in these terms is greatly influenced by the effective mortgage interest rates. In fact, this author shows how changes in this index over time are largely a mirror image of interest rate variations.

throughout the seventies with an improvement during the eighties that failed to reach earlier affordability measures.

This finding is significant because the trend repeats for all of the census tracts analyzed. Slight differences arise however in the magnitude of the overall decline in affordability. Figures 9 and 10 show the results for the lower and higher income tracts. A comparable decline in affordability for richer and poorer tracts is seen from 1970 to 1980. *However, the paths of higher and lower income tracts diverge during the eighties: the wealthier tracts experience an increase in affordability whereas the poorest tracts continue with little relief from the drop in affordability during the seventies.*

This finding is related to the decline in real wages during the eighties for the area's working families. In sum, this data shows that the income necessary to afford an area's median value home is greater than—and continues to exceed—the area's median income. This clearly indicates unfavorable conditions for those hoping to purchase a home and reflects an affordability problem.

THE WIDER CONTEXT

The alarming findings on the cost of housing in central Tucson should be considered in light of similar investigations on the larger scale. This section outlines the current information available from government and non-profit sources on the topic of housing cost trends at these levels. These studies of wider area aggregate data provide the context for interpreting the local situation.

Pima County and the City of Tucson

The first exhibit includes the characteristics of County and City residents alongside the areas' respective rental rates, seen in Figures 11 and 12. These graphs present the data available for Median Household Income (MHI) and Median Family Income (MFI) (see Appendix C for explanation) as well as the area's median rent, all of which has been adjusted for inflation into 2000 dollars. This view demonstrates that

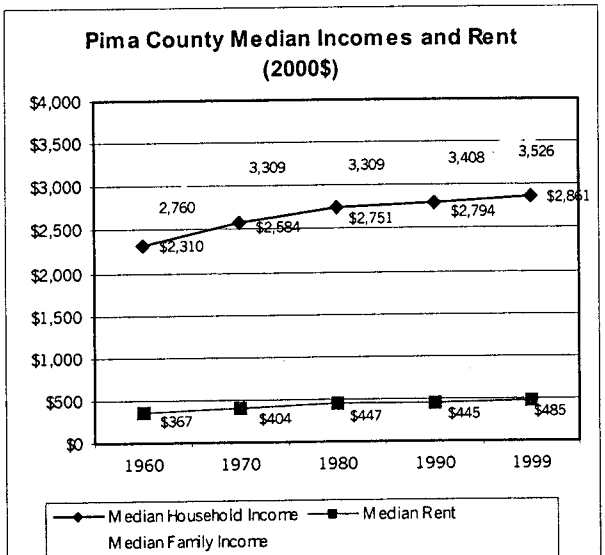

Figure 11

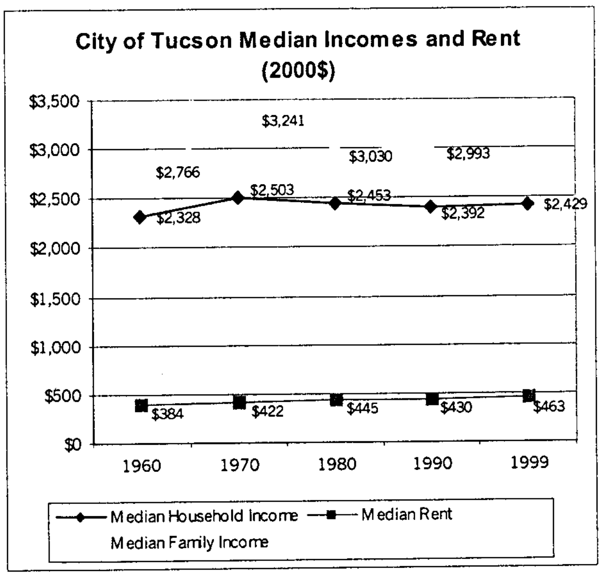

Figure 12

Source: U.S. Bureau of Census
*1999 figures estimated from American Community Survey (City of Tucson 1999 MFI unknown)

[12] (1999: 22-25). *The State of Housing in Arizona: 2000.* Phoenix: Arizona Department of Commerce, Office of Housing and Infrastructure Development.

incomes have kept apace of the slow but steady increase in rents throughout the past twenty to thirty years. A cautious conclusion at this level of awareness could suggest that any evidence of a widening gap between income and rents is slight if not absent.

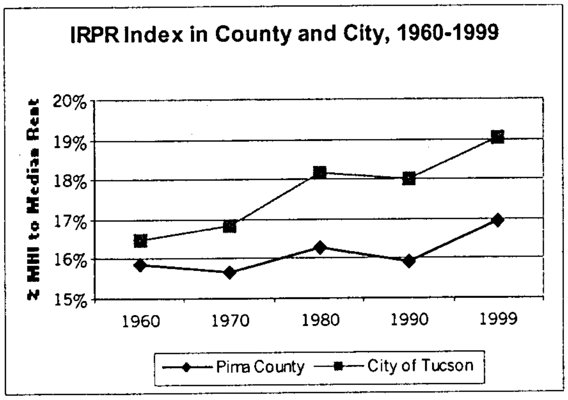

Figure 13
(*1999 figures estimated from ACS)

Another way of assessing these trends however shows this to be a premature conclusion. The IRPR Index, as explained above, follows the situation of a "hypothetical 'median income' renter," which could include a family, unrelated individuals in the same housing unit or an individual. For this renter, an IRPR Index is calculated from the percentage of an area's income needed to pay this same area's median rent.

With the help of the IRPR Index, it is seen that a renter (or household) in the City would have found the rents most affordable around 1960 while Countywide figures show the most affordable mix of incomes to rents around 1970 (see Figure 13). Since these times, an increasingly higher proportion of income has had to be committed to paying rental housing costs.

This trend illustrates a cost-burden "squeeze" in the recent past of City and County rental housing markets that national and state level research has been uncovering. The situation poses a great concern for the future of affordable rental housing in the area.

What does the view look like today? The following section addresses this important question before turning an eye toward an even wider look at state and national studies. The U.S. Bureau of Census recently reported that 49% of Pima County's renters are paying 30 percent or more of their income for housing[13]. This constitutes a "Housing Cost-Burdened".

Estimated % of Renters Unable to Afford FMR		1998	1999	2000
Arizona	One Bedroom	33%	37%	33%
	Two Bedroom	41%	45%	42%
Pima County	**One Bedroom**	**34%**	**41%**	**38%**
	Two Bedroom	**44%**	**52%**	**50%**
Maricopa County	One Bedroom	33%	37%	34%
	Two Bedroom	41%	45%	42%

Figure 14
Source: NLIHC

Another way of looking at the current situation is offered by the *Out of Reach* investigation[14]. This report calculates the income that renter households need in order to afford rental housing, which is called the "Housing Wage" of each community. This data is compiled alongside estimations of how many households can not afford to pay a HUD calculated, area-

	Housing Wages and Minimum Wages						
	Hourly Wage Needed to Afford (@40hrs/week)			% Change in 2 BR Housing Wage (1999-2000)	Housing Wage As % of Minimum Wage ($5.15/hr)		
Location	One Bed-Room FMR	Two Bed-Room FMR	Three Bed-Room FMR		One Bed-Room FMR	Two Bed-Room FMR	Three Bed-Room FMR
Arizona	$9.38	$11.95	$16.56	1.36%	182%	232%	321%
Pima County	**$9.04**	**$12.02**	**$16.71**	**3.52%**	**176%**	**233%**	**324%**
Maricopa County	$10.06	$12.62	$17.56	3.35%	195%	245%	341%

[13] 1999 American Community Survey
[14] National Low Income Housing Corporation (1998, 1999, 2000)

specific, Fair Market Rent (FMR)[15].

On the level of Pima County, current NLIHC estimates find that 50% of renters are unable to afford Fair Market Rents for a two-bedroom unit. This high percentage of unaffordable rents index for Pima County can be contrasted for the last three years with the State of Arizona and Maricopa County (Figure 14).

These figures establish a local county and citywide rental housing affordability problem where a large amount of area residents depend upon rental housing options to satisfy their housing needs. For the lowest income residents of the County and City, it is certain that the heaviest burdens exist between income and rental costs. The hourly wage necessary in both of these jurisdictions to afford a two-bedroom fair market rent comes to $12.02 (NLIHC 2000 calculations). This is a large 233% of current minimum wage standards ($5.15/hr.), which amounts to 93 hours of work per week necessary to maintain FMR affordability at this wage (see Figure 15).

Another way of interpreting the severity of these statistics is offered in the revealing comparison of Figure 16, which shows some of the average area salaries next to the annualized version of the County's calculated Housing Wage given above.

The Housing Wage and a Look at Tucson's Earnings by Industry (2000)

Housing Wage Needed to Afford:	(Annualized)	Average Wage Industry:	Earnings
3 BR FMR	$34,756.80	T.C. P.U.*	$34,690.00
		Wholesale Trade	$33,256.00
		State & Local Gov.	$32,775.00
		Construction	$30,762.00
2 BR FMR	$25,001.60	Services	$25,931.00
		F.I.R.E.**	$24,350.00
1 BR FMR	$18,803.00	Retail Trade	$18,002.00

Figure 16
Source: NLIHC, University of Arizona, EBR Program
*Trade, Communication, and Public Utilities
**Finance, Insurance, and Real Estate

Arizona's Housing Wage and Minimum Wage

- The Housing Wage calculation represents what a full time worker must earn per hour in order to afford the area's two-bedroom Fair Market Rent, while paying no more than 30% of income. The calculated housing wage in Arizona is $11.95. This amount is 232% of the present Minimum Wage ($5.15 per hour).
- A worker earning the Minimum Wage has to work 93 hours per week in order to afford a two-bedroom unit at the area's Fair Market Rent.

Source: NLIHC (2000)

This survey of the available data for past and present rental housing conditions in the County and the City demonstrates:

- Recent income and housing cost trends point to a growing percent of incomes going to rents, and
- That a local housing-wage (which takes into account Fair Market Rents) exceeds the area minimum wage to the extent that the lowest income residents must spend an unacceptably large percent of their incomes for rent.

The State Setting

A current source for Arizona housing data, and much of the impetus for formulating the present study, comes from the release of a report issued by the Arizona Housing Commission (1999) entitled *The State of Housing in Arizona: 2000.* The tone of this report expresses a concern for housing affordability problems. It concludes by identifying a widening gap between many Arizona households' incomes and the costs of securing their housing needs.

The report offers a comprehensive view of Arizona's housing market and a look at statewide policy recommendations. The primary finding of the State Commission's report deserves repeating:

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15 FMRs are calculated in order to determine rental subsidies for housing assistance programs, and while they have increased in the area during the past four years, they still fall below what the average unassisted renter pays for housing costs (City of Tucson, CSD 2000).

The urgent, overriding message is clear; *housing affordability is an impending crisis in Arizona*...The report considers income levels, household demographics, housing costs and developable land concerns to illustrate one point: *many Arizona middle- and lower-income families are paying more than they should for housing*. These families are burdened by limited resources and statewide housing prices and rents that are rising twice as fast as incomes. (*Executive Summary,* emphasis added)

These statements apply to rental and homeownership opportunities throughout the state. The analysis of the rental housing market showed the ratio of median household income to median rent declining since 1970 (see Figure 17). Moreover, the Commission reported that a small percentage of new multifamily rental construction is designed for low- and moderate-income families.

Arizona Rental Affordability, 1970 To Present

Year	Median Household Income	Median Rent	Income Necessary to Afford Median Rent + Utilities	% of Households Who Could Afford To Rent**
1970	$8,197	$90	$4,400	73%
1980	$16,448	$228	$10,760	68%
1990	$27,540	$370	$17,560	70%
1998*	$34,268	$567	$26,120	62%

*Estimated. ** Based on household income distributions

Compiled by Arizona Housing Commission (1999)

Source: U.S. Census; Pcensus; Arizona Department of Commerce

Figure 17 (see Arizona Housing Commission [1999] for method of calculation)

Most recently (NLIHC, September 2000), the State of Arizona's Fair Market Rent for a two-bedroom unit was calculated to be $622. An extremely low-income household (earning 30% of the AMI at $50,988) is able to afford a monthly rent of a maximum of $382. A minimum wage earner (earning $5.15 per hour) can afford monthly rent of no more than $268. Another striking conclusion of the report includes the finding that 42% of renters in Arizona were unable to afford Fair Market Rent for a two-bedroom unit during the year 2000.

Arizona housing market data confirms the often-bleak situation for Arizona's renters. The next section reviews these issues on the national scale.

The National Housing Market: An Affordable Housing Shortage

Recent reports by non-profit and federal sources point to a growing shortage of affordable rental housing options for low- and moderate- income Americans. A brief review of these studies serves to highlight the dimensions of the problem. Data available on the national level by the American Housing Survey (AHS), which is sponsored by the U.S. Department of Housing and Urban Development and conducted by the U.S. Bureau of the Census, demonstrates a significant shortage of affordable housing units developing in recent decades.

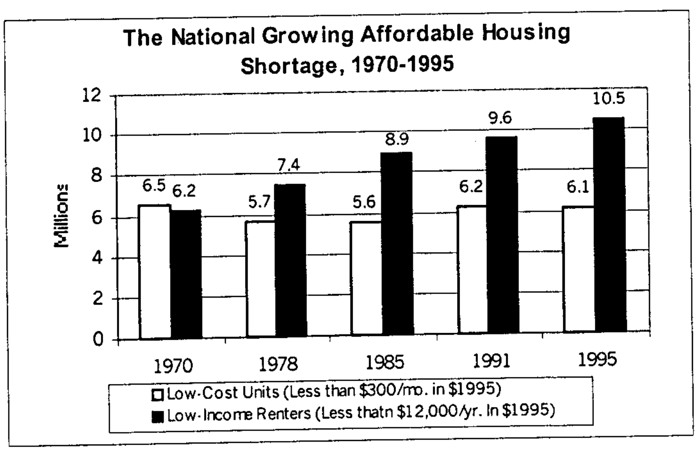

Figure 18: Compiled by Center on Budget and Policy Priorities
Source: American Housing Survey, 1995

A synthesis of this information was conducted by the Center on Budget and Policy

Priorities[16] that reported between 1970 and 1995 the number of low-cost rental units actually fell while the total number of low-income renters increased. This resulted in a shortage of nearly two low-income renters for every low-cost unit, and marked 1995 as the period for the largest affordable rental housing shortage on record for which comparable data at that time was available (see Figure 18).

The Cost-Burden:

Another conclusion drawn from the 1995 AHS data was that a majority of renters at or below the federal poverty line spend large proportions of their incomes on providing for their housing needs. The results showed that 82 percent of poor renter households committed more than 30 percent (the federal housing affordability standard) of their income for rent and utilities, while three of every five poor renter households spent more than 50 percent of their income on housing[17].

This evidence illustrates a rental housing-cost squeeze for low-income households. This problem is compounded by a decrease in affordable rental units at the national level and leads to a situation in which with little options available, low-income families lose ground as more and more of their incomes go to providing shelter. The AHS data furthermore shows that such a housing affordability problem is not restricted to geographical areas or social segments of the American community. In fact, these problems are spread throughout every region of the country and among all racial and ethnic groups.

Alongside these national trends in affordable rental housing shortages should be reported the fact that beginning in the 1970s and continuing into the present, very low-income households make up the fastest growing segment of the rental market. To illustrate this point, a report by the Joint Center for Housing Studies[18] states that the number of very low-income renter households jumped by 13.5 percent between 1985 and 1995, and this report contributes much of this growth to an increase in the number of very low-income, single-parent families.

National Affordability Index:

There are various ways to measure homeownership opportunities in terms of affordability. The National Association of Realtors® (NAR) publishes the most widely known affordability index. Figure 6 shows NAR's Affordability Index on the national level for the years 1998 to 2000. A nationwide decline is seen in these figures, and the beginning of 2001 marked record lows during the past eight years of the NAR Affordability Index. This trend illustrates deteriorated conditions in housing affordability and greater challenges for first-time homebuyers[19].

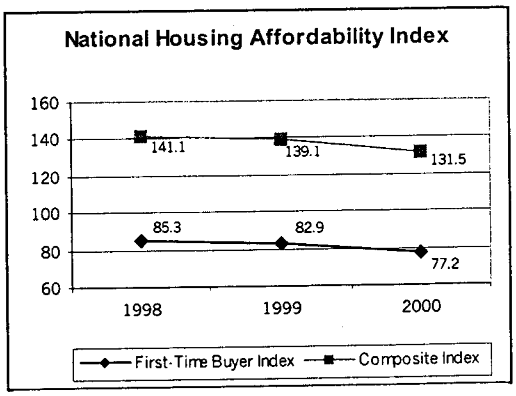

Figure 19

Source: National Association of Realtors®

The results of NAR's Affordability Index are discouraging to median income households wanting to enter the home purchasing market (Figure 19). For potential homebuyers lower on the income scale, the news appears even worse. For instance, the NAR Affordability Index assumes a 20 percent down payment for all transactions, and this obstacle is extremely formidable for lower income would-be buyers. This suggests

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[16] Daskal, Jennifer (1998) *In Search of Shelter: The Growing Shortage of Affordable Rental Housing*. Washington, D.C.: Center on Budget and Policy Priorities.

[17] Daskal 1998: 9

[18] 1997. *The State of the Nation's Housing: 1997*. Cambridge: Harvard University. <http://www.gsd.harvard.edu/jcenter/Research>

[19] Journal of Housing and Community Development. 2000. "FYI." *Journal of Housing and Community Development* 58(1): 3.

that the NAR Index, while currently showing negative trends for middle-income Americans, does not begin to suggest the far worse situation for lower-income households.

Worst Case Needs:

The U.S. Department of Housing and Urban Development has periodically reported to Congress upon the state of renter households with "worst case needs." This is defined as unsubsidized renters with incomes less than 50 percent of area median and paying at least half of that income for housing and/or living in structurally inadequate units. A brief review of some of the findings from these studies follows.

Beginning with a major report in 1996, entitled *Rental Housing Assistance at a Crossroads,* HUD documented the number of households facing serious housing problems increasing by two-thirds in between the period 1974 and 1995. At that time, newly available data and analysis demonstrated a record—and growing—number of households and people who face worst case housing needs, particularly among families with children, Hispanics, and those living in the western part of the U.S.

HUD followed this evidence with a 1999 report, called *The Widening Gap: New Findings on Housing Affordability in America*, which laid out the following conclusions:

- Despite a period of robust economic expansion, the housing stock affordable to struggling families continues to shrink
- In 1997 and 1998, rents increased at twice the rate of general inflation
- As the affordable housing stock shrinks, the number of renters at or below 10 percent of median income continues to grow
- The gap between the number of struggling Americans and the number of rental units affordable to them is large and growing

This study carried over into HUD's 2000 report, known as *Rental Housing Assistance—The Worsening Crisis*, that further confirmed this trend: worst case housing needs reached an all time high between 1995 and 1997. The findings of this report come as particularly disturbing since such an increase in rental housing needs had been growing in spite of a period of booming U.S. economic expansion and unprecedented prosperity. These "worst case" households represent 5 percent of the Nation's population and a full one-sixth of all U.S. renters.

This report went on to note the shrinkage of the housing stock affordable to the lowest income residents and recognized that the poorest families are increasingly the hardest hit by worst case needs. The severe financial pressures experienced by these renting families without federal, state or local housing assistance place them merely a paycheck or two away from homelessness. Also, of critical importance, the report reiterated that worst case housing needs became more concentrated among minority households during the 1990s, with particularly high increases among Hispanic households and working minority families with children. It was noted as well that on a regional basis, very-low-income renters in the West continue to be most likely to have worst case problems.

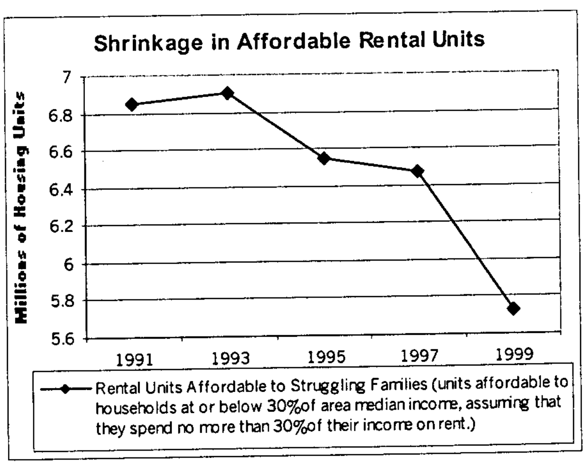

Figure 20: Data compiled by HUD (1999a, 2001)
Source: Bureau of Census, American Housing Survey

The most recent follow-up report to this study[20] by HUD found a significant decrease (about 8 percent) in the number of households between 1997 and 1999 with worst case housing needs. This reversal of trends was attributed to a rise in incomes for lowest-income residents with a slower increase adjustment in rents, which are recognized to be vulnerable improvements and leads to an overall mixed picture.

This finding comes mixed with the continued and accelerated reduction in the number of affordable rental units (see Figure 20). In the U.S. between 1997 and 1999, the number of units affordable to renters with extremely low incomes dropped by 13 percent and the total number of units affordable to renters with very low incomes fell by 7 percent between 1997 and 1999. Thus, the drop in worst case needs occurred despite a worsening shortage of affordable and available units. This report suggests that these decreases are due to rent increases rather than demolition or other physical changes to housing units.

The findings presented here offer the well-documented dimensions of a national rental-housing affordability crisis. In sum, this data demonstrates that the goal of the 1949 National Housing Act, a decent home and suitable living environment for every American family, has yet to be accomplished. This dubious recognition comes in spite of a strong economy and record low rates of unemployment. It is clear that decent and affordable housing remains out of reach for an unjustifiable amount of American households who find themselves devoting high percentages of their incomes to the maintenance of their housing needs.

DEMOGRAPHIC, SOCIAL AND ECONOMIC CONSIDERATIONS OF THE LOCAL HOUSING MARKET

A look at some of the most salient social and economic factors that affect residential opportunities in Pima County helps to frame the discussion of housing problems. The information provided in this section sets-the-stage from which to understand expected future trends in the housing market. The rapidly growing population coupled by an increasing relative percentage in the minority population—as well as an economy characterized by low-wage service industries—suggests the importance of considering how these factors will impact the housing market.

This section concentrates upon the urban and suburban areas of the eastern portion of the County. The focus of urban activities has taken place in the five incorporated jurisdictions here as well as parts of unincorporated Pima County surrounding Tucson. Included in this region are the Cities of Tucson and South Tucson, the Towns of Marana, Oro Valley and Sahuarita, all of which have experienced a rapid rate of population growth over the past half a century, save for South Tucson (see Figure 21).

Pima County Population Estimates and Projections:

YEAR	Marana	Oro Valley	Sahuarita	South Tucson	Tucson	Unincorp. Pima Co.	TOTAL
1980	1,647	1,489	N/A	6,554	330,537	191,216	**531,443**
1985	1,699	3,012	N/A	5,969	369,007	202,913	**582,600**
1990	2,187	6,670	1,629	5,171	405,390	247,540	**666,880**
1995	5,309	19,657	2,159	5,570	445,299	288,178	**766,172**
2000	15,185	29,530	3,580	5,675	485,790	326,365	**866,125**
2005	29,518	36,321	5,110	6,099	508,521	358,226	**943,795**
2010	46,078	44,190	6,491	6,474	540,307	388,083	**866,125**
2015	62,328	51,228	8,991	6,804	565,736	424,255	**943,795**
2020	76,553	59,388	10,564	7,151	589,899	462,689	**1,031,623**

Source: Pima County Planning; Pima Association of Governments

Figure 21

[20] U.S. Department of Housing and Urban Development (January 2001) *A Report on Worst Case Housing Needs in 1999: New Opportunity Amid Continuing Challenges*. Washington D.C.: Office of Policy Development and Research.

Population Growth

One of the factors fueling the population expansion of Eastern Pima County is that approximately 17,000 individuals make up a positive average net migration to the area annually. For example, from 1998 to 1999, the City of Tucson Planning Department reported that 56,500 people moved into Tucson and 42,650 moved away from the area. This residential turnover effects the stability of communities and the quality of life in many subtle and not-so-subtle ways. For instance, inconsistent student enrollments along with neglected home and neighborhood appearances may reflect communities that are in a constant state of flux.

Diverse Community

The recent release of the U.S. Bureau of Census "Profile of General Demographic Characteristics: 2000" affords a new picture of the County and City's residential population. Particularly noteworthy is the

Percent Race, U.S. Census Bureau 2000 Figures

	Marana	Oro Valley	Sahuarita	South Tucson	**Tucson**	**Pima County**	Phoenix	Maricopa County	State of Arizona
Hispanic or Latino (of any race)	19.6%	7.5%	24.2%	81.2%	**35.7%**	**29.3%**	34.1%	24.8%	25.3%
Not Hispanic or Latino	80.4	92.5	75.8	18.8	**64.3**	**70.7**	65.9	75.2	74.7
One race	78.7	91.5	75.0	18.0	**62.5**	**69.1**	64.4	73.6	73.3
White	71.7	88.2	72.7	9.0	**54.2**	**61.5**	55.8	66.2	63.8
Black or African American	2.8	1.0	0.4	2.0	**4.1**	**2.9**	4.8	3.5	2.9
American Indian and Alaska Native	1.7	0.3	1.0	6.5	**1.6**	**2.6**	1.6	1.5	4.5
Other	4.1	3.1	1.8	1.2	**4.5**	**3.8**	3.7	4.0	3.4
Note: "Other" includes "Asian," "Native Hawaiian and Other Pacific Islander," "Some other race," and "Two or more races."									

Figure 22

sizable proportion of the area's population that self-identified as belonging to the "Hispanic or Latino" category (29.3% in Pima County and 35.7% in Tucson, see Figure 22). This represents a significant increase from the previous 1990 enumeration by about five percentage points (24.5% in Pima County and 29.3% in Tucson), and highlights the cultural diversity seen throughout the area, in which the communities are better described as a mosaic of differing racial characteristics. Along with the local Hispanic population, other minority groups are experiencing substantial growth relative to the current majority white "Anglo" population. The available projections suggest that this trend as well as the overall population expansion will continue well into the County's future.

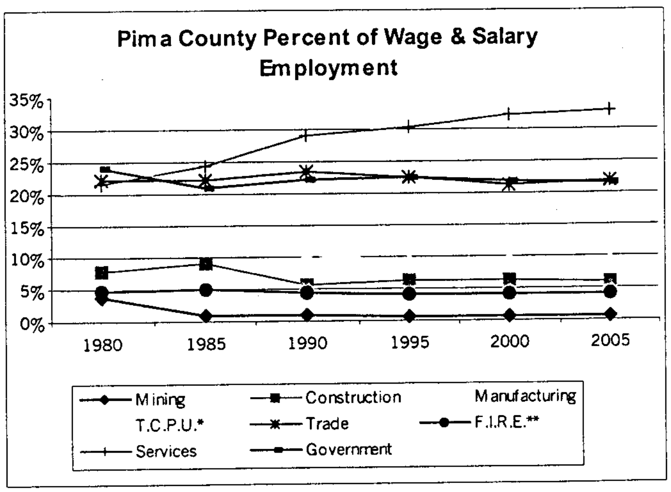

Figure 23

Source: Unofficial figures from Tucson Planning Department/ UofA EBR Program.

*Transportation, Communication and Public Utilities

**Finance, Insurance and Real Estate

Employment and Income

How has this growing community sustained itself? Where do residents go in order to make a living? The answers to these questions are critical in understanding how this area functions as a community. Also, a look at the local economic trends and forecasts may help suggest some of the factors that influence the decisions that residents make and offer insights into the needs for community services.

Arizona experienced the fastest employment growth of any state during the year 2000, and Tucson was the most rapidly growing area in the U.S. for the first half of that year. The Tucson Update 2001[21] reports that Tucson is projected to be the 13th most rapidly growing metro area for employment during the next five years. Currently, a 3.9% employment growth rate for Pima County is being led by the Service-Providing sector followed by Manufacturing; Finance, Insurance, and Real Estate; Mining; and Trade.

Figure 23 shows that while Tucson's Goods-Producing sector (including mining, construction, and manufacturing) has experienced a leveling-off to a more modest growth rate, the Service-Providing industries have and will continue to increase as an accelerated sector of the County's economy. The significance of this observation can be seen by the fact that Service-Providing industries are spread throughout the urban areas in a decentralized manner with a growing presence in suburban settings.

Looking at income-earnings on the scale of the County, a report titled *Pima County Tax Base and Property Valuation*[22] documents that while earnings per employee have appeared to increase substantially, this is due to inflation. When viewed on a constant dollar basis, employee earnings have actually fallen since the late 70s. This negative trend has had somewhat of a correction since the mid-nineties as constant dollar earnings began slowly increasing once again, and this has been attributed to the growth in higher paying manufacturing employment opportunities.

In sum, it has been shown here that the County is experiencing the effects of a broadening economy with expansion in the Service-Providing sectors whose employment opportunities are spreading throughout the community. Also, a recent upturn in earnings has served to ameliorate nearly 25 years of declining real wages for some working residents of Pima County.

Wealth Distribution and Poverty

Compared to other states, Arizona has one of the widest income gaps between the rich and the poor[23]. The social and political consequences of such an economic division are far reaching, presenting a situation in which the low- and moderate- income families see a decrease in their real wage incomes while the top fifth see their incomes rise[24] (Figure 24).

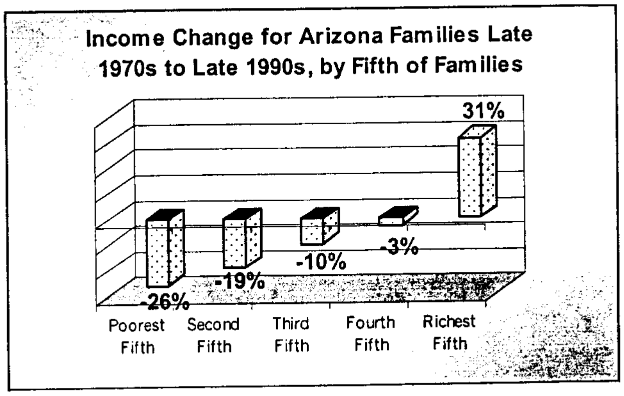

Figure 24
Source: Economic Policy Institute/Center on Budget and Policy Priorities

More recent developments in the Tucson area reported by Marshall Vest[25] point to the growth of high-tech industries and manufacturing employment as helping to narrow this income gap. However, there persists a bimodal distribution of wealth that is reflected by a disproportionate number of residents earning incomes that are insufficient to adequately support themselves and their families.

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21 August Issue

22 Baseman, Bruce (2001) "Pima County Tax Base and Property Valuation." *Memorandum to the Board of Supervisors*, June 11, 2001.

23 Vest, Marshall (1998) "The Widening Income Gap: Are We Getting Better, or Just Bigger?" *Arizona's Economy* Spring Issue: 4-5.

24 Bernstein et al. (2000) *Pulling Apart: A State-by-State Analysis of Income Trends.* Washington D.C.: Center on Budget and Policy Priorities, Economic Policy Institute.

25 (2000) "While Tucson and Phoenix Economies March to the Beat of Different Drummers, The Income Gap Narrows." *Arizona's Economy* Spring Issue: 8-10.

The U.S. Census bureau provides estimates of the percentage of residents that are considered to be living below the poverty line as seen in Figure 25. These estimates clearly show that a higher percentage of Pima County's residents find themselves living in poverty compared to regional and national figures. All of this evidence, furthermore, shows that while this area currently enjoys a robust and growing economy on one hand, a generally "low-wage community" prevails on the other.

Percent of all People in Poverty

	1993	1995	1997
City of Tucson	**22.3%**	**20.3%**	**19.5%**
Pima County	**19.0%**	**16.9%**	**16.2%**
Suburbs of Tucson*	**14.0%**	**12.0%**	**11.5%**
Western Region	15.6%	14.9%	14.6%
United States	15.1%	13.8%	13.3%

Source: U.S. Census, Current Population Survey, Small Area Income and Poverty Estimates Program

Figure 25

* Poverty rates in Suburbs derived from Small Area data

Summary and Overview of Demographic Factors

The preceding discussion provides a context in which to understand how Pima County as a community operates. It shows that Southern Arizona is an interconnected and diverse community with various needs and service demands that will continue to change alongside consistent residential growth.

The evolving nature of community service priorities can be related to the changing demographic and economic factors witnessed in Pima County. For example, the minority Hispanic population is growing relative to the current majority Anglo population. And, economic trends of the past 20 years show an increase in lower-paying service-sector job opportunities that mirrors a decrease in low- and moderate-real wages. While high-tech industries are presently on the rise, which may offer relief to these negative trends.

Another indicator of the situation experienced by Pima County residents is found in poverty rates. A growing gap between high and low incomes has led to a bimodal distribution of wealth which has resulted in a disproportionate amount of residents living in poverty when compared to regional and national statistics.

These demographic and economic trends intersect with land use issues in the arena of residential housing. These rapid growth in suburban settings leave the urban core areas drained of needed reinvestment. The dangers of an overextended community include the inability to respond to the needs of vulnerable populations—elderly and children in poverty, single parent families, minorities, etc.—which suggests the importance of appropriate planning and policy implementation.

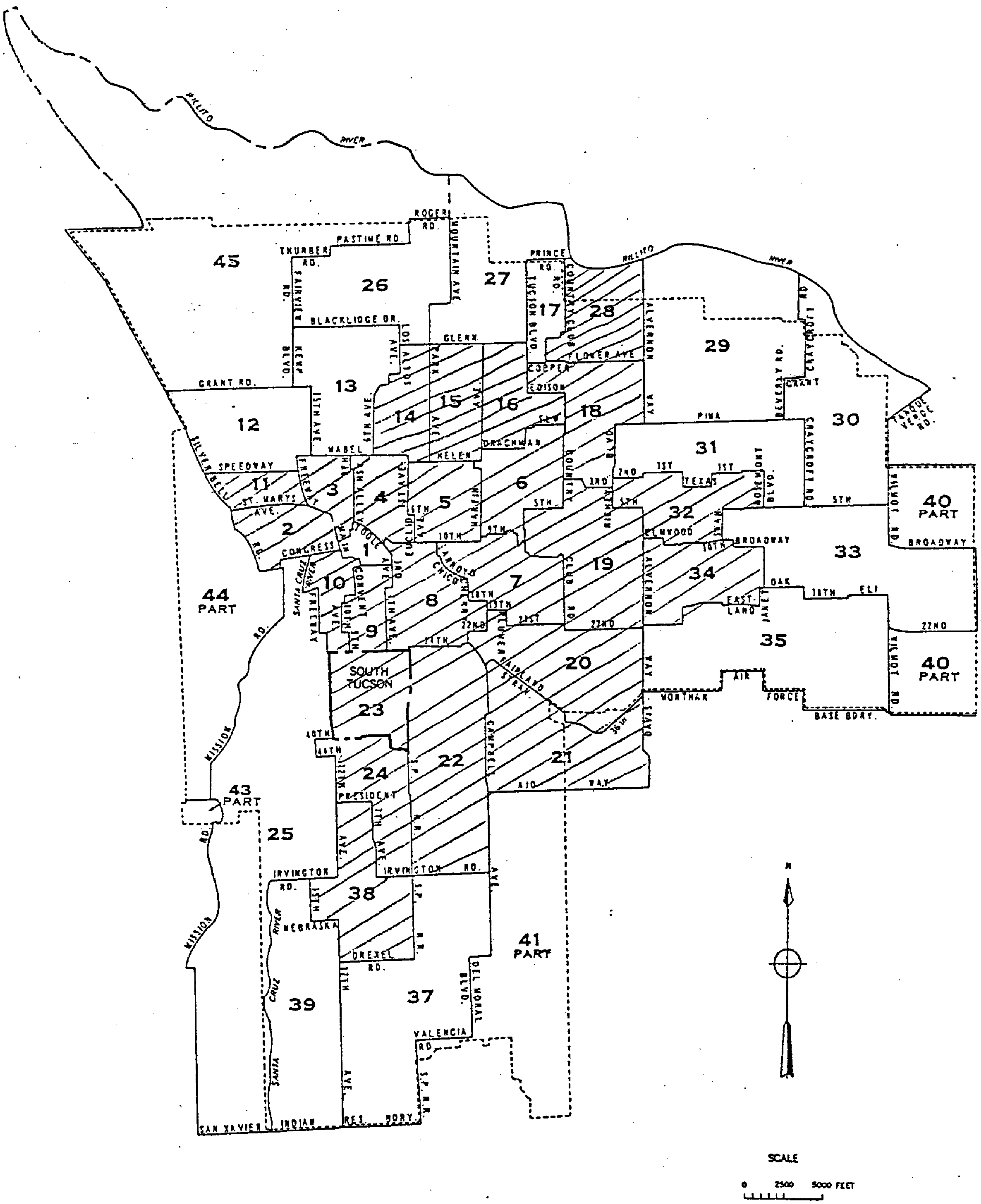
CONCLUSION

The housing market of Pima County and the City of Tucson has changed for the worse from the perspective of working class families. What was formerly a market with a reputation for affordability is now a housing production system that largely fails to serve lower-income residents. This study illustrates the point to the extent that a larger percentage of incomes in poorer areas of this community must be spent on shelter accommodations at the expense of other necessities and discretionary items. Or, stated in another way, income has not kept pace with the rising cost of housing[26]. If housing is becoming an increasing problem of lower and moderate-income residents, then the situation is likely to get worse as the economy slows. In any event, the important role that safe, decent and affordable housing plays in a healthy and balanced community is paramount. Accordingly, this market deserves high priority in the public policy arena.

[26] A very recent local article addresses this issue from the findings of a National Association of Home Builders study by Goldberg, Irwin M. and Blake Morlock. November 22, 2001. "Squeeze on home buyers." *The Tucson Citizen.*

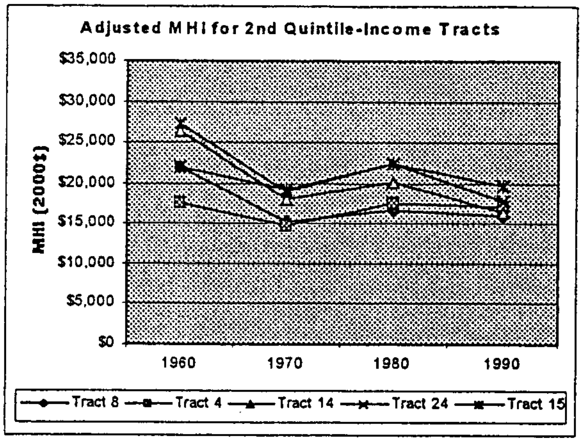
CENSUS TRACTS IN THE TUCSON SMSA

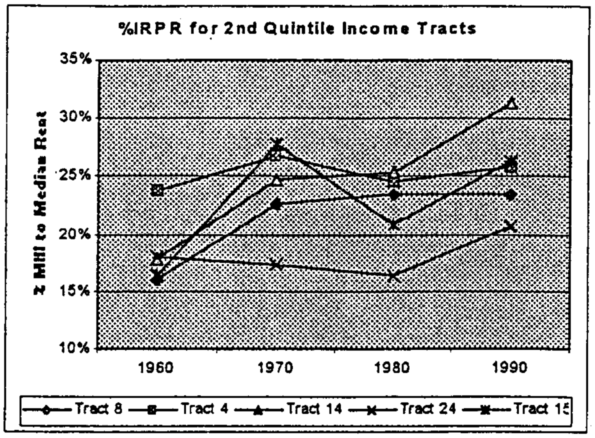
INSET MAP - TUCSON CITY AND ADJACENT AREA



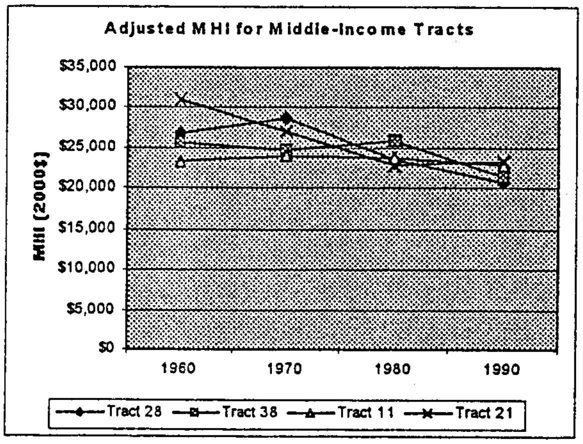
Appendix A:
Hatched areas include the census tracts analyzed

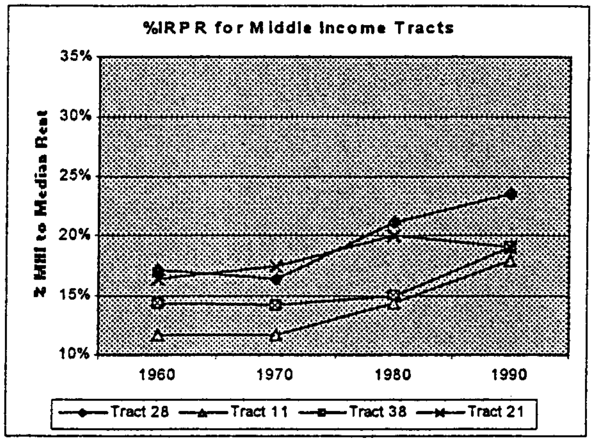
Appendix B:



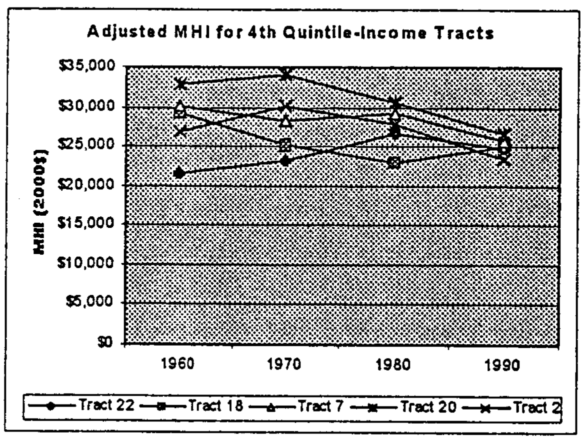


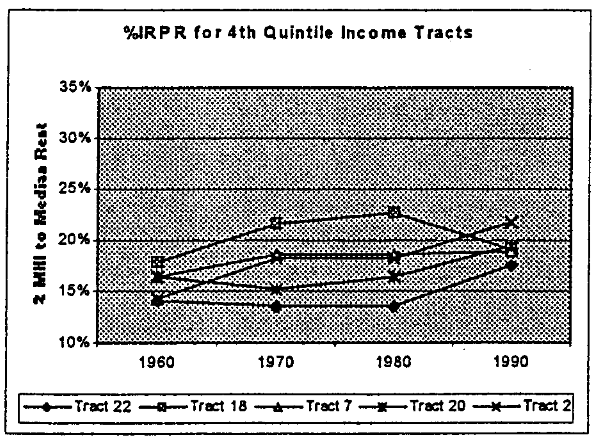
2nd Quintile-Income Tracts MHI and IRPR Indices





Middle Quintile-Income Tracts MHI and IRPR Indices





4th Quintile-Income Tracts MHI and IRPR Indices

Appendix C:

Median Household and Family Income Indices

Median Income:

As a measure of central tendency, the median index of a group of data divides the distribution into two equal parts. Generally, by reporting the median value of a group of data, one is lessening the effects of extreme values on the average of the total. In this study, the median values of household and family incomes are the observed variables.

Median Household Income (MHI):

This value consists of the incomes of all the persons who occupy a given housing unit. This means that a family, unrelated individuals or an individual might constitute household. In fact, in the 1960 and 1970 Census Household Incomes were reported as the incomes of "Families and unrelated individuals." This demographic distinction results in the case that many households consist of only one person, and therefore the average household income is usually less than an average family income. In this report, households, in all their diversity, are taken as the basic economic unit of a community; and, therefore when "incomes" are discussed on the level of the County, City or Tract, this will be referring to the MHI, unless otherwise stated as referring to the following:

Median Family Income (MFI):

This demographic consists of two or more persons in the same household who are related to each other. This distinction leads to fewer families than households counted in an area with usually higher incomes.