APPLIED ECONOMICS

CITY OF SCOTTSDALE
GENERAL PLAN ECONOMIC ANALYSIS:
DEVELOPMENT FORECAST UPDATE

PREPARED FOR:

CITY OF SCOTTSDALE
7447 E. INDIAN SCHOOL ROAD
SCOTTSDALE, ARIZONA 85251

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EXECUTIVE SUMMARY

This report transmits an update of development forecasts that were prepared by Applied Economics for the City of Scottsdale General Plan Economic Analysis in 2010. The update includes revised population and housing data for 2010 based on the results of the decennial Census, and new population and employment forecasts based on updated regional projections developed by the University of Arizona. This report carries forward much of the documentation of the approach and data used in the original analysis to provide context for the projections, but it has not been updated other than to accommodate the revised 2010 levels.

The purpose of this analysis is to project levels of population and employment growth through the year 2030 based on market demand, and the competitive position of Scottsdale for certain types of development. These forecasts are designed to be used in developing a realistic, long-term land use element for the General Plan, and for other general planning purposes by the City of Scottsdale. Basing the future land use plan on market-driven projections helps the City maximize its potential by making the best use out of the limited amount of vacant land remaining for development.

Projections of residential and nonresidential growth are derived from a detailed analysis of development by type that is generally consistent with the land use classifications used in the City's proposed 2011 General Plan land use map. In the case of residential, projections were developed for rural residential, suburban residential and urban residential components. For nonresidential, most employment categories were further sub-divided to improve the quality of the projections, capturing the differences that exist between the components and between the subareas within the City of Scottsdale

The development forecasts detail housing and population, as well as employment demand by type for the south, central and north subareas of the City of Scottsdale as shown in **Map 1**. These regions have been used elsewhere in the study to evaluate economic development competitiveness and fiscal sustainability.

The number of housing units, or the amount of additional building square footage, was used to drive projections of absorbed acres by land use, and adjustments were made to the 2015 projection to account for the unusually high vacancy level currently being experienced. With employment (and likely population) levels declining significantly over the past 2 to 3 years, the projections for 2015 often do not reflect much new construction. Actual data for the changes occurring between 1990 and 2010 are provided, and has been updated to be consistent with the 2010 Census. Projections for five-year time periods through 2030 are also shown in the report. The following sections present the results of this analysis for each land use category.

The final results of the analysis, presented in **Table 1**, show the City of Scottsdale adding about 15,000 new housing units over the next 20 years, increasing the population from about 218,000 people in 2010 to some 255,000 people in 2030. While significant, the growth in housing units and population will pale in comparison with employment growth. The increase from about 172,000 workers in 2010 to about 249,000 workers in 2030 will substantially increase the jobs/housing ratio for the City of Scottsdale, which is already well above the metropolitan area average. Increasing the ratio from about 1.39 jobs per housing unit in 2010, to 1.79 jobs per housing unit in 2030 will likely have implications for traffic congestion as more workers commute into the City of Scottsdale from other parts of the Phoenix metropolitan area.

In all, the development forecasts imply the absorption of about 7,400 acres of land for new development between 2010 and 2030. Of this, about 5,400 acres would be residential and 2,000 would be nonresidential. In the case of residential development, vast majority of acreage will be absorbed at rural residential densities in the north subarea, with the central subarea generating more of the new units. The south subarea has very little undeveloped land, yet it contains a significant number of developed properties at prices that could be transformed into redevelopment potential in a recovering economy. Nonresidential land absorption will be concentrated nearly evenly in office, retail and hotel/resort uses, together comprising just over 1,600 acres, or about 81 percent of the non-residential land demand through 2030.

The development forecasts, and the land use demands they imply, are subject to variation due to the many factors driving demand in the future. However, we believe that these projections provide a good idea of the magnitude and proportion of change that can be expected in the long term based on the available information, regardless of the actual level of population and employment in any particular year.

TABLE 1
SUMMARY OF DEVELOPMENT FORECASTS

	2010	2015	2020	2025	2030
Total Residential Inventory (Units)					
Scottsdale	124,159	126,276	131,378	135,689	139,257
South Scottsdale	45,385	45,673	46,525	47,238	47,879
Central Scottsdale	60,101	61,268	64,399	67,043	69,367
North Scottsdale	18,673	19,335	20,454	21,408	22,010
Occupancy Rates					
South Scottsdale	82.9%	85.0%	86.0%	87.0%	87.0%
Central Scottsdale	82.8%	86.0%	88.0%	89.0%	90.0%
North Scottsdale	74.9%	75.0%	76.0%	77.0%	78.0%
Households					
Scottsdale	101,408	106,013	112,228	117,249	121,253
South Scottsdale	37,635	38,822	40,012	41,097	41,655
Central Scottsdale	49,793	52,691	56,671	59,668	62,430
North Scottsdale	13,980	14,501	15,545	16,484	17,168
Population per Household					
South Scottsdale	2.01	2.00	1.99	1.98	1.97
Central Scottsdale	2.20	2.19	2.17	2.16	2.15
North Scottsdale	2.35	2.33	2.30	2.28	2.26
Total Resident Population					
Scottsdale	217,757	226,419	238,542	247,942	255,102
South Scottsdale	75,538	77,530	79,507	81,256	81,947
Central Scottsdale	109,360	115,146	123,225	129,093	134,393
North Scottsdale	32,859	33,743	35,810	37,593	38,763
Total Employment					
Scottsdale	172,390	199,762	222,053	237,527	249,132
South Scottsdale	60,085	65,370	69,946	73,084	75,617
Central Scottsdale	100,925	117,989	132,891	142,354	149,273
North Scottsdale	11,380	16,403	19,216	22,089	24,242
Jobs/Housing Ratio					
Scottsdale	1.39	1.58	1.69	1.75	1.79
South Scottsdale	1.32	1.43	1.50	1.55	1.58
Central Scottsdale	1.68	1.93	2.06	2.12	2.15
North Scottsdale	0.61	0.85	0.94	1.03	1.10
Metro Area	1.11	1.12	1.13	1.15	1.16
Absorbed Land Area (Acres)					
Scottsdale		1,274.63	3,763.07	5,929.18	7,387.82
South Scottsdale		49.58	196.60	313.73	412.08
Central Scottsdale		387.41	1,413.75	2,227.74	2,842.45
North Scottsdale		837.64	2,152.71	3,387.71	4,133.29

Source: Applied Economics, 2011.

1.0 INTRODUCTION

This report transmits an update of development forecasts that were prepared by Applied Economics for the City of Scottsdale General Plan Economic Analysis in 2010. The update includes revised population and housing data for 2010 based on the results of the decennial Census, and new population and employment forecasts based on updated regional projections developed by the University of Arizona. This report carries forward much of the documentation of the approach and data used in the original analysis to provide context for the projections, but it has not been updated other than to accommodate the revised 2010 levels.

The analysis projects population and employment through the year 2030 based on overall market demand (projected metropolitan area growth), and the competitive position of Scottsdale for attracting certain types of development. Basing the future land use plan on market-driven projections helps the City maximize its potential by making the best use out of the limited amount of vacant land remaining for development. These forecasts are designed to be used to as a basis for the land use element for the General Plan and for other general planning purposes by the City of Scottsdale.

The development forecasts detail housing and population, as well as employment demand by type for the south, central and north subareas of the City of Scottsdale as shown in **Map 1**. These regions have been used elsewhere in the study to evaluate economic development competitiveness and fiscal sustainability. The south subarea includes the well-established portion of the City of Scottsdale south of Indian Bend Road, containing downtown and the historical core tourism, government and medical services activity in the community.

The central subarea, which extends north from Indian Bend Road to Deer Valley Road, encompasses the portion of the City that has experienced the greatest amount of growth and development over the past 20 to 30 years. In addition to being the location of one of the metropolitan areas largest employment nodes at Scottsdale Airpark / Perimeter Center, the central subarea features a large inventory of Class-A office buildings, upscale residential neighborhoods and world-class resorts and entertainment venues. Developable land in the central area is becoming limited, with some of the largest available tracts still owned by the State Land Department also as shown in **Map 1**.

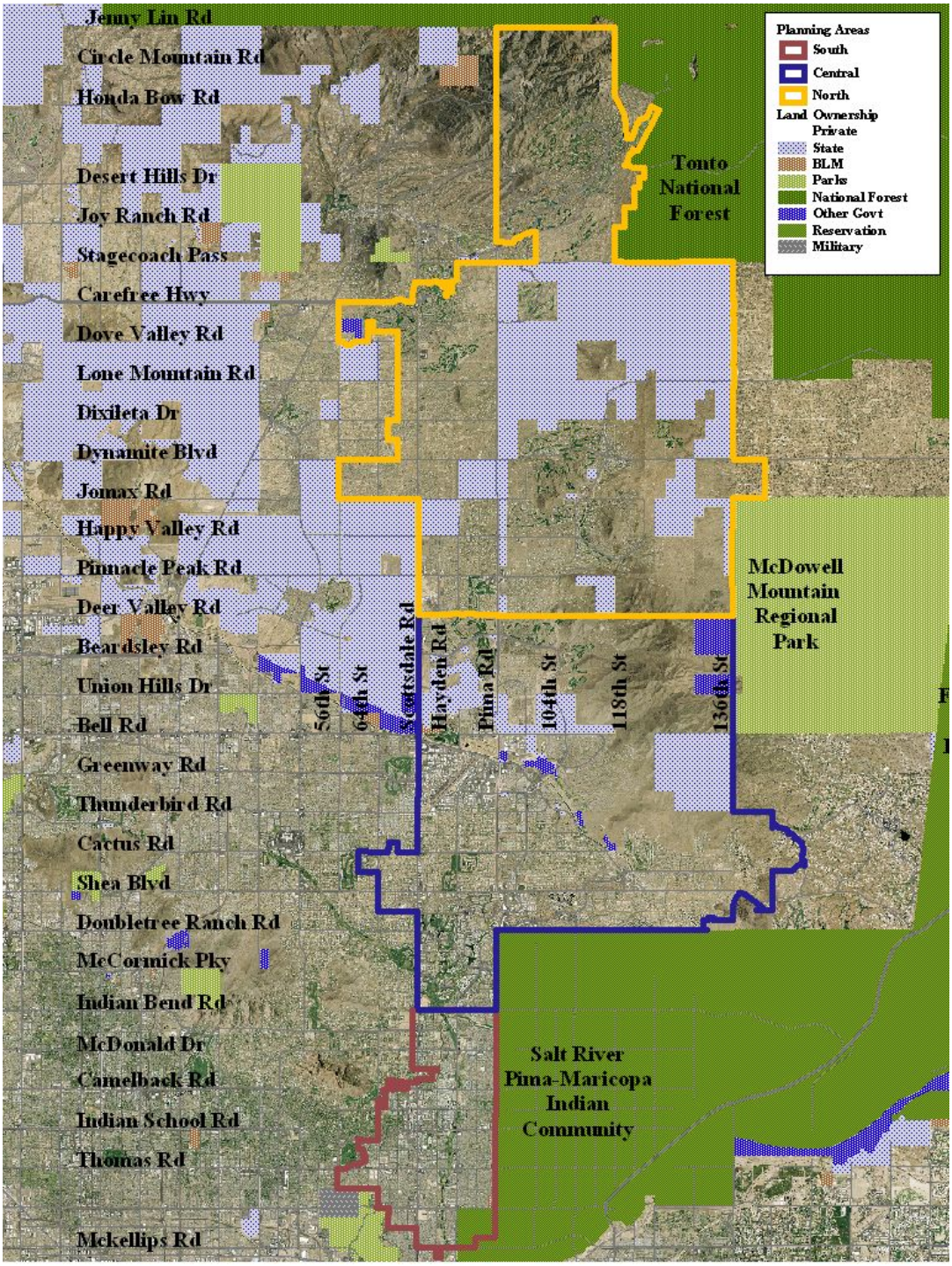
Finally, the north subarea includes the portion of the City north of Deer Valley Road. This subarea is characterized by very low density, high end residential and resort-style development and sweeping Sonoran vistas. While the area contains significant areas of vacant land, much of that land is held by the State Land Department and large parts of it are planned as preserve. The area has limited commercial development potential due to the inavailability and cost of land, lack of access to consumer markets and workforce, and incompatibility with existing uses and preservation plans. However, the demand generated for goods and services by the residents of the north subarea is important to supporting commercial development in the central subarea, as is the supply of executive-level housing it provides to support growth in the central subarea office market.

1.1 General Approach

The development forecasts utilize metropolitan area projections of employment by industry from the University of Arizona to drive the change in nonresidential square footage and the number of supportable housing units in the metropolitan area between 2010 and 2030. Historical data on the addition of nonresidential square footage by type, and housing units by type from 1990 through 2010 were used as the primary basis for determining the share of metropolitan area growth that could reasonably be expected to occur in the City of Scottsdale. For residential uses, the implied growth was constrained by the amount

of available land while for nonresidential uses it was not. It was determined that sufficient development and redevelopment potential existed in the City to meet likely levels of demand by commercial users through 2030. Extension of these past trends takes into consideration Scottsdale's current competitive position and the amount of land available for future development and redevelopment. In the case of residential development, this appears to severely constrain the amount of growth that could be expected in the future.

MAP 1
GENERAL PLAN ECONOMIC ANALYSIS
STUDY SUBAREAS



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Updated metropolitan area forecasts used in the analysis reflect the much lower levels of employment being experienced at present, and more modest long term projections, though they still include a significant resurgence of growth after 2015. The methodology employed to apply these projections to Scottsdale and its subareas uses the likely growth in basic employment categories including industrial, office and tourism as the fundamental driver of housing unit demand. Basic employment growth along with the supply-constrained projected housing growth, are then used to drive the projections of retail and public employment growth. In the case of retail development and employment, the projections are driven by the increase in the resident population, in basic employment, and in tourism. While the majority of retail demand growth is driven by the resident population, the other components also generate significant demand. This is especially true in Scottsdale due to the strong employment base and the level of tourism expenditures.

The Development Forecast Analysis provides planning information for the City of Scottsdale, and each of the three subareas for five-year periods from 2015 through 2030. The information includes:

- Housing units by type;
- Resident population;
- Nonresidential building square footage by land use;
- Employment by land use;
- Gross acres absorbed by land use (residential and nonresidential); and
- Housing demand by price range.

The information and observations contained in this report are based on our present knowledge of the components of development, and of the current physical, socioeconomic and fiscal conditions of the affected areas. Projections made in this report are based on hypothetical assumptions and current long term regional forecasts. However, even if the assumptions outlined in this report were to occur, there will usually be differences between the projections and the actual results because events and circumstances frequently do not occur as expected. The forecasts resulting from this analysis are based on the best available information and are intended to aid the City of Scottsdale in making decisions relative to the future land use planning. The forecasts provided are not suitable for general market feasibility analysis and should not be used for such. Applied Economics is under no obligation to update this study beyond the date of its release.

1.2 Report Organization

Section 2.0 details the procedures and data sources used to assemble the historical (1990 to 2010) residential housing, nonresidential development, demographic and economic data used in the analysis; selected data elements used to determine Scottsdale's competitive position; and the metropolitan area forecasts used to drive the projections through 2030. Section 3.0 details demand-driven development projections for nonresidential markets, while Section 4.0 presents projections for residential development, both constrained and unconstrained. Finally, Section 5.0 summarizes the land use planning implications of the development forecasts.

2.0 DATA COLLECTION

This section of the report describes the data used to create the development forecasts. This includes land use data, historical (1990 to 2010) residential housing, nonresidential development, demographic and economic data used in the analysis; selected data elements used to determine Scottsdale's competitive position including current market indicators; and the metropolitan area forecasts from the University of Arizona used to drive the projections through 2030.

2.1 Historical Trends Data

Historical data for Scottsdale and its subareas was drawn from a variety of sources including the U.S. Census Bureau, Maricopa Association of Governments (MAG), Maricopa County Assessor's Office and the City of Scottsdale. The goal was to examine growth trends by land use category, by city subarea over the past 20 years to establish a pattern on which to base projections for the next 20 years.

2.1.1 Land Use

The land use categories used, shown in **Table 2** below, were based on those proposed by the City in the 2011 conceptual land use map. Some differences in the land use categories were necessary for modeling purposes, such as the combining of the neighborhood and community retail categories due to the lack of detail distinguishing the split in demand in the future, or the fact that auto sales uses are hard to combine with other types of commercial property.

TABLE 2
DEVELOPMENT FORECAST LAND USE CATEGORIES

Residential

Rural Neighborhoods
Suburban Neighborhoods
Urban Neighborhoods

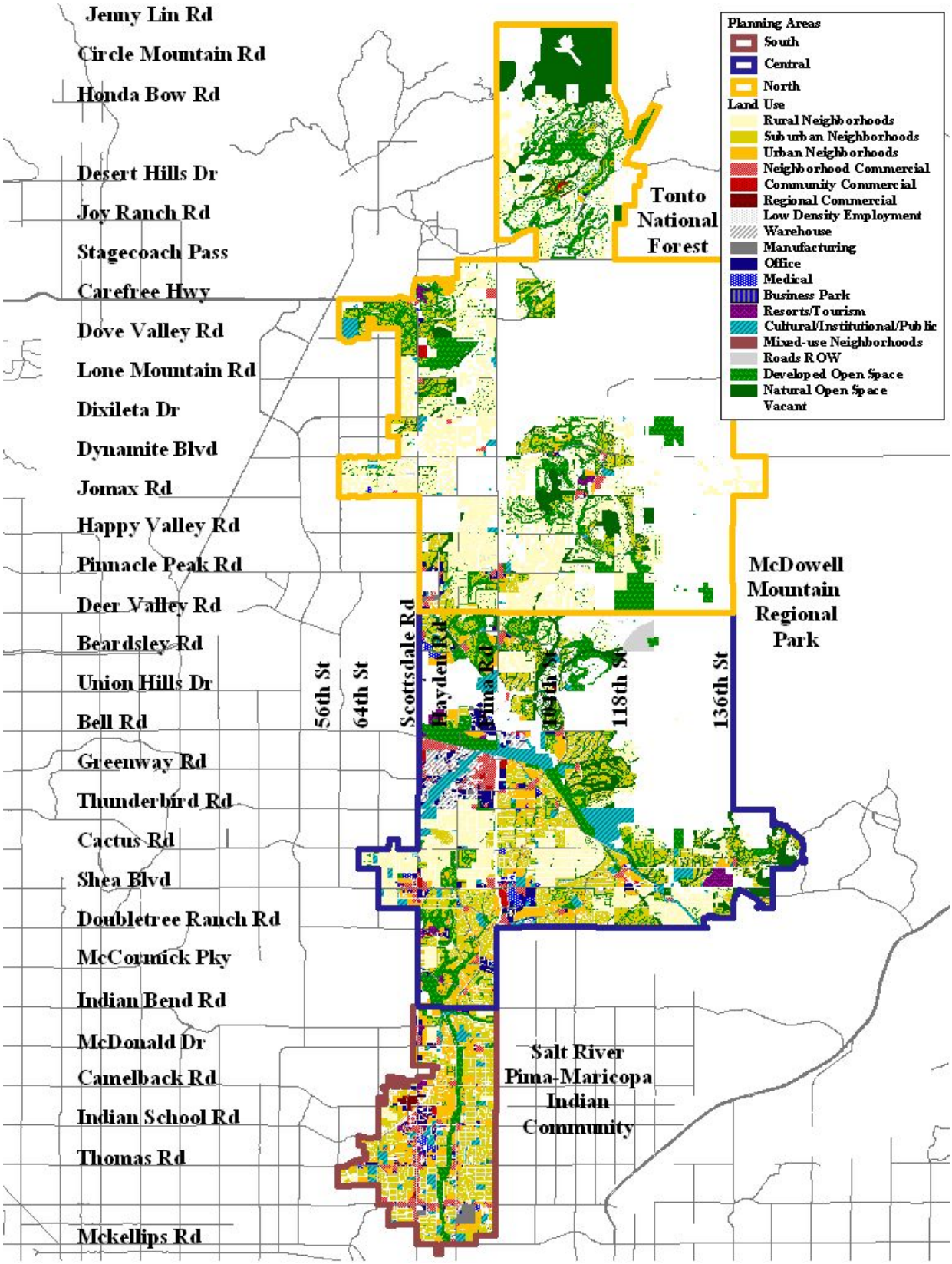
Non-residential

- Retail
  - Neighborhood Commercial
  - Community Commercial
  - Regional Commercial
  - Automotive Sales
- Industrial
  - Warehouse
  - Manufacturing
- Office
  - Standard Office
  - Medical Office
  - Business Park
- Resorts Tourism
- Public & Institutional
  - Public
  - Cultural/Institutional
- Other
  - Mixed-Use Neighborhoods
  - Low Density Employment
  - Roads ROW
  - Developed Open Space
  - Natural Open Space
  - Vacant/Agriculture

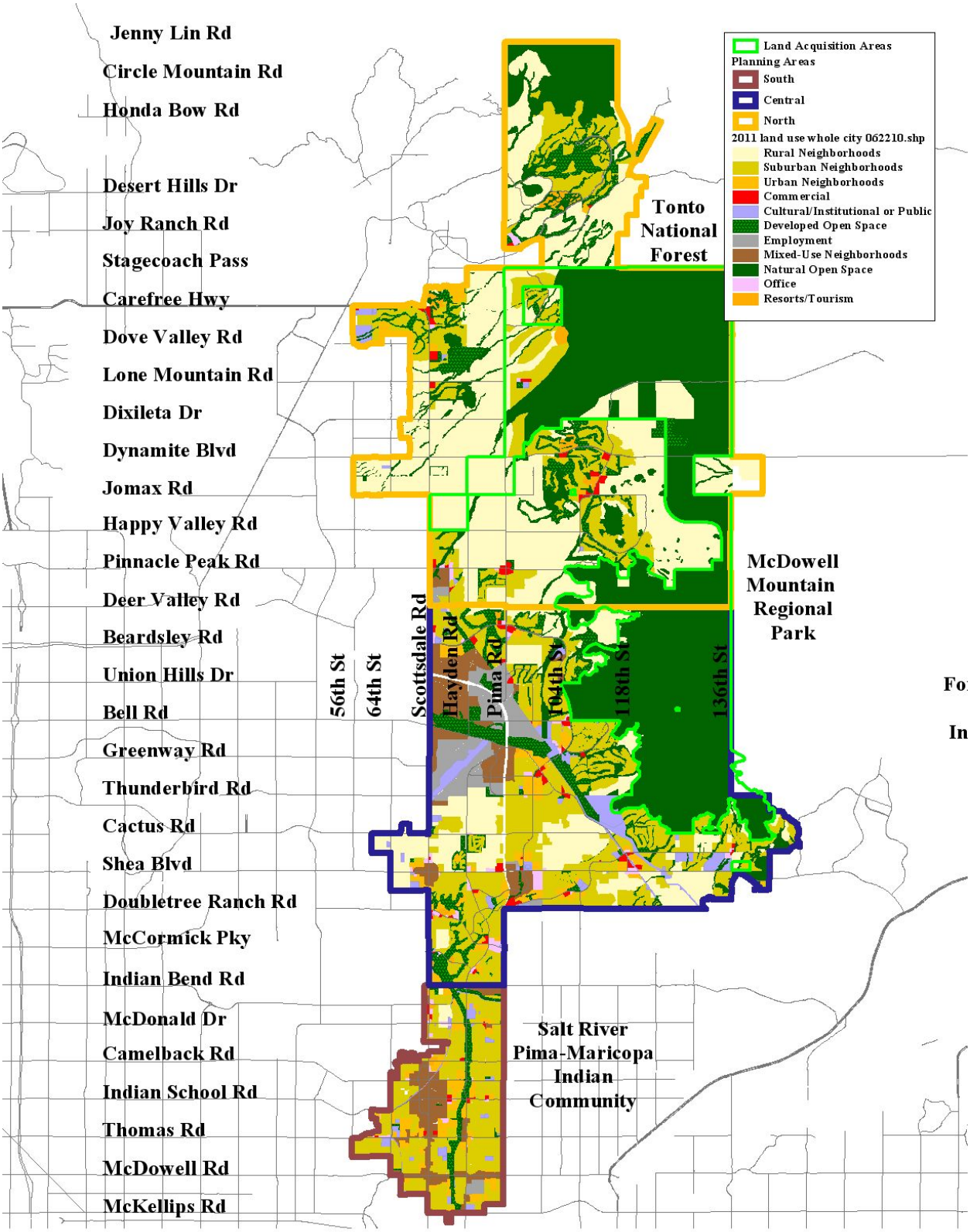
Land use codes were assigned using two methods: one based on MAG Land Use codes and another based on a correlation table relating Assessor's Land Use Codes to Scottsdale General Plan Land Use Codes. After examination of both, it was determined that the Assessor's Land Use Codes would provide the best detail for assigning Scottsdale General Plan Land Use Codes. **Map 2** shows the assignment of these codes to existing developed parcels in the City.

Future land use was determined by applying future land use assumptions to vacant land parcels, and State Land areas (which do not have parcels). The assignment of future land use was based on MAG's Future Land Use Plan, and the Conceptual 2011 General Plan Land Use provided by the City of Scottsdale as shown in **Map 3**. The future land use data was used to measure the supply of developable land, which was a critical factor especially for the residential development forecasts.

MAP 2
EXISTING LAND USE



MAP 3
FUTURE LAND USE



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2.1.2 Built Space Inventory

After land use, the next major component of the data collection entailed assembling a twenty-year time series of residential and nonresidential development. Residential development is measured in terms of housing units by type. Housing inventory data from the 1990 Census was used as the base inventory, and then the number of units added in each five year time period were measured to capture market trends. For single family housing, the unit additions were based on data from Assessor's records which provided a direct link to detailed information for each unit. For multifamily housing it was necessary to use MAG building permit completions because the Assessor's information does not consistently report the number of units in each multifamily structure. For this update, these housing unit additions were adjusted to be consistent with the 2010 Census, which uses a slightly different definition for housing units.

The residential development data, summarized in **Table 3**, shows Maricopa County adding nearly 600,000 units over the past 20 years, representing a 60 percent increase in total inventory. During the same period, the City of Scottsdale housing inventory increased from about 71,700 units to about 124,200 units, an increase of 73 percent, or slightly faster than the County as whole. However, most of the growth in Scottsdale occurred during the first ten year period when the community captured between 12 and 14 percent of all housing unit additions. Since then, the annual rate of growth in Scottsdale has trailed that of the County (by a two to one margin since 2005), and Scottsdale's capture of new units has fallen to about 4.4 percent of the County total. Much of this decline is the natural result of the lack of available land, but the rate of the drop-off was accelerated by high land prices in the City. However, this is also part of the City's appeal, as is evidenced by relatively strong growth continuing in the north subarea into the 2005 to 2010 period.

TABLE 3
HISTORICAL TRENDS IN HOUSING UNIT INVENTORY

	1990	1995	2000	2005	2010
Scottsdale	71,744	84,756	105,673	118,773	124,159
South	39,586	41,502	42,916	44,283	45,385
Central	29,509	37,580	50,139	57,522	60,101
North	2,649	5,674	12,618	16,968	18,673
Other	880,307	960,703	1,107,822	1,286,395	1,402,869
Total	952,051	1,045,459	1,213,495	1,405,168	1,527,028
Scottsdale Share	7.54%	8.11%	8.71%	8.45%	8.13%
Annual Percent Change					
Scottsdale		3.39%	4.51%	2.36%	0.89%
South		0.95%	0.67%	0.63%	0.49%
Central		4.95%	5.94%	2.79%	0.88%
North		16.46%	17.33%	6.10%	1.93%
Other		1.76%	2.89%	3.03%	1.75%
Total		1.89%	3.03%	2.98%	1.68%
Percent of Change					
Scottsdale		13.93%	12.45%	6.83%	4.42%
South		2.05%	0.84%	0.71%	0.90%
Central		8.64%	7.47%	3.85%	2.12%
North		3.24%	4.13%	2.27%	1.40%
Other		86.07%	87.55%	93.17%	95.58%
Total		100.00%	100.00%	100.00%	100.00%

Sources:
U.S. Bureau of the Census; Maricopa Association of Governments; Maricopa County Assessor; Applied Economics.

In the case of nonresidential development, the current inventory and historical levels of built space by geographic area and time period were derived by processing information from the Assessor's Commercial Cost master file, along with the GIS and parcel data provided by the City of Scottsdale. Assessor's property use codes and improvement descriptions were used to assign parcels into the land use categories being used for this study. Once the parcels in Scottsdale had been identified, and assigned a subarea code, it was possible to tally square footage, building area and building value for each type of development directly from parcel data. This results in slightly more square footage than is often reported by real estate brokerages and research companies since it includes all building regardless of size, age, location or ownership.

The aggregation of space added by type by subarea by time forms the initial basis for the nonresidential development forecasts. In the next section, detailed information for each land use type (and in some cases sub-type) is reported and used in the analysis. A summation of built space in all of the major non-government uses, including industrial, office, retail and hotel/resort space is shown in **Table 4**. The inventory includes some 679 million square feet of built space, up about 93.1 percent between 1990 and 2010. This growth rate far outstrips the rate of growth of residential inventory (60.0 percent), and of wage and salary employment that increased about 65.6 percent during the same period. Like housing, Scottsdale's share of the growth in nonresidential space peaked in the 1995 to 2000 period, but unlike housing nonresidential growth remained fairly strong after 2000, far exceeding the recent rates of housing inventory growth. The rate of growth of nonresidential space in both the central and north subareas continues to match or exceed that of the County as a whole.

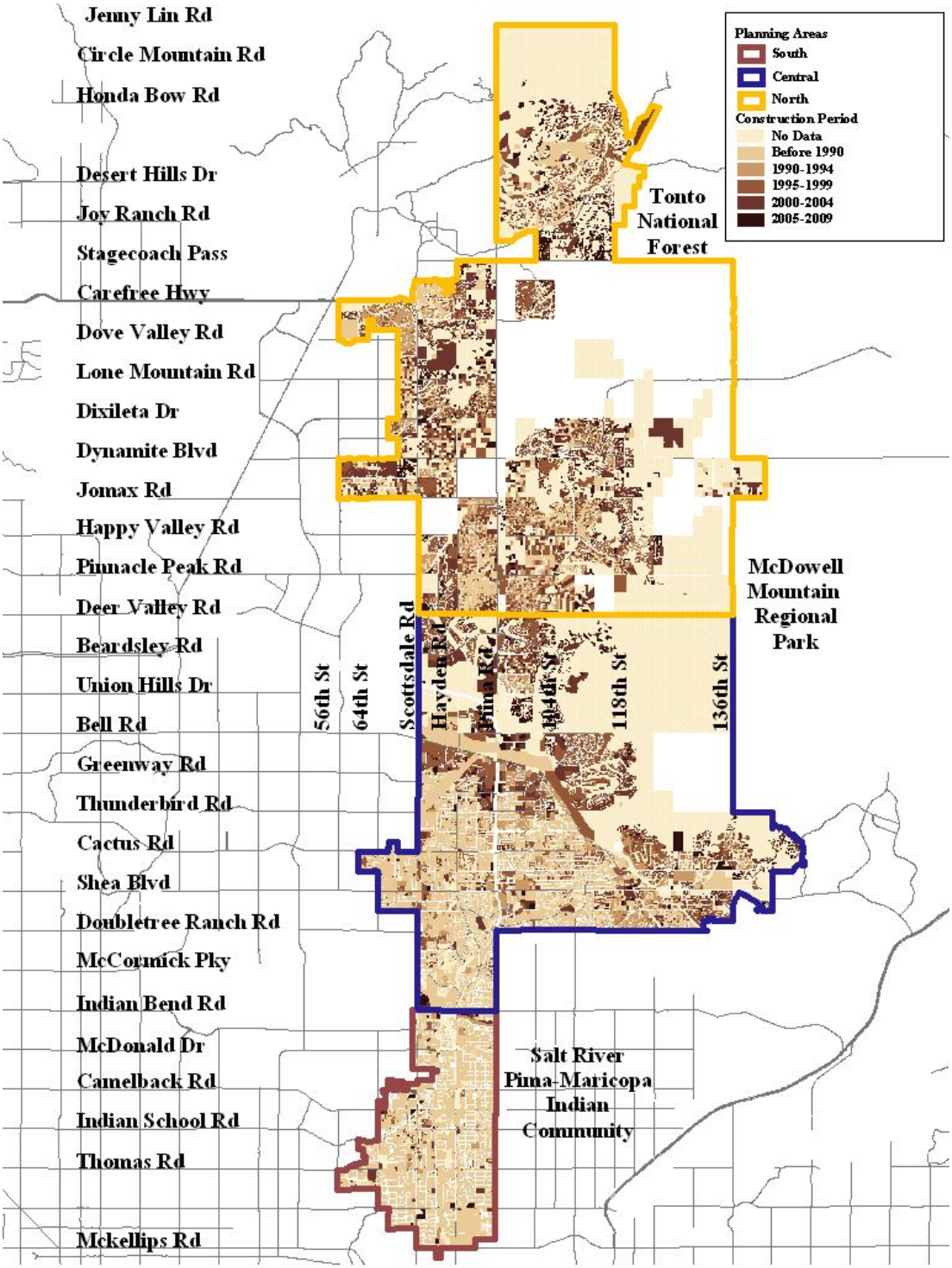
TABLE 4
HISTORICAL TRENDS IN NONRESIDENTIAL INVENTORY
(Millions of Square Feet)

	1990	1995	2000	2005	2010
Scottsdale	27.04	31.24	46.23	55.95	62.96
South	14.02	15.48	18.04	18.61	20.17
Central	12.39	14.82	26.02	34.23	38.87
North	0.63	0.94	2.17	3.11	3.92
Other	324.56	365.06	452.58	532.81	616.14
Total	351.61	396.30	498.81	588.76	679.09
Scottsdale Share	7.69%	7.88%	9.27%	9.50%	9.27%
Annual Percent Change					
Scottsdale		2.92%	8.16%	3.89%	2.39%
South		2.00%	3.11%	0.62%	1.62%
Central		3.63%	11.92%	5.64%	2.58%
North		8.40%	18.26%	7.49%	4.70%
Other		2.38%	4.39%	3.32%	2.95%
Total		2.42%	4.71%	3.37%	2.90%
Percent of Change					
Scottsdale		9.38%	14.63%	10.81%	7.76%
South		3.27%	2.50%	0.63%	1.73%
Central		5.42%	10.93%	9.13%	5.14%
North		0.70%	1.20%	1.05%	0.89%
Other		90.62%	85.37%	89.19%	92.24%
Total		100.00%	100.00%	100.00%	100.00%

Sources:
Maricopa County Assessor; City of Scottsdale; Applied Economics, 2010.

The progression of development in the City of Scottsdale from both the residential and nonresidential uses over the past 20 years is illustrated geographically in **Map 4**. The map clearly shows the northward advancement of the City over time, and the large distances that separate some relatively developed areas from the rest of the community.

MAP 4
PROGRESSION OF DEVELOPMENT IN SCOTTSDALE: 1990 – 2010



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2.1.3 Land & Improvement Values

Data extracted for the built space inventory also provided information on land and building values by type and age of property for Scottsdale, the study subareas, and the balance of Maricopa County. While these are full cash values from the Assessor, which do not necessarily reflect market prices, they provide a good understanding of how prices vary across Scottsdale subareas, and compare with other parts of the urban area. As shown in **Table 5**, improvements in Scottsdale are consistently more valuable than in other parts of the County. The difference is driven by the relatively higher overall quality of buildings found in Scottsdale, and by market demand generated by the types of users who seek the prestige, lifestyle and amenities offered by the community.

TABLE 5
IMPROVEMENT VALUE PER SQUARE FOOT

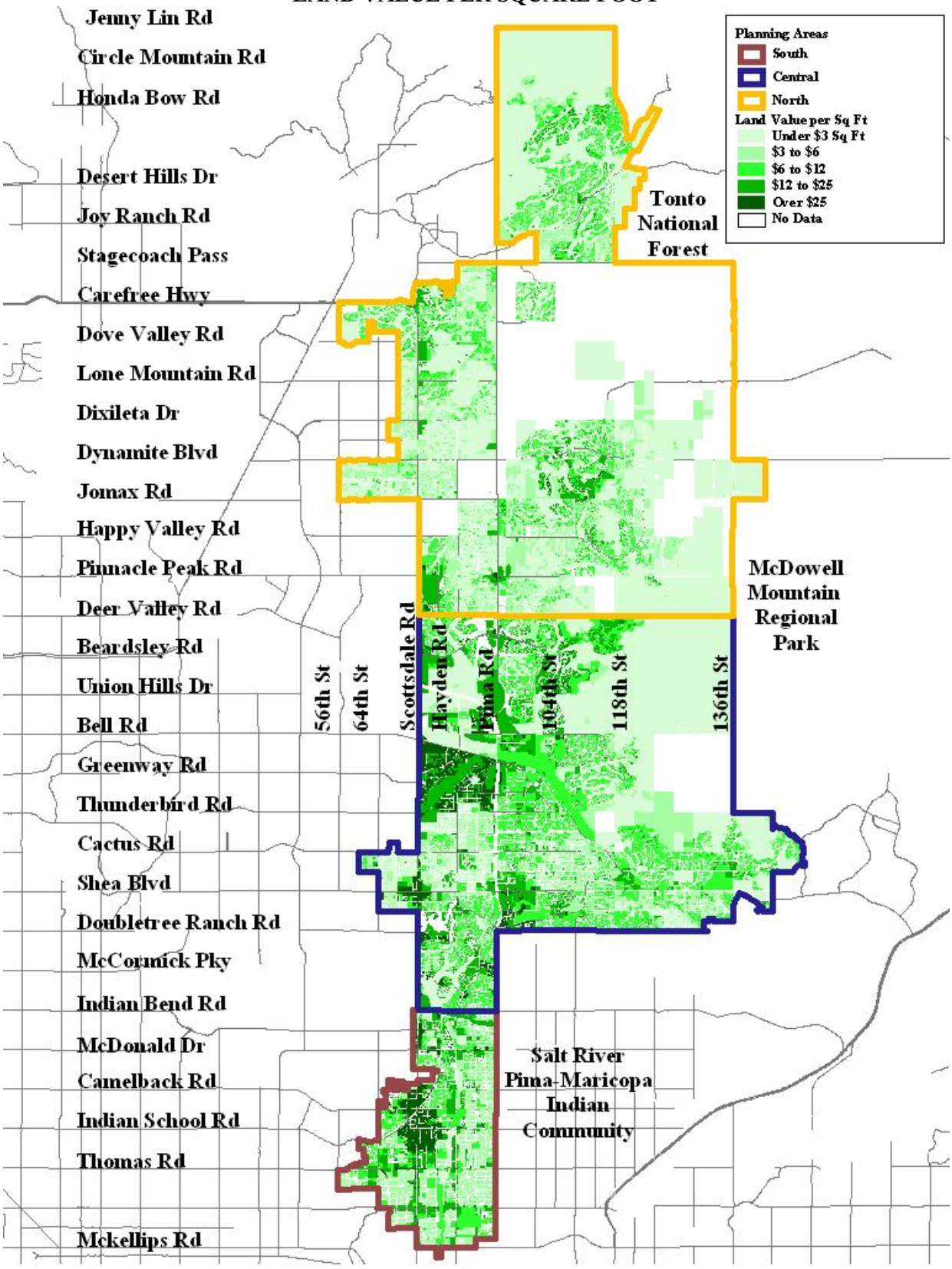
	City of	Scottsdale Subareas			Outside	Difference
	Scottsdale	South	Central	North	Scottsdale	from Scottsdale
Retail						
Neighborhood Commercial	$84	$61	$93	$105	$77	7.99%
Community Commercial	$64	$51	$70	$83	$56	13.53%
Regional Retail	$109	$109	$0	$0	$61	78.74%
Industrial						
Warehouse/showroom	$42	$28	$48	$40	$41	2.99%
Manufacturing	$62	$36	$67	$65	$46	35.65%
Office						
Standard	$111	$102	$116	$115	$97	14.55%
Medical	$130	$94	$145	$133	$110	18.41%
Hotel & Resort	$126	$109	$124	$187	$107	18.06%

Sources: Maricopa County Assessor; City of Scottsdale; Applied Economics, 2010.

The most striking example of the value of choice is evident in the industrial market. The difference between the value of warehouse space in Scottsdale and the balance of the County is very small, while the differential for manufacturing is very large. Much of Scottsdale's manufacturing base is driven by small and/or specialty companies, whose location decision is largely attributable to how the community appeals to entrepreneurs and others in the position to make location decisions. The impact of this on prices is a double-edged sword, supporting property values but making the City competitive for a limited niche of employers.

The same basic value relationships are also exhibited for land. **Map 5** shows the land value per square foot within the City of Scottsdale. Land full cash values shown on the map range widely, from less than $3 per square foot to more than $25 per square foot. The Downtown Scottsdale core and the Airpark area exhibit the highest land values, while older residential areas in the southeast corner of the City exhibit some of the lowest.

MAP 5
LAND VALUE PER SQUARE FOOT



2.2 Current Market Conditions

This portion of the data collection task involved information on current residential and nonresidential real estate market conditions, forecasts and structural changes in the tourism industry, and a broad-brush assessment of redevelopment potential within the City of Scottsdale.

2.2.1 Real Estate Market Conditions

Both the residential and nonresidential real estate markets in the Phoenix metropolitan area are currently in dismal condition with high vacancy rates and falling prices and rents. These conditions are important to the Development Forecast Analysis since they will very likely delay additional development in the City of Scottsdale for a significant period of time. The rate of employment growth was being out-paced by the rates of housing and nonresidential construction even before employment began to decline in early 2008. The volume of projects in the pipeline kept increasing inventory, while the loss of some 200,000 wage and salary jobs caused negative absorption that all but halted construction activity.

Based on the regional employment forecasts used in this study, it will likely take until at least 2015 to bring nonresidential vacancy rates back toward long-term levels. Until then, new construction activity is expected to be very limited. The following sub-sections review the critical market characteristics for each forecast area, relating the likely near-term implications for the City of Scottsdale. After 2015, growth is presumed to be a function the regional employment forecasts.

Industrial

Depending on the source consulted, and the universe included, industrial vacancy rates in 2010 were at or near all-time highs, running in the range of 15.5 to 18.1 percent with negative absorption of over 6.0 million square feet since the beginning of 2008. According to Cushman & Wakefield the weak market fundamentals and the lack of financing have caused all speculative construction to be postponed until the market strengthens. Their vacancy rate estimate of 16.1 percent on a base of 264.7 million square feet implies that some 42.6 million square feet of industrial space was available county-wide in 2010. Over the past year, the vacancy rates have fallen, consistent with the projections developed for the original study. Cushman & Wakefield now (2Q11) indicates an overall vacancy rate of 14.2 percent, on track with returning the market to long term conditions, with some 2.2 million square feet being absorbed over the past year.

Returning the industrial market to a more reasonable long-term vacancy rate of around 9.0 percent will still require absorption of some 16.6 million square feet of space by 2015, if no additional space is added in the mean time. Based on warehouse and manufacturing employment projections, about 20.7 million additional square feet will be needed in the Phoenix metropolitan area through 2015, leaving net demand for around 4.2 million new square feet. Very little of this growth is projected to occur in manufacturing, further limiting the potential impact on Scottsdale. It could create demand for an additional 84,000 square feet of manufacturing space in Scottsdale over the next five years based on current market share.

Office

Office market conditions are similar to industrial market conditions across the metropolitan area, however, the northeast valley and Scottsdale have faired slightly better than other areas. The office market was hit by the current downturn slightly later than the industrial market, and has still been experiencing high levels of net negative absorption over the past year. Overall, office vacancy rates have increased from a low of about 10 percent in 2006, to about 23 percent in 2010. Over the past year (through 2Q11) vacancy rates have inched upward to about 24 percent.

Based on an inventory of about 104 million square feet of single and multi-tenant building space, this implies a total of about 24.0 million vacant square feet. Returning the office market to a normal vacancy rate of 12 percent would require absorption of about 12 million square feet without any additional space being added. This would leave net new demand for about 5.5 million square feet additional square feet in the metropolitan area through 2015, based on the projected levels of employment growth. This could create demand for an additional 400,000 square feet of office space in Scottsdale over the next five years based on current market capture rates.

Retail

The economic slowdown and restructuring by a number of retailers has had a significant negative impact on the retail real estate market over the past two years, leading to negative absorption in 2009, according to Cushman & Wakefield. The firm's data shows vacancy rates shooting upward from about 6.5 percent in 2007 to 11.9 percent by the end of 2009. This surge of 5.4 percent has put some 9.5 million square feet of built space on the market, driving rents below 2006 levels in most submarkets including Scottsdale. As of 2Q2011, the vacancy rate is virtually unchanged at about 12.0 percent. Returning the retail vacancy rate to 6.5 percent would leave net new demand for only about 2.5 million square feet additional square feet in the metropolitan area through 2015, based on the projected levels of employment growth. This could create net new demand for approximately 350,000 square feet of additional retail space in Scottsdale over the next five years based on current market share.

Residential

The implosion of the residential real estate market that, along with the lack of employment growth, sent the metropolitan Phoenix economy into a tailspin continues on a long and slow recovery process. While the number of active listings has fallen from over 54,000 in June 2008 to 27,100 in September 2011 according to the Cromford Report, the sum of active plus pending listings is 39,000 compared with 60,000 two years ago. Overall, the available inventory is down and rate of sales is up since 2008, shrinking the available supply from 12 months of demand to 6 months of demand. During the same time period monthly sales prices per square foot for the metropolitan area tumbled 40 percent from $135 to $82, though the Scottsdale average is still double the metropolitan area average at about $170 per square foot. These market conditions, combined with the fact that the largest oversupply of housing is in very high-end units, foretells low levels of new residential development in Scottsdale over the next five years. Recent challenges in the single family housing market have created opportunities for multifamily housing. The multifamily housing market is now somewhat under-supplied, and new rental projects are emerging in Scottsdale and throughout the metropolitan area to meet this demand.

2.2.2 Tourism Industry Forecasts

Due to Scottsdale's high concentration of economic activity in tourism and experience industries, emerging trends and industry projections are important in preparing development forecasts for the community. The tourism industry has been hit hard over the past several years, beginning even before the recession, with shocks caused by terrorism scares and the surge in oil prices impacting both ground and air transportation costs. Since the recession began, the decline in consumer income and confidence has impacted leisure travel, and cost-cutting measures by companies and organizations has impacted businesses travel. However, it appears that the industry has begun to recover, with hoteliers in 49 of the 50 largest markets renting more room-nights in the first quarter of 2010 than in 2009 according to PKF-HR Horizons. The firm projects that among hotel chains, growth will be strongest for luxury and upscale class hotels, increasing by 11.1 percent.

Mid-term projections for the industry are positive and the long-term outlook is good – especially for the types of tourism that drive demand in Scottsdale. Projections through 2013 from the U.S. Travel Association show travel expenditures by U.S. residents increasing by about 24 percent over the next four years, with international travel (about 13 percent of tourism in Arizona) growing faster than that. In the longer term there are a number of trends in leisure travel identified by the Gottlieb Duttweiler Institute that bode well for the future of the industry in Scottsdale. These include the increase in older persons (baby boomers) who will live and travel longer, higher incomes among the "new elderly," a much greater focus on health and experience tourism, the evolution of super luxury reports, and the desire to combine leisure activities with time with extended family members and friends. Locations like Scottsdale, that offer that can leverage several of these trends, should do well over the next 20 years.

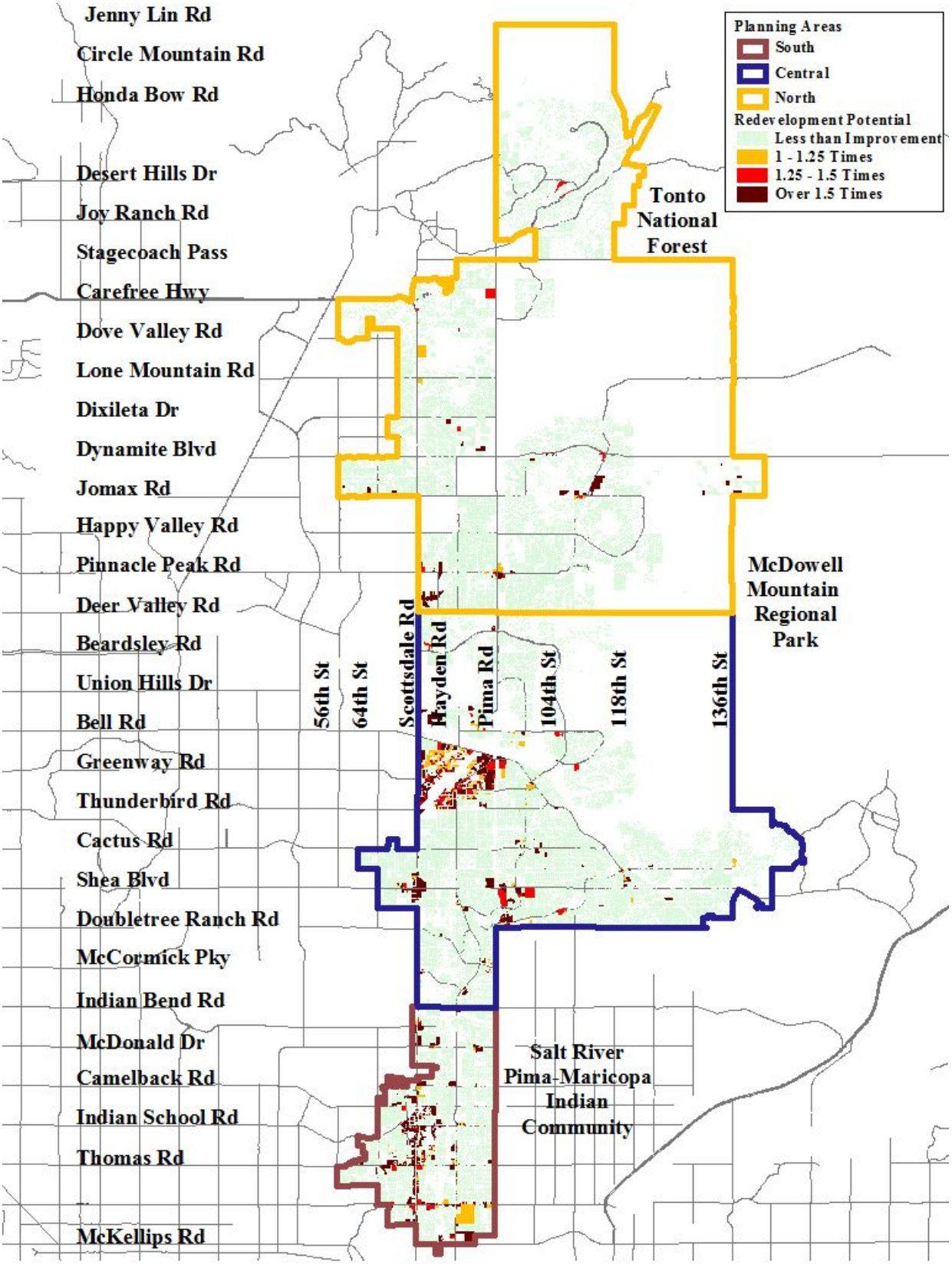
2.2.3 Redevelopment Potential

The final market condition factor considered in the analysis was the possibility for redevelopment in the City of Scottsdale. Since the supply of available vacant land is very limited in the south subarea, and is becoming constrained in the central subarea, examining the potential for redevelopment was an important part of preparing development forecasts. Our knowledge of Scottsdale indicates that there are areas in both the south and central subareas that could become targets for redevelopment over the next twenty years.

Since it is not possible to pin-point specific buildings that may be redeveloped, other indicators must be examined to characterize areas that may lend themselves to redevelopment. These would be areas with obsolete, sub-standard or low-density uses, especially in areas adjacent to existing or emerging activity centers, and areas where the value of land is in excess of the value of the building. Our experience with assessing redevelopment potential for transit-oriented development (TOD), suggests that parcels with land valued at 1.5 times or more that of the improvement have good redevelopment potential.

Map 6, on the following page, shows parcels in the City of Scottsdale where the value of the land is as great, or greater, than the value of improvements. The map shows significant concentrations of land that may be suitable for redevelopment in the Scottsdale Airpark, near the intersection of Scottsdale Road and Shea Boulevard, in Downtown Scottsdale and in the southernmost part of the City along Scottsdale Road and McDowell Road. Based on this information, and our knowledge of the age and quality of buildings in each concentration area, it was felt that redevelopment could add 200 to 300 acres to the development potential in the south subarea, and 400 to 600 acres to the potential in the central subarea. Note that the timing of some of this redevelopment may well exceed the 20 year window covered by the development forecasts.

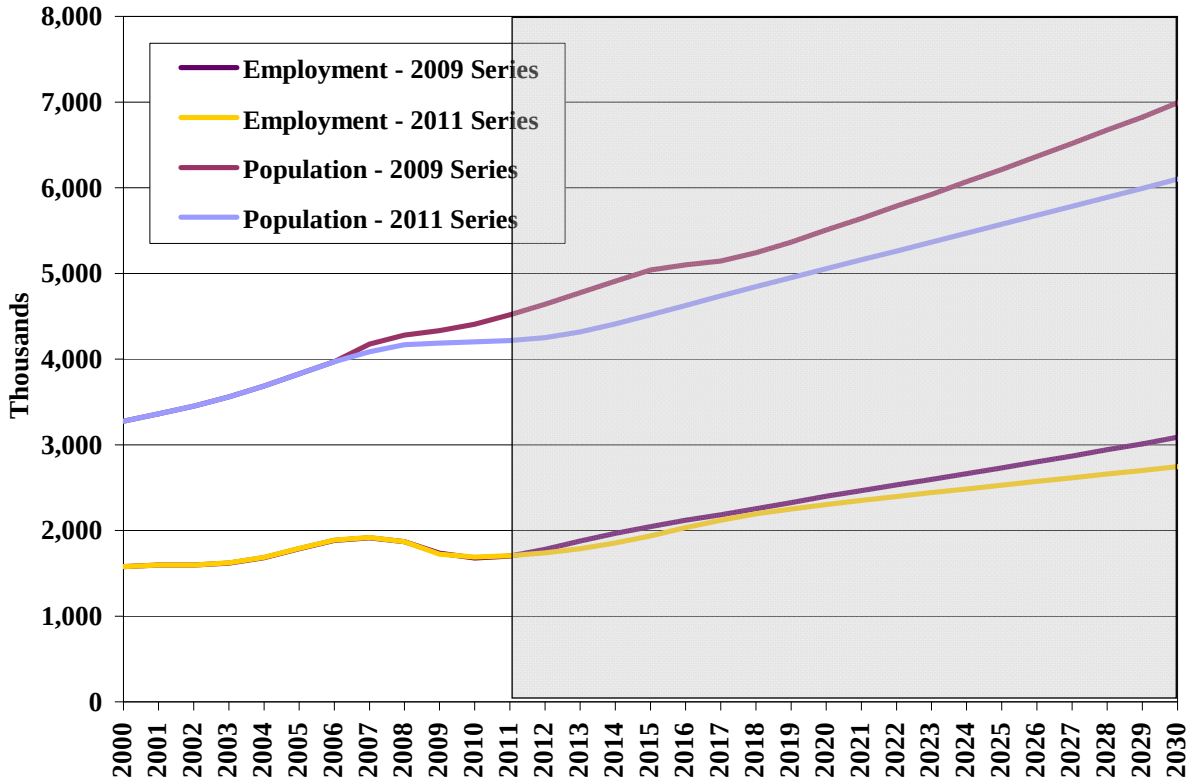
MAP 6
AREAS WITH REDEVELOPMENT POTENTIAL



2.3 Metropolitan Area Growth Projections

The development forecasts used in this study update are based on projections of economic growth in the Phoenix Metropolitan Area through 2030 prepared by University of Arizona during the third quarter of 2011. These projections generally show lower levels of growth in the Phoenix metropolitan area over the next twenty years than those used in the original study, particularly in the case of population. **Figure 1** shows the new population and employment projections relative to the old ones. It shows the flattening of the population estimates for 2006 through 2011 that have resulted from continued analysis of that period in retrospect. The figure also shows significantly lower projected levels of population and employment growth for the Phoenix metropolitan areas through 2030. Employment projections for 2030 include about 350,000 less jobs than in the 2009 projection series. Compounded by demographic changes (both current and future), this reduction in employment growth translates into nearly 900,000 fewer residents in the Phoenix metropolitan area by 2030. These reductions in regional growth impact the projections for the City of Scottsdale.

FIGURE 1
HISTORICAL AND PROJECTED POPULATION AND EMPLOYMENT
PHOENIX METROPOLITAN AREA



Source: University of Arizona, Eller Business College, Forecating Project, 2009 and 2011.

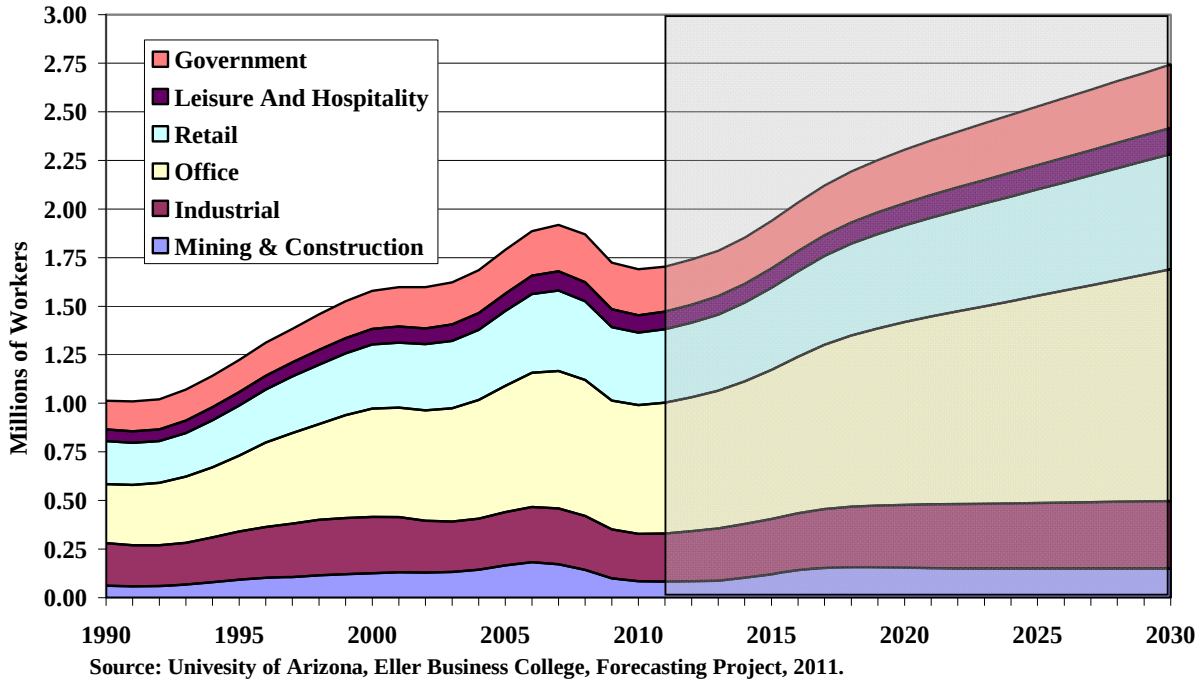
As shown in **Table 6**, the updated economic data includes wage & salary employment by industry from 1990 through 2030. The industries were grouped to match the land use categories used in the development forecast analysis as shown in **Figure 2**. In most cases it was possible to assign an industry to a single land use category, but for some such as Finance & Insurance, Eating & Drinking and Other Services it was more accurate to split the employment across two different land use categories.

Historically, the data series shows that total employment in the metropolitan area peaked in 2007 at about 1.91 million workers, and has fallen off significantly in 2010 to about 1.69 million. Note that industrial employment had not kept pace with growth in the other categories prior to 2005, and along with construction was among the hardest hit sectors on a percentage basis between 2007 and 2010. Little growth is projected in manufacturing, adding only about 10,000 jobs over the next 20 years, while distribution/warehousing portion adds nearly 93,000 jobs. This implies very limited industrial growth in Scottsdale since the community is not generally competitive for distribution and warehousing.

The segments of the economy driving growth in office users are expected to experience the greatest rate of growth, increasing by 79.8 percent by 2030. Growth in this component is expected to be very positive for the City of Scottsdale, even though the share of it captured in Scottsdale will likely decline somewhat over time. Growth in the leisure and hospitality industries is expected to increase that market by about 49.3 percent over the next 20 years, which will continue to fuel related development in Scottsdale throughout the projection period. However, the leisure and hospitality industries accounted for some of the largest reductions in projected growth between the 2009 and 2011 projection series from the University of Arizona, declining from a projection of 75.7 percent growth.

Retail employment is projected to grow by 59 percent during the projection period, however much of the distribution of the growth will be driven by population, especially with sharp reductions forecast for the leisure and hospitality sectors. This will continue to give Scottsdale some growth in retail employment, although its share of the metropolitan area inventory is expected to continue to decline. Finally, public employment is projected to grow by about 39 percent, with much of the distribution being driven by population, limiting the growth potential in the City of Scottsdale.

FIGURE 2
PAST AND PROJECTED EMPLOYMENT BY LAND USE CATEGORY



Source: Univesity of Arizona, Eller Business College, Forecasting Project, 2011.

APPLIED ECONOMICS

TABLE 6
HISTORICAL AND PROJECTED EMPLOYMENT BY INDUSTRY
(Thousands)

	1990	1995	2000	2005	2010	2015	2020	2025	2030
MINING & CONSTRUCTION									
Mining	4.5	5.3	2.4	2.2	3.0	3.5	3.3	3.0	2.7
Construction	57.1	88.0	123.3	163.9	82.0	116.3	151.2	146.8	147.5
Sub-Total	**61.7**	**93.3**	**125.7**	**166.0**	**85.1**	**119.8**	**154.5**	**149.8**	**150.2**
INDUSTRIAL									
Manufacturing:	136.2	147.4	161.1	136.5	110.0	125.0	131.6	125.2	120.4
Durable	107.3	116.0	129.8	109.2	85.4	99.6	105.0	98.8	93.9
Non-durable	28.9	31.4	31.3	27.3	24.6	25.4	26.6	26.4	26.5
Distribution:	83.1	99.7	128.5	137.5	134.0	159.7	191.3	212.0	226.7
Warehousing	32.1	39.8	50.0	54.6	53.1	65.5	74.6	83.1	90.1
Wholesale Trade	51.0	59.9	78.5	82.9	80.9	94.3	116.7	128.9	136.6
Sub-Total	**219.3**	**247.1**	**289.6**	**274.0**	**244.0**	**284.7**	**322.9**	**337.2**	**347.1**
OFFICE									
Information:	23.8	25.0	42.0	33.3	27.6	30.3	32.7	33.3	35.1
Information	13.3	13.6	23.5	19.2	15.9	17.4	19.3	19.6	20.3
Telemcommunications	10.6	11.4	18.5	14.0	11.7	12.8	13.4	13.7	14.8
Finance:	51.9	56.5	79.5	92.2	85.6	98.6	119.4	132.7	145.9
Finance & Insurance (50%)	27.8	31.9	46.9	54.7	50.7	57.6	70.9	78.5	86.6
Real Estate	24.1	24.7	32.6	37.5	34.9	41.0	48.5	54.2	59.3
Utilities	7.8	6.6	7.4	8.1	8.3	8.0	8.6	8.3	8.1
Education & Health Services	91.0	112.4	137.5	186.0	238.0	285.0	339.8	392.6	446.3
Health Care	81.9	102.6	119.3	155.7	195.8	230.3	272.9	315.2	358.5
Education	9.1	9.8	18.2	30.2	42.2	54.7	66.9	77.4	87.8
Other Services (50%)	19.1	21.8	27.4	33.0	32.4	35.5	41.0	46.4	51.9
Professional Services	110.5	168.2	264.1	296.8	270.8	309.9	398.8	452.4	504.2
Sub-Total	**304.1**	**390.5**	**557.9**	**649.4**	**662.7**	**767.3**	**940.3**	**1,065.7**	**1,191.5**
RETAIL									
Building Materials	6.7	8.1	12.9	17.1	13.9	19.7	22.8	24.6	26.4
General Merchandise	31.2	36.1	44.0	56.5	58.8	64.0	74.9	81.4	87.1
Food & Beverage	28.9	28.7	32.7	37.3	37.5	39.5	43.9	46.5	48.8
Motor Vehicle/parts	19.1	23.4	30.1	32.6	24.3	31.0	36.3	39.6	42.0
Eating & Drinking (67%)	42.8	56.4	69.2	80.9	82.4	93.4	107.5	119.5	130.8
Finance & Insurance (50%)	27.8	31.9	46.9	54.7	50.7	57.6	70.9	78.5	86.6
Other Services (50%)	19.1	21.8	27.4	33.0	32.4	35.5	41.0	46.4	51.9
Other	44.5	51.1	65.8	73.0	71.9	81.9	99.6	110.9	119.2
Sub-Total	**220.0**	**257.3**	**329.0**	**385.1**	**371.8**	**422.5**	**497.0**	**547.4**	**592.8**
LEISURE AND HOSPITALITY:									
Accomodation	24.3	24.6	27.1	27.4	25.5	27.9	30.2	31.6	32.6
Arts, Entertainment & Rec.	15.4	17.5	19.3	22.3	24.1	26.5	31.0	34.5	37.6
Eating & Drinking (33%)	21.1	27.8	34.1	39.8	40.6	46.0	53.0	58.9	64.4
Sub-Total	**60.8**	**69.8**	**80.5**	**89.5**	**90.2**	**100.5**	**114.2**	**124.9**	**134.6**
GOVERNMENT:									
Federal	20.2	18.3	21.1	21.8	24.2	23.7	26.5	27.9	30.8
State and Local	65.1	73.6	87.4	99.7	99.2	106.2	124.7	137.2	146.4
Education	62.2	73.8	87.3	104.0	111.7	113.5	124.2	137.0	149.5
Sub-Total	**147.5**	**165.6**	**195.7**	**225.5**	**235.0**	**243.4**	**275.4**	**302.1**	**326.7**
TOTAL	**1,013.3**	**1,223.6**	**1,578.4**	**1,789.6**	**1,688.8**	**1,938.2**	**2,304.2**	**2,527.0**	**2,743.0**

Sources: University of Arizona, Forecasting Project; Applied Economics, 2011.

3.0 NONRESIDENTIAL MARKET ANALYSIS

This section of the report presents the analysis of employment growth through the year 2030 based on market demand, and the competitive position of Scottsdale for certain types of development. It translates those growth projections into implied levels of nonresidential development in terms of built space, and the likely number of acres of land that the development would absorb. In some cases this is more than the amount of available vacant land, signally the potential for redevelopment. The sub-sections that follow describe the data and results of this analysis for major the major nonresidential land use categories used in the General Plan.

3.1 Industrial Employment

The industrial employment component was divided into warehouse and manufacturing uses for this analysis. As shown in **Table 7**, Scottsdale contains a relatively small share of warehouse-type industrial development, comprising just 1.68 percent of the metropolitan area total in 2010. While small, this percentage has stayed relatively unchanged since 1990, however much more of the warehouse space in Scottsdale is used in conjunction with retail showrooms and office uses.

The City's share of warehouse development peaked in 2005 at about 1.92 percent of the metropolitan area when 2.87 million square feet were in inventory. Industrial warehouse inventory in Scottsdale increased by only about 60,000 square feet between 2005 and 2010, while some 24.5 million square feet were added across the rest of the metropolitan area. This quickly reduced Scottsdale's market capture rate. As shown in **Table 8**, the inventory of warehouse space in Scottsdale is only projected to increase by about 150,000 square feet over the next 20 years. The area is too expensive to be competitive for warehouse uses, plus access to labor is an issue. The projection results in an increase of about 500 employees and about 20 acres of developed industrial land in the City of Scottsdale.

The past trends and the projections are significantly different for the manufacturing component of industrial space. As **Table 7** shows, the City's inventory of manufacturing space more than doubled between 1990 and 2010 to some 9.2 million square feet, outstripping the rate of growth in the rest of the metropolitan area. During this period, the City's share of manufacturing space increased from 7.34 percent to 9.28 percent, even as the total amount of manufacturing employment stagnated near 1990 levels. Regional employment forecasts show little change in the level of manufacturing employment over the next 20 years, reducing the growth in Scottsdale to about 3,500 employees and 650,000 square feet of building space through 2030. This level of growth would result in the absorption of about 77.5 additional acres of industrial land in the City of Scottsdale.

TABLE 7
INDUSTRIAL DEVELOPMENT AND EMPLOYMENT TRENDS: 1990-2010

	1990	1995	2000	2005	2010
Warehouse Inventory (Sq. Ft.)					
Scottsdale	1,414,336	1,843,671	2,439,436	2,872,227	2,934,040
South Scottsdale	715,540	719,012	742,415	761,291	776,811
Central Scottsdale	645,678	1,067,836	1,558,996	1,919,519	1,965,812
North Scottsdale	53,118	56,823	138,025	191,417	191,417
Other Metro	86,511,258	98,464,407	126,176,523	146,960,345	171,457,948
Total	87,925,593	100,308,077	128,615,958	149,832,572	174,391,987
Scottsdale	1.61%	1.84%	1.90%	1.92%	1.68%
South Scottsdale	0.81%	0.72%	0.58%	0.51%	0.45%
Central Scottsdale	0.73%	1.06%	1.21%	1.28%	1.13%
North Scottsdale	0.06%	0.06%	0.11%	0.13%	0.11%
Other Metro	98.39%	98.16%	98.10%	98.08%	98.32%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
Warehouse Employment					
Total	83,100	99,700	128,500	137,500	131,800
Scottsdale	1,604	2,088	2,763	3,253	3,032
South Scottsdale	811	815	842	863	814
Central Scottsdale	732	1,209	1,765	2,173	2,005
North Scottsdale	60	64	156	217	213
Percent of Total	1.93%	2.09%	2.15%	2.37%	2.30%
Manufacturing Inventory (Sq. Ft.)					
Scottsdale	4,295,984	4,689,350	7,689,709	8,701,529	9,242,128
South Scottsdale	1,537,816	1,542,642	1,569,908	1,577,213	1,582,997
Central Scottsdale	2,736,291	3,074,960	6,009,535	6,984,523	7,393,430
North Scottsdale	21,877	71,748	110,266	139,793	265,701
Other Metro	54,266,963	58,145,798	70,286,780	79,300,163	90,389,689
Total	58,562,947	62,835,148	77,976,488	88,001,692	99,631,816
Scottsdale	7.34%	7.46%	9.86%	9.89%	9.28%
South Scottsdale	2.63%	2.46%	2.01%	1.79%	1.59%
Central Scottsdale	4.67%	4.89%	7.71%	7.94%	7.42%
North Scottsdale	0.04%	0.11%	0.14%	0.16%	0.27%
Other Metro	92.66%	92.54%	90.14%	90.11%	90.72%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
Manfacturing Employment					
Total	136,200	99,700	128,500	137,500	131,800
Scottsdale	9,191	10,250	15,078	15,821	13,735
South Scottsdale	3,290	3,303	3,347	3,352	3,099
Central Scottsdale	5,854	6,766	11,488	12,204	10,289
North Scottsdale	47	181	243	265	347
Percent of Total	6.75%	10.28%	11.73%	11.51%	10.42%

Source: Maricopa Association of Governments; City of Scottsdale; Applied Economics, 2010.

TABLE 8
INDUSTRIAL DEVELOPMENT AND EMPLOYMENT PROJECTIONS: 2010-2030

	2010	2015	2020	2025	2030
Warehouse Inventory (Sq. Ft.)					
Scottsdale	2,934,040	2,944,229	2,995,751	3,024,531	3,046,164
South Scottsdale	776,811	779,722	795,992	804,714	810,894
Central Scottsdale	1,965,812	1,973,090	2,008,341	2,028,401	2,043,853
North Scottsdale	191,417	191,417	191,417	191,417	191,417
Warehouse Employment					
Scottsdale	3,032	3,346	3,404	3,437	3,462
South Scottsdale	814	822	828	826	821
Central Scottsdale	2,005	2,310	2,363	2,398	2,428
North Scottsdale	213	213	213	213	213
Cumulative Acres (Absorbed)					
Scottsdale		1.28	7.72	11.33	14.04
South Scottsdale		0.34	2.25	3.28	4.00
Central Scottsdale		0.94	5.47	8.05	10.04
North Scottsdale		-	-	-	-
Manufacturing Inventory (Sq. Ft.)					
Scottsdale	9,242,128	9,326,325	9,686,755	9,822,986	9,890,634
South Scottsdale	1,582,997	1,593,624	1,598,494	1,600,132	1,600,829
Central Scottsdale	7,393,430	7,464,547	7,809,554	7,940,545	8,005,927
North Scottsdale	265,701	268,153	278,706	282,309	283,878
Manufacturing Employment					
Scottsdale	13,735	15,544	16,847	17,083	17,201
South Scottsdale	3,099	3,265	3,234	3,188	3,142
Central Scottsdale	10,289	11,879	13,175	13,451	13,613
North Scottsdale	347	400	438	444	447
Cumulative Acres (Absorbed)					
Scottsdale		10.11	53.23	69.45	77.49
South Scottsdale		1.25	1.82	2.01	2.09
Central Scottsdale		8.35	48.86	64.25	71.92
North Scottsdale		0.51	2.55	3.19	3.48

Source: Applied Economics, 2011.

3.2 Office Employment

For modeling, office employment was divided into standard office and medical office uses. As shown in **Table 9**, Scottsdale contains a relatively large share of office development, now comprising nearly 14 percent of the metropolitan area total. This percentage has grown steadily over the last 20 years as more than 13 million square feet of space has been added to inventory in Scottsdale. Office employment also increased steadily, from about 25,000 employees in 1990, to nearly 63,000 employees in 2005. Since 2005, the level has remained virtually unchanged while more than 4.2 million square feet of space has been added to inventory. This stagnant level of office employment is actually better than many submarkets that have lost considerable amounts of employment since 2005.

Office inventory in Scottsdale is projected to increase by about 33 percent over the next 20 years. As shown in Table 5, the inventory of office space in Scottsdale is projected to increase by about 7.2 million square feet. The projection results in an increase of nearly 38,000 employees, from about 63,000 today to nearly 101,000 by 2030. This growth will consume about 450 acres of land in the City of Scottsdale. Most of this growth (260 acres) will occur in the central subarea, with the south and north areas absorbing about 90 and 100 acres, respectively.

The city's share of medical office space in the metropolitan area peaked in 2005 at about 18.5 percent, but has stayed strong still representing about 17.5 percent of the inventory with about 2.6 million square feet as shown in **Table 10**. However, the City's share of medical office employment was much less, at about 12.3 percent. Between 1990 and 2010 medical office employment more than doubled from about 8,200 in 1990 to nearly 21,000 in 2010. This segment of the economy, and hence the development market, is one of few to not experience major declines since 2005. In fact, the metropolitan area added some 36,000 medical office employees between 2005 and 2010, more than keeping pace with population as several major medical providers positioned themselves to leverage on the growth that was anticipated to occur. Furthermore, it is the only sector driven by higher growth in the 2011 employment projection series from the University of Arizona than in the 2009 projection series.

As **Table 10** shows, the City's inventory of medical office space is projected to increase by nearly 50 percent over the next 20 years to over 3.8 million square feet. This will consume nearly 170 acres of land in the City of Scottsdale while adding nearly 9,000 new employees. While the majority of the increase will be in the central subarea, a significant increase is also anticipated in the north subarea driven by population increases in north Scottsdale, north Phoenix, Cave Creek and Carefree. In all, the market demand in the north subarea could result in the absorption of about 60 acres of land in the north subarea for medical office uses.

TABLE 9
OFFICE DEVELOPMENT AND EMPLOYMENT TRENDS: 1990-2010

	1990	1995	2000	2005	2010
Office Inventory (Sq. Ft.)					
Scottsdale	8,235,894	9,550,019	13,671,059	17,713,672	21,993,765
South Scottsdale	4,196,652	5,092,183	5,965,310	6,118,556	6,975,668
Central Scottsdale	3,905,793	4,307,004	7,339,901	11,105,492	14,060,709
North Scottsdale	133,449	150,832	365,847	489,624	957,388
Other Metro	71,888,544	78,167,418	95,057,921	114,801,192	130,743,057
Total	80,124,438	87,717,437	108,728,979	132,514,864	152,736,822
Scottsdale	10.28%	10.89%	12.57%	13.37%	14.40%
South Scottsdale	5.24%	5.81%	5.49%	4.62%	4.57%
Central Scottsdale	4.87%	4.91%	6.75%	8.38%	9.21%
North Scottsdale	0.17%	0.17%	0.34%	0.37%	0.63%
Other Metro	89.72%	89.11%	87.43%	86.63%	85.60%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
Office Employment					
Total	222,213	287,892	438,563	493,617	466,920
Scottsdale	25,341	34,774	52,581	62,918	62,954
South Scottsdale	12,913	18,542	22,943	21,733	23,014
Central Scottsdale	12,018	15,683	28,230	39,446	36,593
North Scottsdale	411	549	1,407	1,739	3,348
Percent of Total	11.40%	12.08%	11.99%	12.75%	13.48%
Medical Office Inventory (Sq. Ft.)					
Scottsdale	1,146,818	1,325,780	1,903,461	2,456,594	2,650,872
South Scottsdale	534,588	536,747	642,607	731,548	745,662
Central Scottsdale	612,230	771,705	1,211,395	1,675,587	1,793,706
North Scottsdale	-	17,328	49,459	49,459	111,504
Other Metro	6,494,831	7,501,156	8,641,175	10,830,911	12,541,369
Total	7,641,650	8,826,937	10,544,636	13,287,505	15,192,241
Scottsdale	15.01%	15.02%	18.05%	18.49%	17.45%
South Scottsdale	7.00%	6.08%	6.09%	5.51%	4.91%
Central Scottsdale	8.01%	8.74%	11.49%	12.61%	11.81%
North Scottsdale	0.00%	0.20%	0.47%	0.37%	0.73%
Other Metro	84.99%	84.98%	81.95%	81.51%	82.55%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
Medical Office Employment					
Total	81,933	102,600	119,300	155,733	195,776
Scottsdale	8,192	10,266	14,347	19,181	20,984
South Scottsdale	3,818	4,156	4,843	5,712	6,676
Central Scottsdale	4,373	5,976	9,131	13,083	13,803
North Scottsdale	-	134	373	386	506
Percent of Total	10.00%	10.01%	12.03%	12.32%	10.72%

Source: Maricopa Association of Governments; City of Scottsdale; Applied Economics, 2011.

TABLE 10
OFFICE DEVELOPMENT AND EMPLOYMENT PROJECTIONS

	2010	2015	2020	2025	2030
Office Inventory (Sq. Ft.)					
Scottsdale	21,993,765	22,541,020	25,160,760	27,501,906	29,177,093
South Scottsdale	6,975,668	7,107,764	7,846,665	8,515,564	9,035,450
Central Scottsdale	14,060,709	14,419,255	16,031,403	17,369,201	18,293,441
North Scottsdale	957,388	1,014,001	1,282,692	1,617,141	1,848,202
Office Employment					
Scottsdale	62,954	75,137	86,761	94,834	100,611
South Scottsdale	23,014	25,954	29,233	31,540	33,332
Central Scottsdale	36,593	44,574	51,728	56,341	59,528
North Scottsdale	3,348	4,608	5,800	6,954	7,750
Cumulative Acres (Absorbed)					
Scottsdale		35.11	201.20	347.48	446.90
South Scottsdale		5.76	37.95	67.10	89.75
Central Scottsdale		21.71	119.32	200.32	256.28
North Scottsdale		7.64	43.93	80.06	100.86
Medical Office Inventory (Sq. Ft.)					
Scottsdale	2,650,872	2,977,097	3,352,806	3,622,209	3,862,851
South Scottsdale	745,662	788,213	834,032	867,707	902,084
Central Scottsdale	1,793,706	1,992,277	2,212,205	2,380,582	2,528,404
North Scottsdale	111,504	196,606	306,570	373,921	432,362
Medical Office Employment					
Scottsdale	20,984	22,901	25,791	27,863	29,714
South Scottsdale	6,676	7,623	7,826	7,942	8,061
Central Scottsdale	13,803	18,223	19,199	19,779	20,289
North Scottsdale	506	2,401	2,888	3,121	3,322
Cumulative Acres (Absorbed)					
Scottsdale		46.93	100.44	137.19	169.69
South Scottsdale		3.21	6.67	9.22	11.81
Central Scottsdale		26.04	54.88	76.95	96.34
North Scottsdale		17.68	38.89	51.02	61.54

Source: Applied Economics, 2011.

3.3 Hotel & Resort Employment

The tourism component of employment, as measured through hotel and resort activity is a major economic driver for the City of Scottsdale. As shown in **Table 11**, Scottsdale contains a large inventory of hotel and resort development encompassing nearly 6.2 million square feet of built space and about 9,500 guest rooms in 2010. This is nearly double the 1990 level, with Scottsdale currently comprising about 15.2 percent of the metropolitan area total development of this type. This level is down slightly from 16.3 percent in 2005 due a surge in hotel and resort development elsewhere during the last boom cycle. However, as the boom has turned to bust, the share of hotel and resort employment located in Scottsdale has continued to grow, reaching about 15.7 percent in 2010.

The new projections for the metropolitan Phoenix economy show more near term negative impacts of the recession, the projected decline in personal income (especially for the middle class), declines in the amount of leisure time and the general aging of the population on tourism. The 2030 employment projections for the sectors of the economy used to project hotel and resort development fell from 169,000 jobs to 135,000 jobs. Compared to the current (2019) employment base of about 90,000 jobs, the reduction from 79,000 new jobs to 45,000 new jobs (88 percent growth versus 49 percent growth) had a significant impact on these updated projections for Scottsdale.

However, travel experts indicate strong growth at both ends of the scale, with very inexpensive motels and super-luxury resorts polarizing the marketplace. This polarization, combined with trends toward experience tourism, the combining of work and leisure travel, and the increase in people traveling for health care reasons, all bode well for the future of the tourism industry in Scottsdale even if the size of the market is likely to be smaller than previously expected.

TABLE 11
HOTEL & RESORT DEVELOPMENT AND EMPLOYMENT TRENDS: 1990-2010

	1990	1995	2000	2005	2010
Hotel & Resort Inventory (Sq. Ft.)					
Scottsdale	3,184,437	3,409,630	5,443,799	5,860,387	6,182,588
South Scottsdale	1,437,112	1,528,403	2,171,713	2,180,983	2,398,620
Central Scottsdale	1,539,326	1,588,278	2,743,278	2,966,712	3,044,661
North Scottsdale	207,999	292,949	528,808	712,692	739,307
Other Metro	20,271,623	21,205,977	27,722,726	29,947,343	34,414,689
Total	23,456,060	24,615,607	33,166,525	35,807,730	40,597,277
Scottsdale	13.58%	13.85%	16.41%	16.37%	15.23%
South Scottsdale	6.13%	6.21%	6.55%	6.09%	5.91%
Central Scottsdale	6.56%	6.45%	8.27%	8.29%	7.50%
North Scottsdale	0.89%	1.19%	1.59%	1.99%	1.82%
Other Metro	86.42%	86.15%	83.59%	83.63%	84.77%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
Hotel & Resort Employment					
Total	60,788	69,823	80,483	89,545	90,204
Scottsdale	7,470	8,754	11,957	13,265	15,124
South Scottsdale	3,371	3,924	4,770	4,937	5,591
Central Scottsdale	3,611	4,078	6,025	6,715	7,770
North Scottsdale	488	752	1,161	1,613	1,763
Percent of Total	12.29%	12.54%	14.86%	14.81%	16.77%

Source: Maricopa Association of Governments; City of Scottsdale; Applied Economics, 2011.

Based on these industry trends, and the regional employment projections provided by the University of Arizona, the hotel and resort inventory in Scottsdale is projected to grow by about 30 percent over the next 20 years as shown in **Table 12** (down from 50 percent using the 2009 projection series). This would increase the amount of built space from about 6.2 million square feet today, to about 7.9 million square feet in 2010. The majority of this increase will occur in the central subarea of Scottsdale. However, the demand for super luxury resorts and experience-oriented vacations will likely push some of this development into the north subarea.

Employment in the hotel and resort industry in Scottsdale is projected to grow from about 15,000 employees in 2010, to nearly 20,000 employees in 2030. These development and employment projections result in the number of hotel and resort rooms increasing from about 9,500 rooms today to nearly 12,000 rooms by 2030. In all, this development implies absorption of some 400 acres over the next 20 years, with the central and north subareas capturing the majority of the increase. The larger number of acres consumed in the north subarea is a function of the low intensity of the development expected to occur in that area, with far fewer rooms per acre.

TABLE 12
HOTEL & RESORT DEVELOPMENT AND EMPLOYMENT PROJECTIONS

	2010	2015	2020	2025	2030
Hotel & Resort Inventory (Sq. Ft.)					
Scottsdale	6,182,588	6,391,234	7,148,740	7,584,109	7,941,446
South Scottsdale	2,398,620	2,446,769	2,604,583	2,683,741	2,734,789
Central Scottsdale	3,044,661	3,157,009	3,535,762	3,733,657	3,869,785
North Scottsdale	739,307	787,456	1,008,395	1,166,711	1,336,872
Hotel & Resort Employment					
Scottsdale	15,124	15,978	17,872	18,960	19,854
South Scottsdale	5,591	5,788	6,183	6,381	6,508
Central Scottsdale	7,770	8,230	9,177	9,672	10,012
North Scottsdale	1,763	1,960	2,512	2,908	3,334
Cumulative Acres (Absorbed)					
Scottsdale		46.30	219.36	322.19	410.85
South Scottsdale		6.56	28.07	38.86	45.82
Central Scottsdale		25.29	110.53	155.07	185.71
North Scottsdale		14.45	80.75	128.26	179.32
Hotel & Resort Rooms					
Scottsdale	9,444	9,760	10,875	11,495	11,977
South Scottsdale	4,030	4,110	4,373	4,505	4,590
Central Scottsdale	5,044	5,231	5,863	6,192	6,419
North Scottsdale	370	418	639	797	968

Source: Applied Economics, 2011.

3.4 Retail Employment

For this analysis, retail employment was divided into three components including neighborhood and community retail, regional retail and auto sales. This division was necessary due to the fact that each of these components have very different development characteristics and economic drivers. Retail demand was estimated and projected based on expenditures by the resident population, businesses and visitors. Since residential growth was used as an input factor to retail demand, it was projected before retail development and employment even though it follows the employment categories in this memorandum.

As shown in **Table 13**, Scottsdale contains about 15.5 million square feet of neighborhood and community retail space, a two-and-a-half fold increase over the 1990 level of about 6.7 million square feet. Scottsdale share of the metropolitan area development of this type increased from 1990 through 2005, from 8.9 percent to 10.8 percent, before declining somewhat to 10.3 percent currently. Within the City, the inventory in the south subarea was by far the largest in 1990, but has increased only about 1.3 million square feet while 6.3 million square feet have been added to the central area making its inventory much larger.

Neighborhood and community retail employment has followed the same basic pattern over the past years, though lower employer density in Scottsdale makes its share of metropolitan area employment less than its share of square footage. Note that metropolitan area employment driving this type of retail declined between 2005 and 2010, which is reflected in very high vacancy rates. All of the subareas experienced substantial increases in employment from 1990 through 2005, but experienced slight declines between 2005 and 2010 as the recession and decline in tourism have both negatively impacted retail employment in Scottsdale while more building space continued to be added.

The inventory of neighborhood and community retail space in the City of Scottsdale is projected to increase by about 3.1 million square feet over the next 20 years as shown in Table 9. While the vast majority of this growth is expected to occur in the central subarea, the north subarea should also experience gains due to residential development and an increase in tourism activity. The addition of this space will result in employment in Scottsdale increasing from about 30,000 jobs in 2010, to nearly 41,000 jobs by 2030. In all, this development implies absorption of some 350 acres over the next 20 years, with the central and north subareas capturing the majority of the increase in land area with 251 acres and 75 acres, respectively.

Regional retail represents a relatively small part of retail development in the City of Scottsdale with about 1.8 million square feet, all of which is located in the south subarea (Fashion Square). As shown in **Table 13,** the inventory of regional retail space represents only about 9.4 percent of the metro area total, down from 17.5 percent in 1990. Regional retail employment increased steadily through 2005, before declining somewhat in 2010 due to the recession.

Based on projected demand from residents and visitors, regional retail space in Scottsdale is projected to increase by about 1.7 million square feet over the next 20 years with the addition of a major center in the central subarea, and a somewhat smaller specialty regional center in the north subarea. The projection results in an increase of some 3,400 employees, from about 3,000 today to nearly 6,400 by 2030. This growth will consume about 210 acres of land in the City of Scottsdale, with two-thirds occurring in the central subarea and one-third occurring in the north subarea.

TABLE 13
RETAIL DEVELOPMENT AND EMPLOYMENT TRENDS: 1990-2010

	1990	1995	2000	2005	2010
Neighborhood & Community Retail Inventory (Sq. Ft.)					
Scottsdale	6,676,638	8,073,398	11,326,286	14,187,703	15,506,399
South Scottsdale	4,186,110	4,461,705	4,802,595	5,067,360	5,459,911
Central Scottsdale	2,280,642	3,263,777	5,741,847	7,785,085	8,590,327
North Scottsdale	209,886	347,916	781,843	1,335,257	1,456,161
Other Metro	68,537,368	79,816,679	96,270,339	117,008,436	135,211,005
Total	75,214,006	87,890,077	107,596,625	131,196,139	150,717,404
Scottsdale	8.88%	9.19%	10.53%	10.81%	10.29%
South Scottsdale	5.57%	5.08%	4.46%	3.86%	3.62%
Central Scottsdale	3.03%	3.71%	5.34%	5.93%	5.70%
North Scottsdale	0.28%	0.40%	0.73%	1.02%	0.97%
Other Metro	91.12%	90.81%	89.47%	89.19%	89.71%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
Neighborhood & Community Retail Employment					
Total	210,431	245,606	313,984	368,827	359,675
Scottsdale	14,957	18,065	26,465	31,937	29,630
South Scottsdale	9,378	9,983	11,222	11,407	9,898
Central Scottsdale	5,109	7,303	13,416	17,524	17,026
North Scottsdale	470	778	1,827	3,006	2,706
Percent of Total	7.11%	7.36%	8.43%	8.66%	8.24%
Regional Retail Inventory (Sq. Ft.)					
Scottsdale	1,054,990	1,241,891	1,724,145	1,724,145	1,783,415
South Scottsdale	1,054,990	1,241,891	1,724,145	1,724,145	1,783,415
Central Scottsdale	-	-	-	-	-
North Scottsdale	-	-	-	-	-
Other Metro	4,979,133	9,468,443	11,363,532	13,771,902	17,223,485
Total	6,034,123	10,710,334	13,087,677	15,496,047	19,006,900
Scottsdale	17.48%	11.60%	13.17%	11.13%	9.38%
South Scottsdale	17.48%	11.60%	13.17%	11.13%	9.38%
Central Scottsdale	0.00%	0.00%	0.00%	0.00%	0.00%
North Scottsdale	0.00%	0.00%	0.00%	0.00%	0.00%
Other Metro	82.52%	88.40%	86.83%	88.87%	90.62%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
Regional Retail Employment					
Total	12,068	21,421	27,266	30,992	29,241
Scottsdale	1,918	2,258	3,284	3,135	2,972
South Scottsdale	1,918	2,258	3,284	3,135	2,972
Central Scottsdale	-	-	-	-	-
North Scottsdale	-	-	-	-	-
Percent of Total	15.89%	10.54%	12.04%	10.11%	10.16%

TABLE 13 (Continued)
RETAIL DEVELOPMENT AND EMPLOYMENT TRENDS: 1990-2010

	1990	1995	2000	2005	2010
Auto Sales Inventory (Sq. Ft.)					
Scottsdale	304,460	388,615	574,599	607,632	651,397
South Scottsdale	286,268	356,555	359,608	369,008	393,275
Central Scottsdale	18,192	32,060	214,991	238,624	258,122
North Scottsdale	-	-	-	-	-
Other Metro	757,078	867,410	1,344,434	2,073,593	2,389,939
Total	1,061,538	1,256,025	1,919,033	2,681,225	3,041,336
Scottsdale	28.68%	30.94%	29.94%	22.66%	21.42%
South Scottsdale	26.97%	28.39%	18.74%	13.76%	12.93%
Central Scottsdale	1.71%	2.55%	11.20%	8.90%	8.49%
North Scottsdale	0.00%	0.00%	0.00%	0.00%	0.00%
Other Metro	71.32%	69.06%	70.06%	77.34%	78.58%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
Auto Sales Employment					
Total	9,538	11,704	15,063	16,313	12,150
Scottsdale	2,735	3,621	4,510	5,022	4,170
South Scottsdale	2,290	2,852	2,664	2,636	2,185
Central Scottsdale	146	256	1,846	2,386	1,986
North Scottsdale	-	-	-	-	-
Percent of Total	28.68%	30.94%	29.94%	30.79%	34.33%

Source: Maricopa Association of Governments; City of Scottsdale; Applied Economics, 2011.

In the case of auto sales, Scottsdale's share of the metropolitan area market area inventory and employment has declined somewhat over the past 20 years, but not as much as the community's relative share of population. It has declined from about 28.7 percent of in 1990 to 21.4 percent in 2010. This occurred even though the inventory of built space for auto sales increased from about 304,000 square feet in 1990 to about 651,000 square feet in 2010, with new dealerships in the central subarea comprising nearly all of the increase. Employment continued to expand with the addition of dealerships through 2005, but has declined somewhat since then as the industry has been hit very hard by the current recession.

Based on projected demand, the inventory of auto sales space should continue to increase over the next 20 years, growing by nearly 114,000 square feet as shown in **Table 14**. This projection is much lower due to the sharp reduction in the predicted growth of employment in this sector. The 2009 projection series called for nearly 16,000 total jobs being added between 2010 and 2030, presenting a 130 percent increase over the 2010 level of about 12,000 jobs. The 2011 projection series lowers the growth by 45 percent, down to about 8,800 additional jobs, representing a 73 percent increase over the two decade period.

The share of employment in Scottsdale is expected to decline as other areas experience higher levels of population growth in less saturated portions of the metropolitan area. This will reduce Scottsdale's share of the market from about 21 percent in 2010 to 16 percent in 2030. Since demand is weaker in the south subarea, and auto dealerships are not considered to be compatible with the other uses in the north subarea, we expect most of this demand will be satisfied within the central subarea. The growth should add about 500 jobs in the City of Scottsdale, and consume about 20 acres of land.

TABLE 14
RETAIL DEVELOPMENT AND EMPLOYMENT PROJECTIONS

	2010	2015	2020	2025	2030
Neighborhood & Community Retail Inventory (Sq. Ft.)					
Scottsdale	15,506,399	15,873,194	16,858,261	17,793,019	18,598,889
South Scottsdale	5,459,911	5,526,377	5,629,566	5,715,798	5,793,402
Central Scottsdale	8,590,327	8,761,361	9,531,038	10,257,578	10,890,576
North Scottsdale	1,456,161	1,585,455	1,697,658	1,819,643	1,914,911
Neighborhood & Community Retail Employment					
Scottsdale	29,630	33,417	36,254	38,680	40,877
South Scottsdale	9,898	10,584	10,881	11,105	11,317
Central Scottsdale	17,026	18,792	21,009	22,894	24,620
North Scottsdale	2,706	4,041	4,364	4,681	4,940
Cumulative Acres (Absorbed)					
Scottsdale		47.63	159.65	265.66	356.56
South Scottsdale		6.10	15.58	23.50	30.62
Central Scottsdale		18.70	102.84	182.26	251.46
North Scottsdale		22.83	41.23	59.90	74.48
Regional Retail Inventory (Sq. Ft.)					
Scottsdale	1,783,415	1,790,276	2,549,413	3,255,736	3,515,338
South Scottsdale	1,783,415	1,790,276	1,843,239	1,866,023	1,891,146
Central Scottsdale	-	-	706,174	1,085,918	1,169,660
North Scottsdale	-	-	-	303,795	454,532
Regional Retail Employment					
Scottsdale	2,972	3,255	4,635	5,920	6,392
South Scottsdale	2,972	3,255	3,351	3,393	3,438
Central Scottsdale	-	-	1,284	1,974	2,127
North Scottsdale	-	-	-	552	826
Cumulative Acres (Absorbed)					
Scottsdale		0.39	84.49	175.88	210.01
South Scottsdale		0.39	3.43	4.74	6.18
Central Scottsdale		-	81.06	124.65	134.26
North Scottsdale		-	-	46.49	69.56
Auto Sales Inventory (Sq. Ft.)					
Scottsdale	651,397	686,739	730,416	752,468	765,192
South Scottsdale	393,275	399,902	407,432	411,107	413,116
Central Scottsdale	258,122	286,837	322,984	341,361	352,075
North Scottsdale	-	-	-	-	-
Auto Sales Employment					
Scottsdale	4,170	4,229	4,451	4,602	4,689
South Scottsdale	2,185	2,105	2,144	2,164	2,174
Central Scottsdale	1,986	2,125	2,307	2,438	2,515
North Scottsdale	-	-	-	-	-
Cumulative Acres (Absorbed)					
Scottsdale		6.57	14.74	18.87	21.27
South Scottsdale		0.83	1.78	2.24	2.49
Central Scottsdale		5.74	12.96	16.64	18.78
North Scottsdale		-	-	-	-

Source: Applied Economics, 2011.

3.5 Public & Institutional Employment

The City's share of public and institutional employment and development has continued to expand over the past 20 years, reaching 6.2 percent of the metropolitan area built space with just over 8.0 million square feet in inventory, as shown in **Table 15**. Between 1990 and 2010 public and institutional employment doubled from about 7,200 in 1990 to nearly 14,000 in 2010. This segment of the economy, and the medical segment, are the only ones not to experience significant declines since 2005. The metropolitan area added some 10,000 public and institutional employees between 2005 and 2010, although like most sectors employment peaked in 2008, with small declines evident since then.

As **Table 16** shows, the City's inventory of public and institutional space is projected to increase by about 23 percent over the next 20 years to about 9.8 million square feet. The slowing pace of growth in this sector is reflective of the established nature of the community, and the modest levels of population growth that are projected. This development will consume about 280 acres of land in the City of Scottsdale, nearly two-thirds of which is expected to occur in the central subarea. The addition of this space will result from about 3,600 new employees in this sector, with employment reaching just over 17,500 jobs in 2030.

TABLE 15
PUBLIC AND INSTITUTIONAL DEVELOPMENT AND EMPLOYMENT TRENDS

	1990	1995	2000	2005	2010
Public & Institutional Inventory (Sq. Ft.)					
Scottsdale	3,374,535	3,929,884	5,096,687	6,801,747	8,001,623
South Scottsdale	1,647,682	1,853,836	2,011,945	2,340,473	2,759,589
Central Scottsdale	1,538,094	1,790,028	2,575,762	3,699,556	4,410,215
North Scottsdale	188,759	286,020	508,980	761,718	831,819
Other Metro	62,442,712	73,475,239	88,338,526	110,705,878	120,948,992
Total	65,817,247	77,405,123	93,435,213	117,507,625	128,950,615
Scottsdale	5.13%	5.08%	5.45%	5.79%	6.21%
South Scottsdale	2.50%	2.39%	2.15%	1.99%	2.14%
Central Scottsdale	2.34%	2.31%	2.76%	3.15%	3.42%
North Scottsdale	0.29%	0.37%	0.54%	0.65%	0.65%
Other Metro	94.87%	94.92%	94.55%	94.21%	93.79%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
Public & Institutional Employment					
Total	147,484	165,625	195,733	225,500	235,008
Scottsdale	7,257	8,051	10,223	12,498	13,962
South Scottsdale	3,543	3,798	4,035	4,300	4,815
Central Scottsdale	3,308	3,667	5,166	6,798	7,696
North Scottsdale	406	586	1,021	1,400	1,451
Percent of Total	4.92%	4.86%	5.22%	5.54%	5.94%

Source: Maricopa Association of Governments; City of Scottsdale; Applied Economics, 2011.

TABLE 16
PUBLIC AND INSTITUTIONAL DEVELOPMENT AND EMPLOYMENT PROJECTIONS

	2010	2015	2020	2025	2030
Public & Institutional Inventory (Sq. Ft.)					
Scottsdale	8,001,623	8,148,010	8,742,792	9,303,158	9,832,433
South Scottsdale	2,759,589	2,786,025	2,931,096	3,070,470	3,207,917
Central Scottsdale	4,410,215	4,472,583	4,829,918	5,162,310	5,479,971
North Scottsdale	831,819	889,402	981,778	1,070,378	1,144,544
Public & Institutional Employment					
Scottsdale	13,962	14,550	15,612	16,613	17,558
South Scottsdale	4,815	4,921	5,181	5,429	5,675
Central Scottsdale	7,696	7,946	8,584	9,178	9,745
North Scottsdale	1,451	1,683	1,848	2,006	2,138
Cumulative Acres (Absorbed)					
Scottsdale		27.01	121.70	206.66	282.37
South Scottsdale		3.42	21.28	37.63	52.99
Central Scottsdale		10.38	67.00	117.16	162.81
North Scottsdale		13.22	33.42	51.86	66.57

Source: Applied Economics, 2011.

4.0 RESIDENTIAL MARKET ANALYSIS

The first part of this section of the report presents the analysis of housing and population growth through the year 2030 based on market demand, the supply of land available for residential development, and the competitive position of Scottsdale for certain types of residential development. It translates those growth projections into implied levels of residential development in terms of housing units, and the likely number of acres of land that the development would absorb. In the second part of this section the demand projections are performed again without the constraint of available vacant land for development, being driven only by the current and future level of employment in the City, the prevailing level of wages paid by those industries and long-term jobs/housing balance indicators. The second part is intended to illustrate the amount of housing, especially low-cost housing, is in demand relative to the supply, the purpose of which is to provide comprehensive planning information to policy makers.

4.1 Residential Forecasts

For this analysis, residential development was divided into three components, consistent with the residential categories used in the City of Scottsdale General Plan including rural residential, suburban residential and urban residential. The rural and suburban categories include single family housing, at under 2 and over 2 units per acre, respectively, while the urban residential category includes multifamily housing. Past trends in the residential market are tracked through Census data, Maricopa Association of Government's (MAG's) building permit completions, and Assessor's parcel data which is shown on Map 1. Residential demand was projected based on past trends in the market capture rate for each type, and the amount of land available for development within each of the three subareas.

As shown in **Table 17**, the inventory of rural residential housing units increased quickly over the past 20 years with more than 10,000 new units being built. This increased Scottsdale's share of such units in the metropolitan area from 15.6 percent in 1990 to 20.5 percent in 2005. Since 2005, the share has remained steady, possibly being constrained by the very high land prices that existed through 2008 and low levels of demand after that which has delayed new projects including those on state land. During the 1990 to 2005 period the distribution of such units within the City of Scottsdale shifted from the central subarea to the north subarea with the addition of nearly 8,000 units there bringing that area's share of rural residential development to about 54 percent of the City total.

Growth in the rural residential inventory in Scottsdale is expected to slow over the next 20 years, due to lower regional growth rates, lower levels of income growth, and constraints on the supply of land available for such development. Nonetheless, the City of Scottsdale could expect another 3,000 rural residential units to be added over the next 20 years bringing total inventory to about 21,000 units, as shown in **Table 18**. About 650 of the new units could be in the central subarea, with all but 21 units of the balance going to the north subarea. Based on the current density exhibited for residential units in the category, this would result in the absorption of some 4,100 acres of rural residential land citywide, about 3,400 acres of which would be in the north subarea.

TABLE 17
RESIDENTIAL DEVELOPMENT TRENDS: 1990-2010

	1990	1995	2000	2005	2010
Rural Residential Inventory (Units)					
Scottsdale	7,668	9,556	12,815	16,314	18,187
South Scottsdale	595	600	615	635	651
Central Scottsdale	5,130	5,621	6,365	7,254	7,636
North Scottsdale	1,943	3,335	5,835	8,425	9,900
Other Metro	41,383	45,268	53,271	63,431	70,533
Total	49,051	54,824	66,086	79,745	88,720
Scottsdale	15.63%	17.43%	19.39%	20.46%	20.50%
South Scottsdale	1.21%	1.09%	0.93%	0.80%	0.73%
Central Scottsdale	10.46%	10.25%	9.63%	9.10%	8.61%
North Scottsdale	3.96%	6.08%	8.83%	10.57%	11.16%
Other Metro	84.37%	82.57%	80.61%	79.54%	79.50%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
Suburban Residential Inventory (Units)					
Scottsdale	40,052	47,293	59,083	63,352	64,634
South Scottsdale	23,830	24,130	24,457	24,590	24,622
Central Scottsdale	15,766	21,118	28,293	30,753	31,888
North Scottsdale	456	2,045	6,333	8,009	8,124
Other Metro	580,688	651,969	778,279	935,748	1,030,039
Total	620,740	699,262	837,362	999,100	1,094,673
Scottsdale	6.45%	6.76%	7.06%	6.34%	5.90%
South Scottsdale	3.84%	3.45%	2.92%	2.46%	2.25%
Central Scottsdale	2.54%	3.02%	3.38%	3.08%	2.91%
North Scottsdale	0.07%	0.29%	0.76%	0.80%	0.74%
Other Metro	93.55%	93.24%	92.94%	93.66%	94.10%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
Urban Residential Inventory (Units)					
Scottsdale	24,024	27,907	33,775	39,107	41,338
South Scottsdale	15,161	16,772	17,844	19,058	20,112
Central Scottsdale	8,613	10,841	15,481	19,515	20,577
North Scottsdale	250	294	450	534	649
Other Metro	258,236	263,466	276,272	287,216	302,297
Total	282,260	291,373	310,047	326,323	343,635
Scottsdale	8.51%	9.58%	10.89%	11.98%	12.03%
South Scottsdale	5.37%	5.76%	5.76%	5.84%	5.85%
Central Scottsdale	3.05%	3.72%	4.99%	5.98%	5.99%
North Scottsdale	0.09%	0.10%	0.15%	0.16%	0.19%
Other Metro	91.49%	90.42%	89.11%	88.02%	87.97%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Maricopa Association of Governments; City of Scottsdale; Applied Economics, 2011.

Suburban residential housing unit inventory increased steadily over the past 20 years with about 24,600 new units being added, bringing the total inventory to about 64,600 units, or about 5.9 percent of the metropolitan area market. The majority of suburban residential units were located in the south subarea in 1990, which has only increased by about 800 units since. The inventory in the south subarea was surpassed by the inventory in the central subarea by the year 2000 with 28,300 units. Since then, the central subarea has continued to grow, reaching 31,900 units in 2010, although the growth rate has slowed due to constraints on available land for development. As growth in the central subarea began to slow, the rate of suburban residential development in the north subarea accelerated dramatically. Inventory in the area surged from just 2,045 units in 1995 to 6,333 units in 2000. Growth in the north subarea remained fairly strong through 2005, reaching over 8,000 units, but has slowed significantly since due to land supply constraints and the weakening "high-end" housing market.

Projections for suburban residential growth for the next 20 years are dramatically constrained by the lack of available land for development. The projections include the addition of about 2,300 housing units in this category through 2030. Of these, about 1,600 can be accommodated in the central subarea, with the balance being located in the north subarea. In all, these additions would consume about 530 acres of land, about 360 acres of which would be in the central subarea and 160 acres would be in the north subarea.

In the case of urban residential housing, the south subarea has remained active over the past 20 years with nearly 5,000 new units being added, but it still pales in comparison with the central subarea where some 12,000 units were added. These unit additions drove Scottsdale's share of this market in the metropolitan area from 8.5 percent in 1990, to about 12.0 percent by 2005. The capture rate has remained about the same since 2005. The increases in the urban residential category were driven by high levels of employment growth and to some extent, especially in the later years, by rapidly escalating housing prices driven by speculation. Since neither of these forces is likely to return to previous levels, and the supply of land is becoming limited, the growth experienced from 1990 to 2010 will not likely be replicated over the next 20 years.

Urban residential housing unit projections show the potential for about 9,800 new units between 2010 and 2030, bringing the total inventory to about 51,200 units. While the majority of these new units are likely to be located in the central subarea, redevelopment in the south subarea could result in over 2,400 units being added over the next 20 years. This would increase the south subarea to about 22,500 units in 2030 while the central subarea increases to about 27,600 units. Construction of these new urban residential housing units would require about 770 acres including 130 in the south subarea, 580 in the central subarea and over 60 acres in the north subarea.

The combination of the three types of housing units would increase the total inventory in Scottsdale from about 124,200 units currently to over 139,000 units by 2030.

TABLE 18
RESIDENTIAL DEVELOPMENT PROJECTIONS

	2010	2015	2020	2025	2030
Rural Residential Inventory (Units)					
Scottsdale	18,187	18,815	19,746	20,619	21,139
South Scottsdale	651	655	662	668	672
Central Scottsdale	7,636	7,769	7,967	8,155	8,284
North Scottsdale	9,900	10,391	11,117	11,796	12,183
Cumulative Acres (Absorbed)					
Scottsdale		873.25	2,165.97	3,378.30	4,093.29
South Scottsdale		5.10	11.95	18.21	22.22
Central Scottsdale		145.77	364.00	571.83	713.95
North Scottsdale		722.38	1,790.02	2,788.26	3,357.12
Suburban Residential Inventory (Units)					
Scottsdale	64,634	65,047	65,875	66,482	66,947
South Scottsdale	24,622	24,628	24,640	24,651	24,661
Central Scottsdale	31,888	32,160	32,724	33,158	33,511
North Scottsdale	8,124	8,260	8,511	8,673	8,774
Cumulative Acres (Absorbed)					
Scottsdale		96.60	288.73	428.53	534.22
South Scottsdale		1.01	3.36	5.38	7.27
Central Scottsdale		61.61	188.70	285.79	364.35
North Scottsdale		33.97	96.67	137.36	162.61
Urban Residential Inventory (Units)					
Scottsdale	41,338	42,413	45,757	48,587	51,171
South Scottsdale	20,112	20,390	21,223	21,919	22,546
Central Scottsdale	20,577	21,340	23,708	25,730	27,571
North Scottsdale	649	684	826	938	1,053
Cumulative Acres (Absorbed)					
Scottsdale		83.45	345.84	567.64	771.13
South Scottsdale		15.60	62.46	101.57	136.84
Central Scottsdale		62.90	258.13	424.77	576.55
North Scottsdale		4.95	25.25	41.30	57.74
Total Residential Inventory (Units)					
Scottsdale	124,159	126,276	131,378	135,689	139,257
South Scottsdale	45,385	45,673	46,525	47,238	47,879
Central Scottsdale	60,101	61,268	64,399	67,043	69,367
North Scottsdale	18,673	19,335	20,454	21,408	22,010

Source: Applied Economics, 2011.

4.2 Housing Demand Implications of Employment

A key part of integrating the employment and population projections into the General Plan update is evaluating the amount of housing by price level that is implied by the current and future levels of employment in the City. Based on 2010 Ride Share data for employers with 50 or more employees, only 29 percent of those who work in Scottsdale also live in Scottsdale. In some cases this is surely just a matter of preference, or is based on the work location of a significant other, but for some it is also driven by the fact that Scottsdale has a shortage of workforce housing. And, while prices are way down for the

time being, it is expected that they will rise again as the economy recovers and the housing supply glut is eliminated.

The approach to quantifying the need for additional affordable housing uses the employment by category projections developed for this study, along with household income data for employees working in each category from the Public Use Micro-data Sample (PUMS) Census data. By applying the distribution of workers by income for each category to the increase in employment in each category it is possible to calculate the demand for housing by price range. Conversion of income levels into housing price ranges was accomplished by assuming a housing payment equal to 25 percent of gross pay based on a 10 percent down payment and 30-year financing at 6 percent interest.

Table 19 summarizes the employment projections resulting from this study by category and subarea. It shows total employment increasing by about 77,000 jobs from approximately 172,000 jobs in 2010 to over 249,000 jobs by 2030. While much of the increase falls into employment categories with fairly high wage levels (office & medical office), much is also contained in lower wage employment categories such as retail and tourism. Further, even within the higher paying employment categories there are many workers in lower skill, lower-paying occupations.

The projected 90,000 job increase over the next 20 years, translates into potential demand for some 54,000 housing units based on the average number of workers per household. The actual demand would, of course, be less since not all workers would choose to live in Scottsdale even if affordable housing were available. So, while the increase in demand will be less than 54,000 units, that figure does not take into consideration that there is now a shortage of about 37,000 affordable housing units based on the 2010 employment levels and residential inventory. If we were to assume that half of all these combined 91,000 households would locate in Scottsdale if housing were available, that still leaves net demand of around 43,000 by 2030.

Table 20 shows how the demand for housing (both current and future) breaks down by price range. It shows that of the 43,000 units "needed," about 23,000 would be demanded at $300,000 per unit and up, and so could potentially be accommodated in the south and central subareas. However, since the residential inventory projections show an increase over the next 20 years of only about 15,000 units, and many of those being in the central and north subareas, it appears that the un-met demand even among people of means could be significant. Then, when you add in many of the 20,000 workers who would seek housing below the $300,000 mark, the un-met demand for housing becomes even more exaggerated. This is similar to the situation that exists in Tempe, where the number of jobs, and the associated housing demand, far out-strips the available housing.

TABLE 19
CITY OF SCOTTSDALE EMPLOYMENT PROJECTIONS

	2010	2015	2020	2025	2030
Warehouse Employment					
South Scottsdale	814	822	828	826	821
Central Scottsdale	2,005	2,310	2,363	2,398	2,428
North Scottsdale	213	213	213	213	213
Total	3,032	3,346	3,404	3,437	3,462
Manufacturing Employment					
South Scottsdale	3,099	3,265	3,234	3,188	3,142
Central Scottsdale	10,289	11,879	13,175	13,451	13,613
North Scottsdale	347	400	438	444	447
Total	13,735	15,544	16,847	17,083	17,201
Office Employment					
South Scottsdale	23,014	25,954	29,233	31,540	33,332
Central Scottsdale	36,593	44,574	51,728	56,341	59,528
North Scottsdale	3,348	4,608	5,800	6,954	7,750
Total	62,954	75,137	86,761	94,834	100,611
Medical Office Employment					
South Scottsdale	6,676	7,623	7,826	7,942	8,061
Central Scottsdale	13,803	18,223	19,199	19,779	20,289
North Scottsdale	506	2,401	2,888	3,121	3,322
Total	20,984	28,246	29,913	30,842	31,672
Hotel & Resort Employment					
South Scottsdale	5,591	5,788	6,183	6,381	6,508
Central Scottsdale	7,770	8,230	9,177	9,672	10,012
North Scottsdale	1,763	1,960	2,512	2,908	3,334
Total	15,124	15,978	17,872	18,960	19,854
Retail Employment					
South Scottsdale	15,055	15,944	16,377	16,662	16,930
Central Scottsdale	19,012	20,917	24,600	27,307	29,261
North Scottsdale	2,706	4,041	4,364	5,233	5,767
Total	36,773	40,902	45,341	49,202	51,957
Public & Institutional Employment					
South Scottsdale	4,815	4,921	5,181	5,429	5,675
Central Scottsdale	7,696	7,946	8,584	9,178	9,745
North Scottsdale	1,451	1,683	1,848	2,006	2,138
Total	13,962	14,550	15,612	16,613	17,558
Other Employment					
South Scottsdale	1,022	1,052	1,084	1,116	1,150
Central Scottsdale	3,759	3,909	4,066	4,228	4,397
North Scottsdale	1,046	1,098	1,153	1,210	1,271
Total	5,826	6,059	6,302	6,555	6,818
Total Employment					
South Scottsdale	60,085	65,370	69,946	73,084	75,617
Central Scottsdale	100,925	117,989	132,891	142,354	149,273
North Scottsdale	11,380	16,403	19,216	22,089	24,242
Total	172,390	199,762	222,053	237,527	249,132

Source: Applied Economics, 2011.

TABLE 20
HOUSING DEMAND BY PRICE RANGE: 2010-2030

	<$200,000	$200,000-$300,000	$300,000-$500,000	$500,000-$700,000	$700,000+	Total
Warehouse Employment						
South Scottsdale	1	2	1	0	0	4
Central Scottsdale	83	119	33	7	3	246
North Scottsdale	0	0	0	0	0	0
Total						
Manufacturing Employment						
South Scottsdale	1	6	11	4	1	23
Central Scottsdale	109	468	820	281	109	1,788
North Scottsdale	3	14	25	8	3	54
Total						
Office Employment						
South Scottsdale	339	1,454	2,545	872	339	5,550
Central Scottsdale	754	3,232	5,656	1,939	754	12,336
North Scottsdale	145	620	1,086	372	145	2,368
Total						
Medical Office Employment						
South Scottsdale	91	156	239	156	137	779
Central Scottsdale	427	731	1,120	731	640	3,649
North Scottsdale	185	318	486	318	278	1,584
Total						
Hotel & Resort Employment						
South Scottsdale	181	207	68	67	12	535
Central Scottsdale	442	505	166	164	29	1,307
North Scottsdale	310	354	116	115	21	916
Total						
Retail Employment						
South Scottsdale	431	475	139	42	12	1,100
Central Scottsdale	2,359	2,600	758	231	67	6,016
North Scottsdale	705	776	226	69	20	1,797
Total						
Public & Institutional Employment						
South Scottsdale	28	145	212	58	17	461
Central Scottsdale	67	347	505	139	40	1,098
North Scottsdale	23	116	169	46	14	368
Total						
Other Employment						
South Scottsdale	25	29	9	9	2	75
Central Scottsdale	126	144	47	47	8	372
North Scottsdale	44	51	17	17	3	131
Total						
Total Employment						
South Scottsdale	1,099	2,475	3,223	1,209	520	8,526
Central Scottsdale	4,368	8,147	9,106	3,540	1,652	26,813
North Scottsdale	1,415	2,250	2,125	945	483	7,218
Total	6,882	12,871	14,454	5,694	2,655	42,557

Source: Applied Economics, 2011.

5.0 LAND ABSORPTION SUMMARY

The purpose of this section is simply to summarize the impacts of the housing and employment projections on land use to illustrate their potential planning implications. In the case of residential development (**Table 21**), the analysis is decidedly supply constrained. In the south Scottsdale subarea there is very little undeveloped land, yet a few new and replacement units continue to be built every year. We believe that this trend will continue and accelerate. The south subarea contains a significant amount of land at values that could easily be transformed into redevelopment potential in a recovering economy. The projection for development / redevelopment of about 166 acres in the south subarea will likely be driven by the conversion of non-performing retail and rental residential properties into higher density, urban residential housing.

TABLE 21
ABSORBED RESIDENTIAL ACRES BY TYPE: 2010-2030

	2010-15	2015-2020	2020-25	2025-2030	Total
Rural Residential					
South Scottsdale	5.10	6.85	6.26	4.01	22.22
Central Scottsdale	145.77	218.23	207.83	142.12	713.95
North Scottsdale	722.38	1,067.64	998.24	568.86	3,357.12
Total	873.25	1,292.72	1,212.33	714.99	4,093.29
Suburban Residential					
South Scottsdale	1.01	2.34	2.03	1.89	7.27
Central Scottsdale	61.61	127.09	97.09	78.56	364.35
North Scottsdale	33.97	62.70	40.68	25.25	162.61
Total	96.60	192.13	139.79	105.70	534.22
Urban Residential					
South Scottsdale	15.60	46.86	39.11	35.27	136.84
Central Scottsdale	62.90	195.23	166.64	151.78	576.55
North Scottsdale	4.95	20.30	16.04	16.44	57.74
Total	83.45	262.39	221.80	203.49	771.13
Total Residential Land Area					
South Scottsdale	21.71	56.05	47.40	41.17	166.32
Central Scottsdale	270.28	540.56	471.56	372.46	1,654.85
North Scottsdale	761.31	1,150.64	1,054.97	610.55	3,577.47
Total	1,053.29	1,747.25	1,573.92	1,024.18	5,398.64

Source: Applied Economics, 2011.

The central subarea also faces significant supply constraints, although some vacant land still exists. Much of the rural residential development potential is scattered in very low density areas, implying a longer timeline for development, and the supply of suburban residential land is small. Ample, though not excessive, amounts of land have been designated for urban residential development in the central subarea, which will be important to providing workforce housing and bolstering retail demand. Absorption of nearly 600 acres of urban residential land by 2030 could generate up to 9,300 new units and provide housing for some 19,000 people in the City of Scottsdale.

Finally, the north area represents the largest potential pool of developable residential land, far in excess of the 3,600 acres shown as being absorbed through 2030, although about 95 percent is still assumed to be developed at rural residential densities. Over the past 20 years the average density in this category in the north subarea has been 0.77 units per acre, so the 3,577 acres indicated as absorbed by the projections only translates into about 3,300 housing units, or about 165 per year on average.

In the case of nonresidential development, the projections were not directly supply constrained since the higher residual land values that can be generated by these uses will make land available for it, albeit at a higher price than in some areas. Both the south and central subareas of the City of Scottsdale contain a significant amount of redevelopment potential. The age, condition and density (design) of the structures are very different than what the market in a close proximity is demanding. Still, the transformation will not be swift as this type of conversions takes time.

Table 22 provides a summary of absorbed acres by land use for nonresidential uses. In total, it shows demand for about 2,000 acres of nonresidential development in Scottsdale over the next 20 years, over half of which will be in the central subarea. The smallest component of demand will come from industrial users, with warehouse and manufacturing demand of about 90 acres over the next 20 years. However, there is always the possibility of attracting/growing one or more large users, and their suppliers, which would greatly increase demand. These are exactly the type of users that could promote redevelopment in the older portion of the Scottsdale Airpark, west and south of the runway.

Office demand in Scottsdale will remain strong, even as the City's share of the metropolitan area inventory declines. Absorption of about 450 acres of standard office and 170 acres of medical office land are implied by the projections. The south Scottsdale subarea is projected to experience some growth, assumeably through redevelopment, as is the north subarea which will be heavily dominated by medical and other personal service providers. The bulk of the demand will be met in the central area, comprising about 350 acres of new development by 2030.

Hotels and resorts are expected to continue to play an important role in Scottsdale's economic base. The 410 acres of land absorbed by 2030 will be generally evenly split between the central and north subareas; however the density of the future facilities will be very different. The central subarea will feature full-service luxury resort accommodations and full-service hotels, adding some 1,400 rooms. The north subarea will feature full-service luxury resorts and super luxury resorts and experience destinations that are developed at very low densities adding some 600 rooms.

Retail land demand will continue to follow residential and tourism demand, however the south subarea could experience some neighborhood retail revitalization from new urban residential development and growing tourism demand. Housing and population growth in the north subarea will generate demand for about 145 acres of neighborhood and community retail development, while contributing to the over 400 acres of land projected to be absorbed in the central subarea for community and regional retail uses.

Public and institutional uses are expected to absorb an additional 280 acres of land over the next 20 years. While the majority of this, about 160 acres, would be in the central subarea, the south subarea could add some 50 acres as municipal and medical (hospital) uses expand, and more institutions seek desirable urban locations. The north area will have additions based on new residential and retail development through schools, fire stations, police sub-stations, libraries, etc., however the amount of development will be limited compared with the total number of acres absorbed due to the low density of that development. This low density of development tends to make public service delivery more expensive than in higher density parts of the City, often offsetting the extra taxes collected from each unit based on property values.

The development forecasts, and the land use demands they imply are subject to variation due in the many factors driving demand in the future. However, we believe that these projections provide a good idea of the magnitude and proportion of change that can be expected over time based on the available information, regardless of the actual level of population and employment in any particular year.

TABLE 22
NONRESIDENTIAL LAND ABSORPTION: 2010 – 2030
(Acres)

	2010-15	2015-20	2020-25	2025-30	Total
Warehouse					
South Scottsdale	0.34	1.91	1.02	0.73	4.00
Central Scottsdale	0.94	4.53	2.58	1.99	10.04
North Scottsdale	-	-	-	-	-
Total	1.28	6.44	3.60	2.71	14.04
Manufacturing					
South Scottsdale	1.25	0.57	0.19	0.08	2.09
Central Scottsdale	8.35	40.51	15.38	7.68	71.92
North Scottsdale	0.51	2.04	0.65	0.28	3.48
Total	10.11	43.12	16.22	8.04	77.49
Standard Office					
South Scottsdale	5.76	32.20	29.15	22.65	89.75
Central Scottsdale	21.71	97.61	81.00	55.96	256.28
North Scottsdale	7.64	36.28	36.13	20.80	100.86
Total	35.11	166.09	146.28	99.42	446.90
Medical Office					
South Scottsdale	3.21	3.46	2.54	2.60	11.81
Central Scottsdale	26.04	28.84	22.08	19.38	96.34
North Scottsdale	17.68	21.21	12.13	10.52	61.54
Total	46.93	53.51	36.75	32.50	169.69
Hotel & Resort					
South Scottsdale	6.56	21.51	10.79	6.96	45.82
Central Scottsdale	25.29	85.24	44.54	30.64	185.71
North Scottsdale	14.45	66.30	47.51	51.06	179.32
Total	46.30	173.06	102.84	88.66	410.85
Retail					
South Scottsdale	7.33	13.46	9.69	8.82	39.30
Central Scottsdale	24.44	172.42	126.69	80.95	404.49
North Scottsdale	22.83	18.40	65.16	37.65	144.04
Total	54.60	204.28	201.54	127.42	587.83
Public & Institutional					
South Scottsdale	3.42	17.87	16.35	15.35	52.99
Central Scottsdale	10.38	56.62	50.16	45.66	162.81
North Scottsdale	13.22	20.20	18.45	14.71	66.57
Total	27.01	94.68	84.96	75.72	282.37
Total Nonresidential Land Area					
South Scottsdale	27.87	90.98	69.73	57.19	245.76
Central Scottsdale	117.13	485.79	342.43	242.25	1,187.60
North Scottsdale	76.34	164.43	180.03	135.03	555.82
Total	221.34	741.19	592.19	434.47	1,989.18

Source: Applied Economics, 2011.