

*The Economics of Land Use*



## Draft Report

# Component 2: Future Jobs, Economic Opportunity and Housing Study

Prepared for:

Planning and Community Development, City of San Antonio

Prepared by:

Economic & Planning Systems, Inc.

August 1, 2014

*Economic & Planning Systems, Inc.  
730 17th Street, Suite 630  
Denver, CO 80202-3511  
303 623 3557 tel  
303 623 9049 fax*

*Berkeley  
Denver  
Los Angeles  
Sacramento*

**[www.epsys.com](http://www.epsys.com)**

EPS #133029

## Table of Contents

---

1.	SUMMARY OF FINDINGS .....	7
	Component 2 Understanding .....	7
	Component 2 Summary of Findings .....	10
2.	EMPLOYMENT FORECAST .....	14
	Methodology .....	14
	Historic Employment Trends .....	16
	Economic Development Framework .....	20
	Forecast Methodology and Benchmarks .....	31
	EPS Employment Forecast .....	37
	Commercial and Industrial Development Trends .....	40
	Future Employment Development Opportunities .....	46
	Development Typology .....	49
	Estimate Development Demand .....	51
	Employment “Activity Centers” .....	52
	Activity Center Employment Forecast .....	58
	Non Employment Activity Center Job Forecast .....	60
	Employment Land Demand .....	61
3.	HOUSING FORECAST .....	64
	Methodology .....	64
	Recent Regional Trends and Development .....	65
	Housing Demand Benchmarks .....	72
	Regional Housing Forecast .....	79
	Housing Typology .....	80
	Housing Location Demand Benchmarks .....	82
	Subarea Housing Capture and Land Demand .....	86
4.	LAND DEMAND AND CAPACITY .....	88
	Activity Centers .....	88
	Subareas .....	93
	APPENDIX .....	96

## List of Tables

---

Table 1	Forecast Employment by Employment Category, 2010 to 2040 .....	10
Table 2	Forecast Housing Units by Super Subarea, 2010 to 2040 .....	13
Table 3	Bexar County Employment by Industry, 2000 to 2012 .....	17
Table 4	Employment by Subarea, 2002 to 2011 .....	18
Table 5	Employment by AAMPO Categories, 2000 to 2012 .....	19
Table 6	Employment by Employment Categories and Industry Definitions, 2000 to 2012 ....	33
Table 7	Employment Categories Benchmark Growth Rates.....	35
Table 8	AAMPO Employment Forecast, 2010 to 2040 .....	36
Table 9	EPS Bexar County Employment Forecast, 2012 to 2040 .....	38
Table 10	Wage and Salary Employment Forecast by MPO Category, 2012-2040 .....	39
Table 11	Employment Development Typology .....	49
Table 12	Employment Development Typology .....	50
Table 13	Forecast New Jobs by Development Type, 2010 to 2040 .....	51
Table 14	Jobs by Employment Category by Employment Activity Center.....	55
Table 15	Forecast New Jobs by Activity Center by Development Type, 2010 to 2040 .....	59
Table 16	Non-Activity Center Employment Forecast by Subarea, 2010 to 2040 .....	60
Table 17	Building and Land Demand Factors.....	61
Table 18	Bexar County Employment Land Demand (Acres), 2012 to 2040.....	62
Table 19	San Antonio Activity Center Employment Land Demand (Acres), 2012 to 2040 .....	62
Table 20	Bexar County Non-Activity Center Employment Land Demand, 2012 to 2040.....	63
Table 21	San Antonio MSA Population and Household, 2000 to 2012 .....	65
Table 22	Bexar County Housing Unit Forecast, 2010 to 2040 .....	79
Table 23	Bexar County Housing Unit Forecast, 2010 to 2040 .....	79
Table 24	Housing Development Typology .....	80
Table 25	Bexar County Forecast New Housing Units by Housing Type, 2010-2040.....	81
Table 26	Bexar County Existing Housing Conditions by Subarea .....	83
Table 27	Bexar County Housing Forecast Benchmark Measures.....	85
Table 28	Forecast Single Family and Multifamily Housing Units by Subarea, 2010 to 2040....	86
Table 29	Bexar County Housing Land Demand by Subarea, 2010 to 2040 .....	87
Table 30	Activity Center Estimated Land Capacity by Use .....	88

Table 31	Activity Center Employment Land Demand and Capacity Comparison .....	90
Table 32	Activity Center Employment Land Demand with Increased Density .....	91
Table 33	Activity Center Housing Demand and Capacity Comparison .....	92
Table 34	Employment Land Demand and Capacity by Subarea.....	93
Table 35	Housing Land Demand and Capacity by Subarea .....	94
Table 36	Total Land Demand and Capacity by Subarea .....	95
Appendix Table 1	Bexar County Employment by AAMPO Categories, 2000 to 2012 .....	97
Appendix Table 2	Bexar County Average Annual Wages by Industry, 2012.....	98
Appendix Table 3	Bexar County Office Inventory, 2005 to 2013.....	99
Appendix Table 4	Bexar County Retail Inventory, 2005 to 2013.....	100
Appendix Table 5	Bexar County Industrial Inventory, 2005 to 2013 .....	101
Appendix Table 6	Allocation of Jobs by Industry to Development Types .....	102
Appendix Table 7	Estimated Jobs by Industry by Activity Center .....	103
Appendix Table 8	Existing Percent Capture of Jobs by Industry by Activity Center.....	104
Appendix Table 9	Forecast Percent Capture of Jobs by Industry by Activity Center .....	105
Appendix Table 10	Forecast Demand for Employment Sq. Ft. by Development Type.....	106
Appendix Table 11	Activity Center Demand for Employment Sq. Ft. by Development Type..	107
Appendix Table 12	Non-Activity Center Employment Sq. Ft. Demand by Development Type	108
Appendix Table 13	Estimated Single Family Units by Development Type by Subarea .....	109
Appendix Table 14	Estimated Multifamily Units by Development Type by Subarea .....	110

## List of Figures

---

Figure 1	Project Subareas.....	8
Figure 2	Employment Activity Centers .....	9
Figure 3	Employment Analysis Methodology .....	14
Figure 4	Component 2 Geographic Analysis Methodology .....	15
Figure 5	San Antonio MSA Wage and Salary Employment, 2001 to 2013 .....	16
Figure 6	San Antonio Traditional Economic Drivers Employers .....	22
Figure 7	San Antonio Health Care and Life Science Employers .....	24
Figure 8	San Antonio Creative, Scientific R&D, and Technology Industries Employers .....	28
Figure 9	Eagle Ford Shale Formation .....	29
Figure 10	Bexar County Office Inventory and Vacancy .....	41
Figure 11	Bexar County Retail Inventory and Vacancy .....	43
Figure 12	Bexar County Industrial Inventory and Vacancy .....	45
Figure 13	Texas A&M-San Antonio Campus Master Plan .....	47
Figure 14	Bexar County Major Employment Concentrations .....	52
Figure 15	Employment Activity Centers .....	53
Figure 16	Activity Center Percent Employment by Employment Category.....	56
Figure 17	New Non-Residential Development by Use within Bexar County, 2005 to 2013 .....	57
Figure 18	Forecast New Jobs by Employment Activity Center .....	58
Figure 19	Housing Forecast Methodology .....	64
Figure 20	U.S. Primary City and Suburban Population Growth, 2000 to 2013 .....	66
Figure 21	San Antonio Primary City and Suburban Population Growth, 2000 to 2013 .....	67
Figure 22	San Antonio Change in Households by U.S. Census Tract, 2000 to 2012 .....	68
Figure 23	San Antonio Average Household Income by U.S. Census Tract, 2012.....	69
Figure 24	San Antonio MSA Residential Building Permits per Year, 2000 to 2012 .....	70
Figure 25	San Antonio MSA Single Family Building Permits per Year, 2000 to 2012.....	70
Figure 26	San Antonio MSA Multifamily Building Permits per Year, 2000 to 2012 .....	71
Figure 27	San Antonio Residential Building Permits per Year, 2000 to 2012 .....	72
Figure 28	United States Share of Population by Age, 2013.....	73
Figure 29	Texas Share of Population by Age, 2013 .....	73
Figure 30	NAR Community Preference Survey - Housing Type Preference .....	74

Figure 31	NAR Community Preference Survey - Neighborhood Type Preference.....	75
Figure 32	San Antonio Walk Score by Neighborhood Association .....	76
Figure 33	NAR Community Preference Survey – Preference Trade-off Responses.....	77

# 1. SUMMARY OF FINDINGS

---

The City of San Antonio is updating its Comprehensive Plan. As a precursor to this effort, the City is seeking to understand the capacity and opportunities for future growth, and the fiscal impact of new development on the City. Economic & Planning Systems (EPS) has been retained by the City of San Antonio (COSA) to perform three studies to be incorporated into the plan. The three studies are referred to in this report as Components 1, 2 and 3 and will address:

- Component 1 - Land and Development Capacity Study
- Component 2 - Future jobs, economic opportunity and housing study
- Component 3 - Fiscal impact of alternative growth scenarios study

The goal of the three studies is to help determine how the City can accommodate the anticipated employment and population growth, which could reach 1.1 million new residents, 500,000 jobs, and another 500,000 dwelling units by 2040. The contents of this report are the findings of Component 2, the Future Jobs, Economic Opportunity and Housing Study.

## Component 2 Understanding

The Future Jobs, Economic Opportunity and Housing Study, known as Component 2, is the second component to be completed. This component assesses the demand for jobs and housing over the next 25 years within the existing City limits and its extraterritorial jurisdiction, and the impact of forecast demand on development patterns and geographic locations.

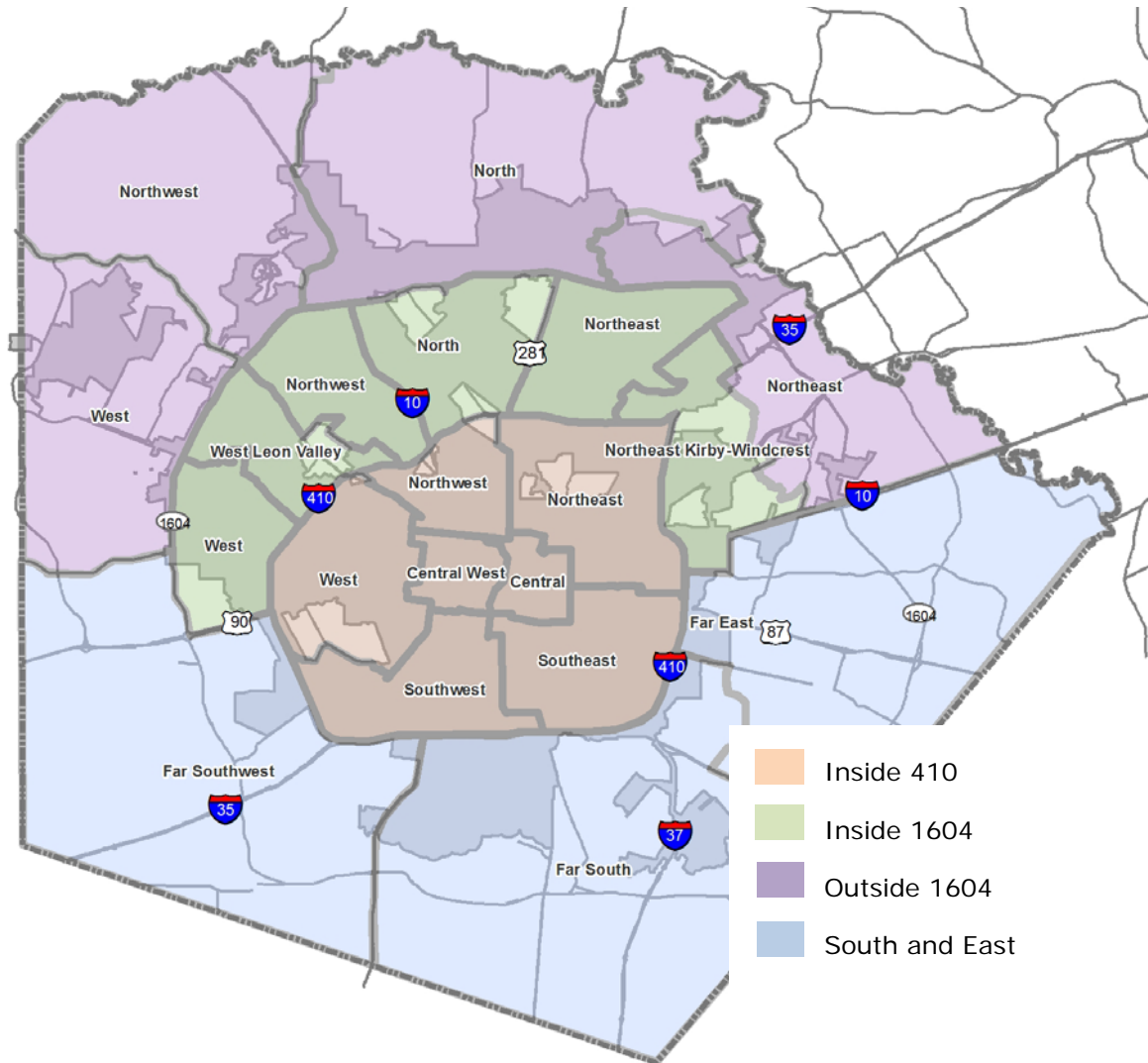
The primary components are an assessment of the demand for jobs by employment industry and the corresponding impact on development patterns, and the demand for housing by type within San Antonio and its extra territorial jurisdictions (ETJ) as a result of future employment expansion.

To complete the Component 2 analysis Bexar County was divided into 20 subareas with four main Super Subareas, as shown in **Figure 1**. The four Super Subareas are:

- Inside 410 – The area inside the I-410 Loop
- Inside 1604 – The area in the north central part of the City between I-410 and 1604
- Outside 1604 – The area outside the 1604 Loop in the northern part of the County
- South and East – The area encompassing the southern portion of the County south of the I-410 loop.

The subareas geographies are based on U.S. Census Public Use Microdata Areas (PUMAs) with minor adjustments and align with the Alamo Area Metropolitan Planning Organization's (AAMPO) traffic analysis zone (TAZ) boundaries.

**Figure 1**  
**Project Subareas**



The Component 2 analysis identified and detailed four major findings:

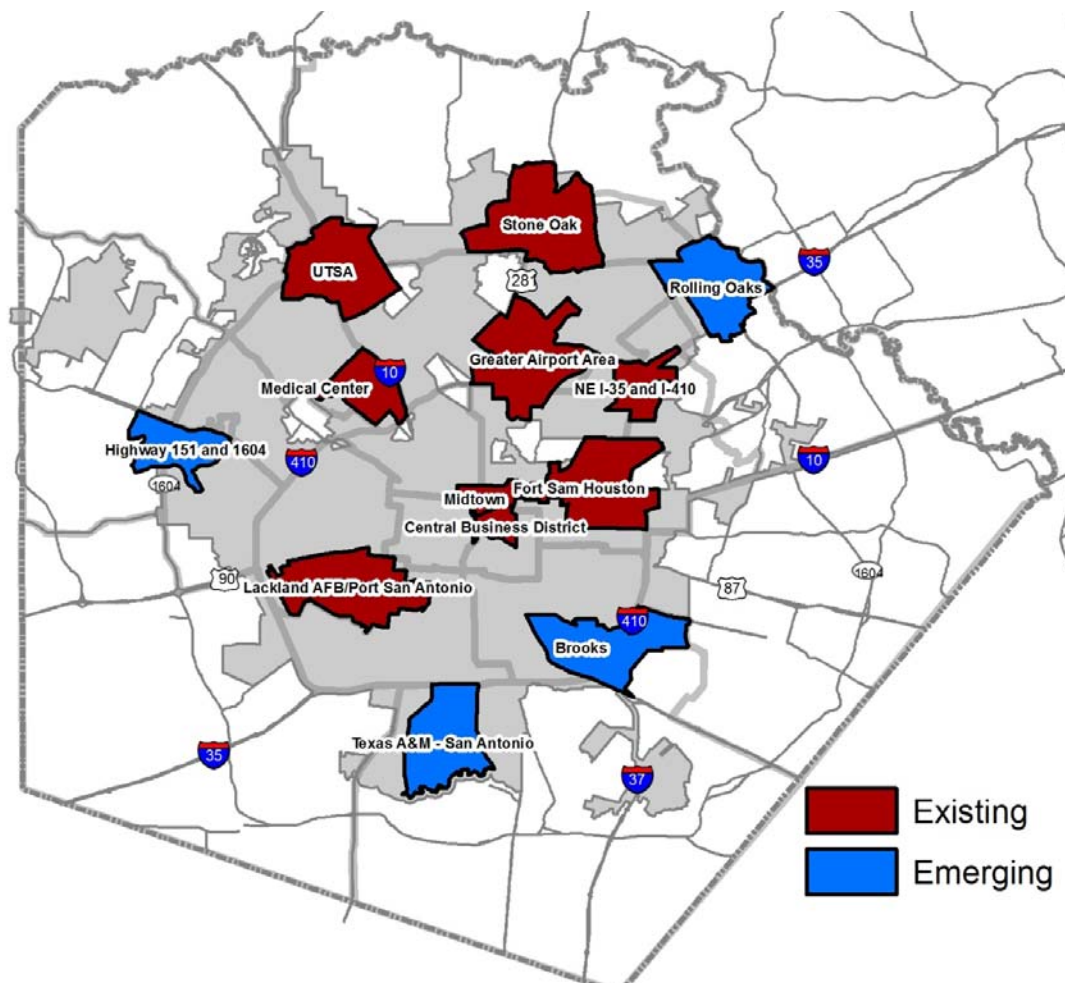
- A employment forecast for Bexar County from the present to 2040 within a set of 29 employment industries within four major employment categories; Traditional Economic Drivers, Industry Clusters and Other Drivers, Business Support Industries, and Community Support Industries. The employment industries and major employment categories were selected and grouped by similar industries based on their economic role within the City, and impact on development patterns.
- A forecast of demand for non-residential development within nine site development types. The analysis is based on the forecast of employment by industry which is translated into demand for building square feet and land acreage based on the needs of employers within each industry.



- Identification of 13 employment activity centers within the City split into two categories—existing and emerging, shown in **Figure 2**. An estimate of demand for development for each center is provided with corresponding land demand.
- A forecast of housing demand by subarea from the present to 2040. The analysis forecast demand by seven housing types based on historic trends, future development plans and projects, an analysis of consumer preferences, as well as residential land capacity in each subarea.

The purpose of the Component 2 analysis is to forecast demand for future jobs and households within the City and its ETJs with specific analysis on existing and emerging employment centers and the demand for infill development. The development demand analysis by subarea and employment activity center is matched with an analysis of land and development capacity that was completed in Component 1. A comparison of Components 1 and 2 is completed to develop a growth forecast scenario for the AAMPO and is summarized in this report. A key feature of this analysis is the geographic focus that translates regional demand into specific development uses and types. As well, the analysis specifies the “where” for this growth with detailed estimates of supply and demand by subarea.

**Figure 2**  
**Employment Activity Centers**



## Component 2 Summary of Findings

- 1. The Alamo Area Metropolitan Planning Organization (AAMPO) forecast that Bexar County will increase in employment by 675,000 jobs over the next 30 years at an annual rate of 2.1 percent.***

Bexar County increased in wage and salary employment by over 100,000 jobs between 2000 and 2012 and grew at an annual rate of 1.2 percent. The AAMPO is forecasting employment to grow at nearly twice the annual rate as experienced in the previous decade. Secondary employment forecasts project Bexar County to increase in employment at the same annual rate as forecast by the AAMPO. The forecast of “where” this growth will occur is the focus of this analysis using the AAPMO forecast as the regional control total.

- 2. Healthcare, education, tourism and military were the major driving industries of the San Antonio economy over the past decade.***

The health care industry grew by nearly 40,000 jobs since 2000 and grew at annual rate of 3.6 percent. Employment growth since 2000 was driven primarily by job gains in industries within the Service sector, which increased in employment by 80,000 jobs. The major employment concentrations for these industries include the South Texas Medical Center (health care), Downtown (tourism), the City’s major universities, and the three area military bases. Finance and Oil and Gas are other industries that also had significant gains in employment and generated economic activity within the City.

- 3. The Traditional Economic Drivers in San Antonio are forecast to continue to lead the economic and employment growth in the City over the next 30 years and are estimated to account for over half the employment growth.***

Employment within San Antonio fits into four general employment categories; traditional economic drivers; industry drivers and other drivers; business support industries; and community support industries. This construct has been used by other agencies in the San Antonio region regarding economic development and serves as the basic categorization for this analysis. The estimated employment growth for each category is shown in **Table 1**.

**Table 1**  
**Forecast Employment by Employment Category, 2010 to 2040**

Category	Total New Jobs	% of New Jobs	Avg. Ann. Growth Rate
Traditional Economic Drivers	305,949	54%	2.7%
Industry Clusters and Other Drivers	34,193	6%	1.6%
Business Support Industries	165,821	29%	1.9%
Community Support Industries	63,472	11%	1.3%
<b>Total</b>	<b>569,435</b>		<b>2.1%</b>

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Forecast.xlsx\Forecast

**4. *San Antonio's economy is heavily reliant on its traditional driving industries and has had difficulty retaining and attracting employment from other industries, which has led to a large portion of the workforce earning low wages and lacking skills necessary to attract businesses in other industries.***

While the traditional economic drivers (health care, education, tourism and military) provide a reasonably strong economic base for the City, the average wages in these industries are lower than the countywide average. The diversification of the San Antonio economy is needed to lessen the reliance on traditional economic drivers. Employment growth within the Industry Clusters and certain Business Support Services industries is essential to ensure economic vitality. The oil and gas industry is expected to continue to generate economic growth related to services supporting drilling activity in the Eagle Ford Shale formation; however, oil and gas may be even more volatile than the traditional drivers. Going forward economic development efforts need to shift to industries that are producing basic employment in the 21st century that are present in San Antonio. Employment growth, particularly in small, new start up business within the creative, life sciences, scientific R&D, technology, advanced manufacturing, and aerospace industries will be important to aid in diversification and expansion of the economy. Equally important is the continued investment by the City and others into the quality life and live-ability of the City's neighborhoods and activity areas in order to be competitive nationally in attracting and retaining a skilled and educated workforce.

**5. *San Antonio has polycentric economic framework with major nodal concentrations of employment spread throughout the City.***

There are 13 major concentrations of employment within San Antonio that are the major activity centers for the City. Nine of the centers are considered existing centers with more than 15,000 jobs, and four are emerging centers with major development plans and economic assets that will drive future growth. These 13 centers account for 50 percent of all employment in Bexar County and have captured 51 percent of all non-residential development since 2000. The Activity Centers are forecast to capture at least 50 percent of employment over the next 30 years.

**6. *Five of the 13 Activity Centers have an insufficient land capacity to accommodate estimated growth.***

Five of the Activity Centers have insufficient land supply to accommodate demand if development occurs in the pattern consistent with the past several decades. Average development density for these five centers (Greater Airport, CBD, Midtown, Medical Center, and NE I-35/I-410) must essentially double (or more) from an average Floor Area Ratio of development of 0.4 to 0.8. Denser development will achieve a higher yield from the land, but will require substantial changes to the existing building forms and infrastructure within the centers to accommodate denser development. In order to accommodate the estimated demand for development and facilitate denser development, these centers need improvements and policies that will facilitate increased density of buildings, increased walkability and bicycle access, increased transit service and access, and advanced parking solutions.

**7. *San Antonio is capturing a decreasing share of household growth in the metro area and has grown slower than Bexar County and the surrounding communities in other metro counties since 2000.***

San Antonio captured only 70 percent of the household growth in Bexar County since 2000 after capture virtually all of it during the 1990's. San Antonio households grew by an annual rate of 1.3 percent over the past 14 years while Bexar County grew by 1.7 percent and the San Antonio MSA grew by 2.4 percent. The exception to this pattern is the short time period from 2011 to 2012, in which the City grew by a faster rate than the surrounding suburbs matching with a national trend where the primary city in the Nation's 51 largest metro areas grew faster than their surrounding suburbs. This trend is recent and national in scope and has not occurred in the US since the 1920's

**8. *San Antonio has been losing its competitive market position for capturing single family housing development within the metro area as developers and home buyers look outside the City's boundaries for more attractive opportunities.***

San Antonio has been capturing a decreasing share of single family home development within the MSA and now captures less than half. Developers have begun working in unincorporated Bexar County, due to favorable public financing structures provided by the county. This has led to a large amount of development outside the City's boundaries and control, but the development still relies on City services and infrastructure to support the development. Single family home buyers over the past decade have found it cheaper and more attractive to buy homes in the surrounding suburbs, which have been facilitated by infrastructure improvements that allow for easy access in and out of the City's periphery.

**9. *Nationally there is a growing preference from home buyers to live in walkable, mixed use communities that provide close and convenient access to neighborhood amenities and services, as well as shorter commutes to work, in exchange for smaller houses and yards.***

San Antonio lacks in walkable neighborhoods that fit with current consumer preferences. San Antonio has the opportunity to provide more neighborhoods and areas that fit with more recent consumer preferences and fit with the preferences of the demographic groups that will dominate the San Antonio market place in the future. Walkable, mixed use neighborhoods could provide a substantial market niche for the City, as these types of neighborhoods are less prevalent in the surrounding suburban communities.

**10. *San Antonio has captured 88 percent of multifamily development within the San Antonio MSA since 2000.***

Furthermore, multifamily development has accounted for 40 percent of permitted units within the City over the past 14 years. Multifamily development, specifically apartment development, is leading to reinvestment in the inner core of San Antonio. Development of apartments within the I-410 loop accounts for over 30 percent of the apartment development pipeline. The Activity Centers, identified around major employment concentrations, have the opportunity to capture half to multifamily development over the next 30 years, which can transform the City's employment centers into vibrant, high density, mixed use activity centers.

**11. Market trends combined with the land capacity analysis indicate that growth patterns are changing.**

Housing development in San Antonio since 2000 has occurred primarily in the north and western portions of the County. The Outside 1604 Super Subarea captured 40 percent of housing development between 2000 and 2012. Combined the Inside 1604 and Outside 1604 Super Subareas accounted for over 70 percent of housing development. This will change as the areas are nearing build out given the lack of available land, topographic constraints, and the corresponding challenges for utility service. Residential growth is projected to occur more the west, and to some degree, to the south. Depending on the ability of the City to create policies and infrastructure changes to attract growth, it may shift to locations within the city limits or may continue to expand into other counties. Assuming a reasonable share of city-wide capture, growth of new housing units by Super Subarea is shown in **Table 2**.

**Table 2**  
**Forecast Housing Units by Super Subarea, 2010 to 2040**

Super Subarea	New Housing Units	% of Total
Inside 410	124,437	22%
Inside 1604	132,004	23%
Outside 1604	190,303	34%
South and East	118,878	21%
<b>Total</b>	<b>565,621</b>	<b>100%</b>

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Housing Forecast.xls:

**12. Ten of the 20 subareas have a lack of residentially zoned land to accommodate the forecast demand for housing in those subareas.**

There is a lack of land supply to capture housing development, particularly within the Inside 410 and Inside 1604 Super Subareas if development continues under the same density and development patterns. Increasing the density of neighborhoods and the average density of single family development will help reduce some of the demand for land. Additional, there is an oversupply of employment land within underutilized commercial and industrial zoned parcels outside of the 13 Activity Centers. Areas with large concentrations of vacant and underutilized commercial and industrial parcels should be repositioned as residentially focused mixed use neighborhoods, which will increase the supply of residential land in these inner subareas. The inner city arterial corridors have the capacity and potential to evolve from primarily auto-oriented retail uses to a mixture of retail, office and residential uses.

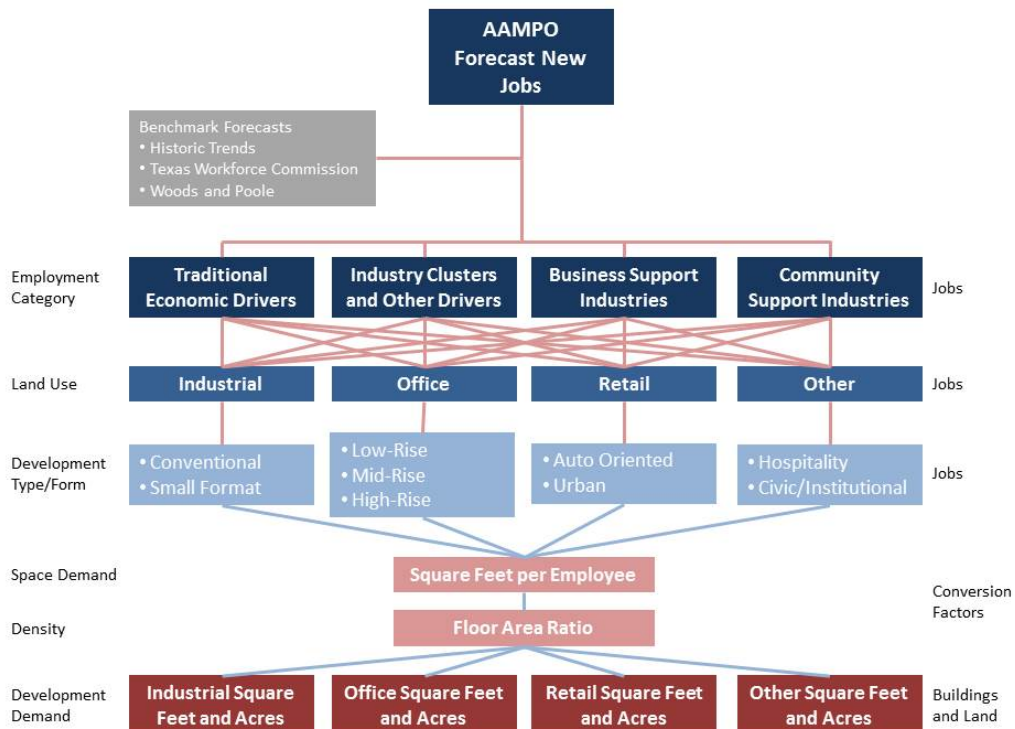
## 2. EMPLOYMENT FORECAST

The Component 2 analysis of future jobs and economic opportunities is meant to provide the basis for understanding the locations within San Antonio and Bexar County where economic opportunities exist and demand for future jobs and housing will be. To provide a basis for understanding the geographic demand for employment and related development, EPS completed an employment forecast through 2040 for Bexar County. A summary of the analysis is provided in this chapter and serves as the basis for estimating the demand for land and development in the City.

### Methodology

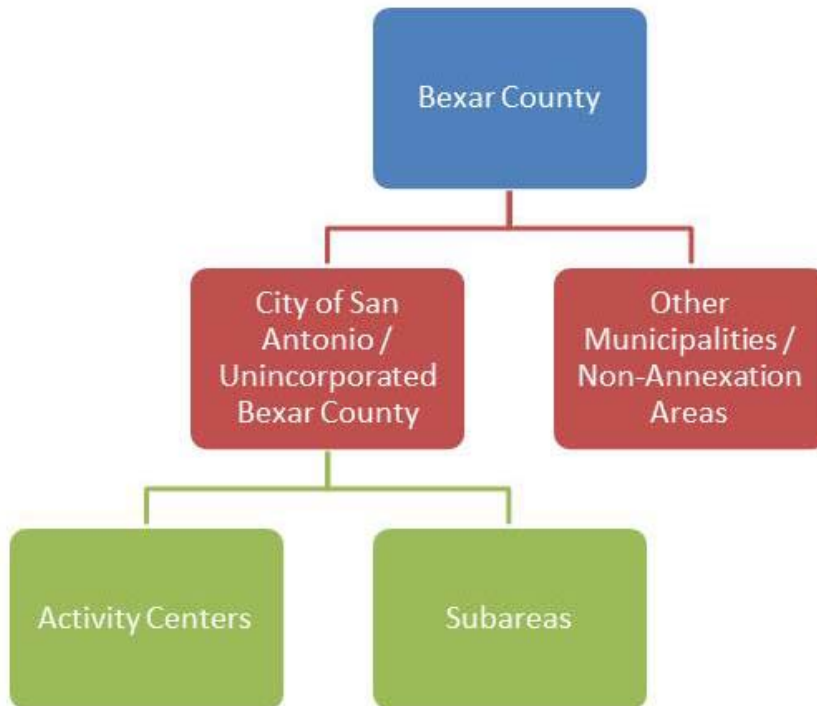
The employment forecast methodology is illustrated in **Figure 3**. The forecast of future jobs by area of the City and employment land demand was completed using the AAMPO forecast for new jobs for Bexar County. The AAMPO forecast was split into four job categories based on the economic base and economic development efforts of the City. Historic employment trends and secondary employment forecasts are used to estimate future jobs within each employment category. The type of development needed to accommodate jobs within the employment categories is estimated and split within seven employment development types. Lastly, research on the building and land necessities of each development type are used to estimate the building and land demand for employment.

**Figure 3**  
**Employment Analysis Methodology**



The employment forecast and land demand estimate was completed for two layered geographies, which include the 20 Bexar County subareas and 13 Activity Centers, as shown **Figure 4**. The land capacity for employment development was estimated in Component 1 and includes all parcels within San Antonio, as well as those that are located in unincorporated Bexar County but fall outside of non-annexation agreements.

**Figure 4**  
**Component 2 Geographic Analysis Methodology**

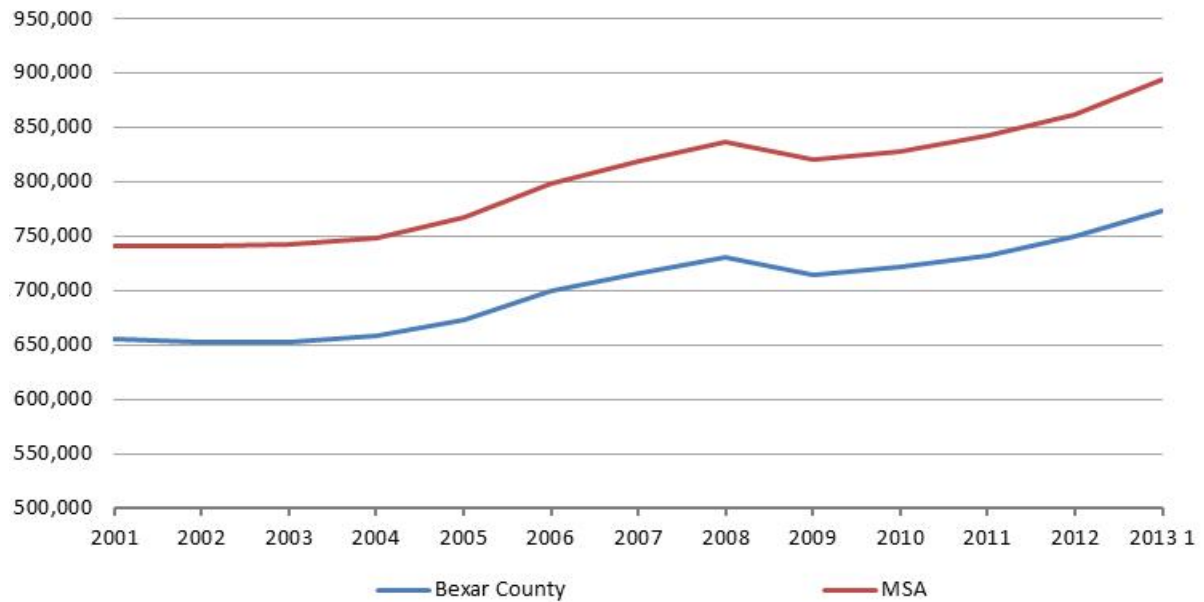


## Historic Employment Trends

### Regional

Employment in the San Antonio Metropolitan Statistical Area (MSA) increased by 152,600 jobs between 2001 and first quarter of 2013, which equates to an annual rate of growth of 1.5 percent, as shown in **Figure 5**. Employment in Bexar County during this same period increased at a slightly slower rate of 1.3 percent per year for a total of 118,000 jobs. Both the MSA and County experienced a decrease in employment from 2008 to 2009 as a result of the national economic recession. However, both recovered the lost jobs from the recession by 2011.

**Figure 5**  
**San Antonio MSA Wage and Salary Employment, 2001 to 2013**





The change in employment from 2000 to 2012 in Bexar County by two digit North American Industry Classification System (NAICS) industries is shown in **Table 3**. Healthcare is the largest industry in Bexar County and was the leading industry in Bexar County over the past decade. The Health Care and Social Assistance industry increased in employment by 39,377 jobs and grew at an annual rate of 3.6 percent. Other industries with significant increases in total jobs during this period were Finance and Insurance with 12,744 jobs, Educational Services with 16,009 jobs and Accommodation and Food Services with 23,925 jobs. The Mining industry employment increased at the highest rate, 3.8 percent, due to increases in oil and gas employment. Industries that experienced a significant decrease in employment include Information with a loss of 5,093 jobs, Transportation and Warehousing with a loss of 3,562 jobs, and Manufacturing with a loss of 7,917 jobs.

**Table 3**  
**Bexar County Employment by Industry, 2000 to 2012**

Industry	2000	2012	Change 2000-2012		
			#	Ann. #	Ann. %
Agriculture, forestry, fishing and hunting	1,305	1,089	-216	-18	-1.5%
Mining	1,486	2,318	832	69	3.8%
Utilities	4,896	5,585	689	57	1.1%
Construction	35,772	33,083	-2,689	-224	-0.6%
Manufacturing	43,576	35,659	-7,917	-660	-1.7%
Wholesale trade	24,129	24,491	362	30	0.1%
Retail trade	79,750	83,260	3,510	293	0.4%
Transportation and warehousing	25,869	22,307	-3,562	-297	-1.2%
Information	24,142	19,049	-5,093	-424	-2.0%
Finance and insurance	39,509	52,283	12,774	1,065	2.4%
Real estate and rental and leasing	11,924	12,780	856	71	0.6%
Professional and technical services	29,248	38,940	9,692	808	2.4%
Management of companies and enterprises	3,411	8,691	5,280	440	8.1%
Administrative and waste services	53,514	52,051	-1,463	-122	-0.2%
Educational services	57,390	73,399	16,009	1,334	2.1%
Health care and social assistance	75,368	114,745	39,377	3,281	3.6%
Arts, entertainment, and recreation	8,534	10,909	2,375	198	2.1%
Accommodation and food services	62,797	86,722	23,925	1,994	2.7%
Other services, except public administration	21,502	23,894	2,392	199	0.9%
Public administration	30,120	36,770	6,650	554	1.7%
Unclassified	0	105	105	9	---
<b>Total</b>	<b>648,765</b>	<b>749,534</b>	<b>100,769</b>	<b>8,397</b>	<b>1.2%</b>

Source: BLS, Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Data\133029-BLS.xlsx]2 Digit

## Subarea

The change in employment in the 20 subareas is shown in **Table 4**. The Inside 1604 Super Subarea increased by the most jobs, 57,054, between 2002 and 2011 of the four Super Subareas. The Inside 1604 Northwest subarea increased by 31,952 jobs, which was the most of any subarea and accounted for 36 percent of all job growth in Bexar County.

**Table 4**  
**Employment by Subarea, 2002 to 2011**

	2002	2011	Change 2002-2011		
			Total	Ann. #	Ann. %
<b>Inside 410</b>					
Central	100,327	96,675	-3,652	-406	-0.4%
Central West	20,159	13,862	-6,297	-700	-4.1%
Northeast	72,229	74,874	2,645	294	0.4%
Northwest	36,243	44,117	7,874	875	2.2%
Southeast	24,523	26,995	2,472	275	1.1%
Southwest	15,518	17,203	1,685	187	1.2%
West	30,299	31,686	1,387	154	0.5%
<b>Subtotal</b>	<b>299,298</b>	<b>305,412</b>	<b>6,114</b>	<b>679</b>	<b>0.2%</b>
<b>Inside 1604</b>					
North	50,319	61,361	11,042	1,227	2.2%
Northeast	64,820	70,400	5,580	620	0.9%
Northeast Kirby-Windcrest	38,479	34,420	-4,059	-451	-1.2%
Northwest	76,328	108,280	31,952	3,550	4.0%
West	16,255	25,900	9,645	1,072	5.3%
West Leon Valley	35,729	38,623	2,894	322	0.9%
<b>Subtotal</b>	<b>281,930</b>	<b>338,984</b>	<b>57,054</b>	<b>6,339</b>	<b>2.1%</b>
<b>Outside 1604</b>					
North	13,519	35,740	22,221	2,469	11.4%
Northeast	16,468	20,416	3,948	439	2.4%
Northwest	14,601	5,722	-8,879	-987	-9.9%
West	2,240	4,798	2,558	284	8.8%
<b>Subtotal</b>	<b>46,828</b>	<b>66,676</b>	<b>19,848</b>	<b>2,205</b>	<b>4.0%</b>
<b>South and East</b>					
Far East	5,536	6,320	784	87	1.5%
Far South	2,932	9,123	6,191	688	13.4%
Far Southwest	7,028	6,340	-688	-76	-1.1%
<b>Subtotal</b>	<b>15,496</b>	<b>21,783</b>	<b>6,287</b>	<b>699</b>	<b>3.9%</b>
<b>Total</b>	<b>643,552</b>	<b>732,855</b>	<b>89,303</b>	<b>9,923</b>	<b>1.5%</b>

Source: Census LEHD; Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Development Demand.xlsx\Employment Change

## MPO Categories

The Alamo Area Metropolitan Planning Organization (AAMPO), in conjunction with the Alamo Area Council of Governments (AACOG), creates employment and population forecasts in order to forecast traffic demand to plan for transportation improvements. The employment forecast are split between four major categories of jobs; Basic, Retail, Service, and Education. These categories are used to better calibrate trip generation, with each category having different trip generation rates.

The categories are composed of industries based on two to four digit NAICS industries. The AACOG's allocation of industries by the four categories is shown in **Table 5**. Also shown is the change in employment in these four major categories from 2000 to 2012. Employment in the Basic employment category decreased 0.9 percent annually and by a total of 14,000 jobs. Employment in the Service category increased by 2.0 percent annually and 79,000 jobs. Retail and Education employment increased by 1.5 percent and 1.6 percent annually during the same period, which matches closely with the rate of population and household growth in Bexar County.

Traditionally, basic employment represents the jobs which generate an inflow of dollars into a region, rather than a recirculation of dollars within the region. Thus, employment in the Basic category would be assumed to lead employment growth or at least have positive growth in order for a community to grow its economic base. Because of San Antonio's substantial tourism visitation and the national and regional services the health care industry provides, a large portion of the regional basic employment falls within the Service category defined by AACOG. Nevertheless it is noteworthy that the traditional definition for basic industry contracted since 2000.

For the forecast and allocation of growth completed by EPS, new categories were created to emulate the groupings of industries that are impacting San Antonio's economic base. The ultimate forecast created by EPS is then recalculated to fit within the AACOG's four categories. In the recent forecasts completed by AACOG and the AAMPO, the growth rate within the four categories was set to the same growth rate as total employment. EPS forecast creates a specific forecast growth rate for each category to help better inform the AAMPO's model.

**Table 5**  
**Employment by AAMPO Categories, 2000 to 2012**

Industry	2000	2012	Change 2000-2012		
			#	Ann. #	Ann. %
Basic	141,980	127,980	-14,000	-1,167	-0.9%
Retail	144,575	171,949	27,374	2,281	1.5%
Service	293,532	372,846	79,314	6,610	2.0%
Education	53,726	65,355	11,629	969	1.6%

(D) Data is suppressed

Source: BLS, AACOG, AAMPO, Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Data\133029-BLS.xlsx]Taz Split Performance

## Economic Development Framework

In order to tailor the analysis to match local economic opportunities, Economic & Planning System (EPS) used the existing economic development efforts of the City and its partners as the basis of the forecast. EPS analyzed the performance of the San Antonio Economic Development Foundations target industry clusters, employment industries measured as part of the SA 2020 plan, and other major economic drivers and trends both nationally and locally.

### Target Industry Clusters

The San Antonio Economic Development Foundation (SAEDF) has identified a set of 11 target industry clusters that represent specific growth areas for the region. The clusters are based on industries with a strong historical presence in San Antonio and in sectors offering a strategic benefit to San Antonio, specifically for quality jobs with higher wages. The 11 target industries are:

- Healthcare and Biosciences
- Information Technology and Information Security
- Aerospace
- New Energy Economic (Environmental Technology and Renewable Energy)
- Oil and Gas
- Finance
- Logistics
- Manufacturing (Advanced, Transportation Equipment, Other)
- Telecommunications
- Agricultural Business

The clusters are based on mixture of individual sectors and aggregated sectors. The definition of the industry clusters SAEDF has identified is provided in the appendix. EPS formed a set of target industries based off the SAEDF construct for these 11. Industries in the new energy economy sectors were not specifically analyzed as the definition was too broad for environmental technology and data too limited for the renewable energy sector.

### SA 2020

In 2011, San Antonio underwent an exercise to develop a vision and plan for what San Antonio should aspire to be in 2020. The process led to a set of 11 categories and several measureable outcomes. SA 2020 includes economic competitiveness targets that were factored into the analysis. Two key indicators the City is tracking were used to guide the analysis. The first is a goal of "steady growth" in San Antonio's traditional industries which include; education, health services, government, and leisure and hospitality. The second goal is a 10 percent growth in Healthcare and Biosciences, Information Technology and Information Security, Aerospace, and the New Energy Economy. In addition to growth in these sectors, SA 2020 also called for growth in per capita income, as shown below.

**ECONOMIC COMPETITIVENESS**

**SAN ANTONIO TODAY. SAN ANTONIO TOMORROW.**

**BASELINE DATA AND TARGETS FOR THE YEAR 2020.**

**KEY INDICATORS OR MEASURES OF WHERE WE ARE TODAY.**

- ▶ **PER CAPITA INCOME:** In 2008, San Antonio's reported per capita income was as \$34,029 (Bureau of Economic Analysis).  
**TARGET: INCREASE BY 20% OR TOP 1/3 OF US (BETTER OF THE TWO).**
- ▶ **JOB GROWTH BY SECTOR:** In 2nd Quarter 2010, during difficult national economic times, the following San Antonio sectors remained moderately stable: education, health services, government, leisure and hospitality (San Antonio Greater Chamber of Commerce).  
**TARGET: MAINTAIN STEADY JOB GROWTH IN THESE TRADITIONAL SAN ANTONIO SECTORS. PURSUE 10% JOB GROWTH IN THE FOLLOWING SECTORS: HEALTHCARE AND BIOSCIENCES, INFORMATION TECHNOLOGY AND INFORMATION SECURITY, AEROSPACE, AND THE NEW ENERGY ECONOMY.**

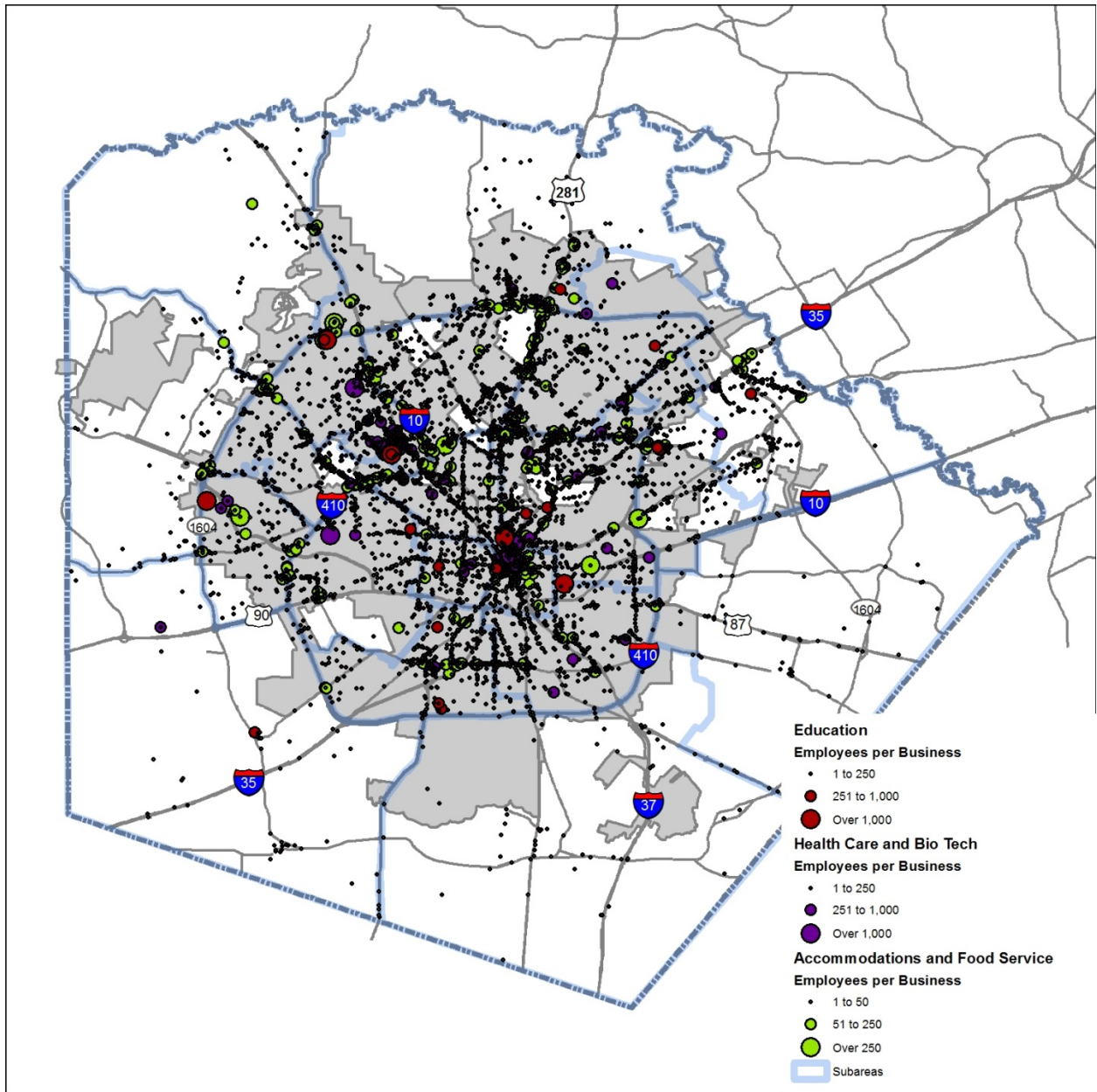
### Economic Drivers

In addition to the industries targeted by SAEDF and identified in SA 2020, EPS completed in depth analysis of the existing location, historic performance and future potential of core industries in San Antonio, major economic drivers, and nationally emerging economic trends driving growth.

#### *Traditional Drivers*

As mentioned above, San Antonio has four core industries that have traditionally driven economic growth; tourism, healthcare, education, and the military. Employment in these industries accounts for over 35 percent of total employment in Bexar County. The health care and social assistance, accommodations and food services, and education industries increased in employment by 80,000 jobs between 2000 and 2012 and were accordingly the highest growth sectors.

Figure 6  
San Antonio Traditional Economic Drivers Employers



### Tourism

Anchored by the history of the Alamo, River Walk, San Antonio Convention Center and major attractions such as SeaWorld San Antonio and Six Flags Fiesta Texas, San Antonio is a major tourist destination in the U.S. In 2011, San Antonio hosted over 28 million visitors, including 13 million over night leisure visitors and 5.6 million business visitors. Economic impact studies commissioned by The San Antonio Convention and Visitors Bureau estimate that Hospitality industries have a \$12 billion economic impact on San Antonio each year. Employment in the Accommodations and Food Services industry increased by 23,925 jobs between 2000 and 2012 to a total of 80,197. This growth translates to an annual rate of 2.7 percent.

The geographic center of the tourism industry in San Antonio is downtown. Over 12,000 jobs in the Accommodations and Food Service industry are located in the Central Business District. The next highest concentration is the Greater Airport Area with 6,400 jobs in the industry.

Based on the EPS forecast, tourism is expected to continue to be a driving industry in San Antonio in the future. The Accommodations and Food Service industry is forecast to grow by 2.2 percent annually over the next 30 years, which is expected to generate over 70,000 new jobs.

#### Health Care

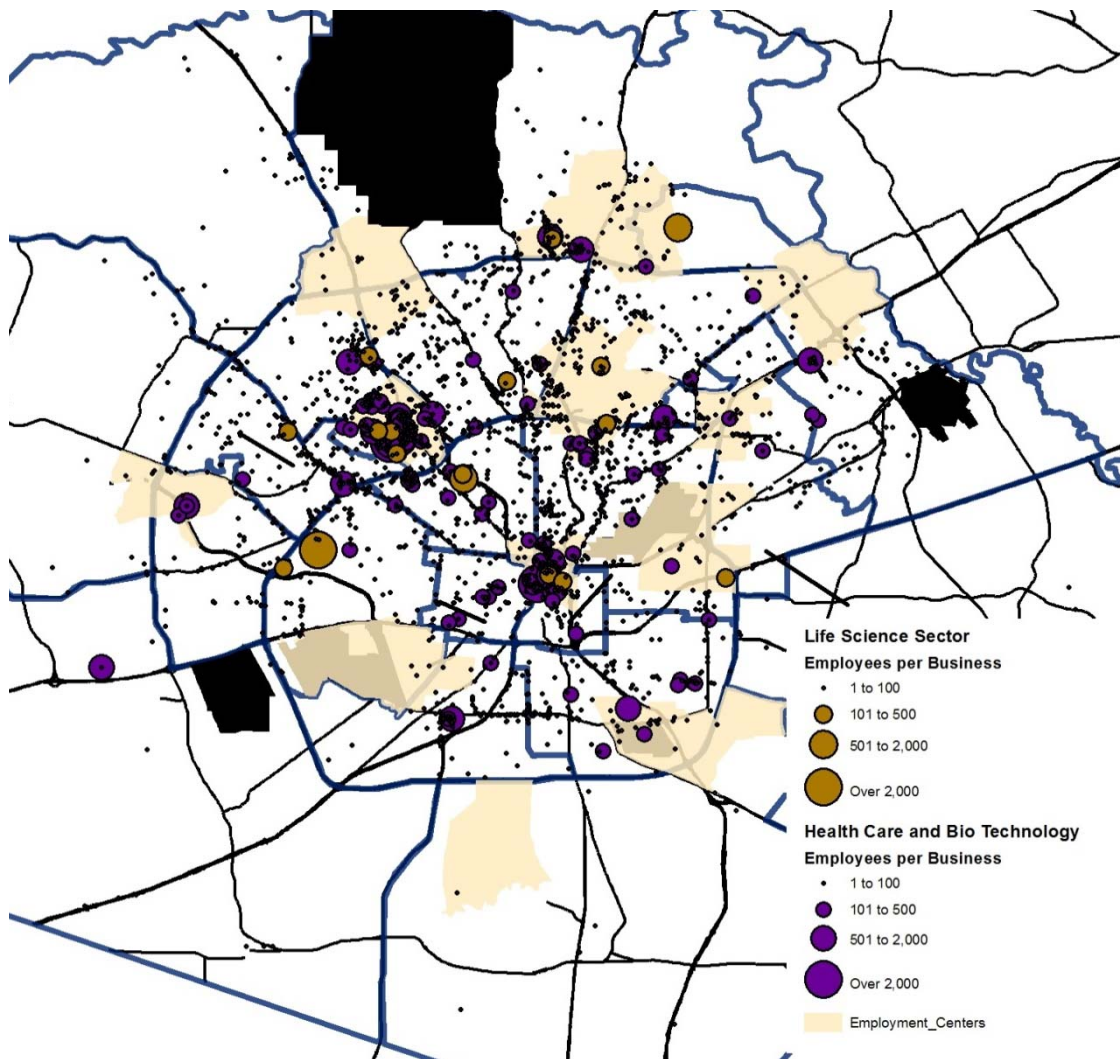
The Health Care and social assistance industry is the largest in San Antonio, accounting for 15 percent of employment. The industry grew in employment by 40,000 jobs between 2000 and 2012 and at annual rate of 3.6 percent. The health care industry in San Antonio is boosted by a large presence of military related health care services and providers, anchored by the South Texas Veterans Health Care Systems, located in the South Texas Medical Center, and the San Antonio Military Medical Center, located at Fort Sam Houston. EPS forecast employment within the Health Care industry to grow by 138,000 jobs by 2040, at an annual rate of 2.9 percent.

The San Antonio Economic Development Foundation has identified Health Care and Biosciences as a target industry cluster. The top five industries in San Antonio in this industry cluster are general medical and surgical hospitals, home healthcare services, offices of physicians, nursing care facilities, and offices of dentists. While these industries are the largest and are important to San Antonio's employment, they are not the drivers of potential growth. General medical and surgical hospitals, offices of physicians and offices of dentists were highlighted by the SAEDF as the clear target for future growth due the City's strength in these areas and the high average wages within these sub industries.

The concentration of health care and bioscience employers and life science employers are shown in **Figure 7**. There are two primary concentrations of employers in this industry cluster; the South Texas Medical Center and the Central Business District. The South Texas Medical Center is major cluster of health care activities with 45 medical related institutions including 12 hospitals and five specialty institutions. Healthcare employment in the center reached 27,500 jobs in 2011 and accounts for nearly 30 percent of all health care employment in Bexar County. The central business district, while significant, has just over 8,100 health care jobs within it.



Figure 7  
San Antonio Health Care and Life Science Employers



### Education

Education industry is split between primary education and higher education. While both are important, higher education is considered an economic driver because of its ability to generate a skilled workforce and to attract students, faculty and related employment from outside San Antonio.

There are 31 higher education institutes in San Antonio and over 100,000 students. The major institutions include University of Texas at San Antonio, the growing Texas A&M–San Antonio campus, Trinity University, University of the Incarnate Word, and the Alamo Community College District with its five colleges.

The educational services sector increased employment by 16,000 jobs from 2000 to 2012, which is an annual rate of 2.1 percent. There is an estimated 74,000 educational services jobs in Bexar County. EPS estimated this sector to grow by 94,500 jobs by 2040 at an annual rate of 3.0 percent.



Educational institutes in San Antonio are dispersed throughout the City aligning with general employment patterns of the City. There are only two major institutions located next to each other, Incarnate Word and Trinity University. Unlike other cities or towns with major universities which have sizeable or recognizable college oriented commercial and residential nodes, the City lacks this. Many of the institutions function as “commuter schools” where students live throughout the City and commute by car or transit to school. The institutions operate in a fairly isolated manner with seemingly little opportunity for informal interaction between students. The major institutions are expected to continue to grow at strong rates, which means employment in and around them will follow. An emerging growth area in the City is the area around the Texas A&M San Antonio campus in the south portion of the City. The school’s goal is to grow enrollment from approximately 7,000 to 25,000 in the next twenty years, which could generate up to 10,000 jobs related to the schools activities based on jobs to student ratios for other major universities.

### Military

The U.S. Military has large economic impact on San Antonio, estimated at \$27.7 billion annually according to the Joint Base San Antonio yearly economic impact study. San Antonio is home to three major bases and the 27,990 acre Camp Bullis training camp. The three major bases (Fort Sam Houston, Lackland Air Force Base, and Randolph Air Force Base) were combined under a single organization in 2005 and is the largest joint base operation for the U.S. Department of Defense. The joint base operation includes 8 other operating areas in addition to the three major bases. Fort Sam Houston is home to the largest Department of Defense hospital in the nation and is one of 15 hospitals in the U.S. with a Level One Trauma certification.

Aggregating employment across these multiple bases, there are an estimated 132,000 jobs directly attributed to the U.S. Department of Defense. The direct employment positions generate an additional 57,000 induced and indirect jobs based on the joint base study. In addition, there are an estimate 55,000 retired military veterans in the San Antonio area. Forecasting future growth in direct military employment is difficult due to the uncertainty related to the military needs and future military budgets. In several cities across the country, the potential for base closures are an ever growing concern as the military has consolidated operations. San Antonio has benefitted from closures elsewhere and from the consolidation of operations to San Antonio, despite the base closure at Brooks-City Base. Woods and Poole, a secondary economic forecast data source used in this study, estimates military employment to increase by 1.0 percent annually. The estimated future growth of direct military employment and the corresponding demand for space was not included in this analysis. The estimated indirect and induced growth in employment based on the secondary data source estimates for direct military employment was factored into the analysis.

## **Creative, Science and Technology Industries**

### ***Creative Industries***

EPS projected growth in the Creative Industry sector based on recently published research from the SABER Institute as well as other reports. Based on this research, EPS defined job classifications and mapped the location of creative industries in San Antonio to indicate the areas where these industries have been drawn. As shown in **Figure 8**, the primary clustering of creative industries in the City is in the Central Business District. Secondly, employers in these industries are also clustered in the Greater Airport Area. An interesting trend is the growth of

these employers along arterial corridors emanating from downtown including Broadway, San Pedro, and Fredericksburg Road. Professional Services employers are also located in the same areas as Creative Industries employers<sup>1</sup> along the arterial corridors.

The clustering of these types of employers is a clear indicator of the areas of the City these employers desire to be in. Creative industries seek areas with concentrations of similar creative activities and leads to economic activity related to the interaction of these firms but also the informal interactions of these workers. The location of these firms also indicates the areas that their workers prefer to live in.

### ***Scientific Research and Development***

Research and development activities are essential to the generation of new products and process that drive business development and innovation. New, small businesses are a major driver of new jobs. Investment in research and development lead to innovation that spurs economic activity either directly for the investor or indirectly through the persons performing the activity and their surrounding community.

The locations of the employers engaged in R&D industries are shown in **Figure 8**. The clustering of these industries is extremely important for fostering a collaborative environment which is a hallmark of these industries and facilitates the interactions in these industries which leads to cross over of industries and technology. The presence of areas in a City with a high concentration of these industries creates a desirable location for not only incoming or start-up companies but for attracting high skilled workers within these industries.

Research and development employers have clustered in the same areas of the City where Creative Industries Employers and Technology Employers have located. The areas with high concentrations include the CBD, the greater airport area, and the South Texas Medical Center.

Another major anchor of research and development in San Antonio is the Southwest Research Institute (SRI). The SRI is located between Culebra Road and West Commerce Street just inside the I-410 loop. The SRI is an independent, nonprofit research and development organization that employs over 2,800 people. The focus of the organization is the creation and transfer of technology in engineering and physical sciences. The organization contracts research and development services for industrial and government clients. SRI has a large sprawling campus with over 2 million square feet of building space, isolated from the surrounding area.

### ***Technology Employers***

Technology employers are businesses within industries involved with advanced manufacturing, communications, software, and computer related services, biosciences and physical science. Technology employees are most often associated workers who are involved with computer services and information technology (IT), but the technology industry is broader. Despite a significant concentration of technology employers, there is the perception that San Antonio lacks technology employers and workers. Another factor is the diversity of technology employers and geographic separation of them within San Antonio. **Figure 8** illustrates how technology employers, particularly large ones, are more dispersed than Creative and R&D employers.

---

<sup>1</sup> The definition of the Professional Services and Creative Industry groups overlap.

### Information Technology and Information Security

The Information industry in San Antonio has had a varied track record of performance of the past 13 years. Traditional information industries (publishing, motion picture and sound recording, and broadcasting) and telecommunications have lost employment since 2000. The Telecommunications industry in San Antonio lost over 8,000 jobs since 2000, partly due to the departure of the AT&T headquarters to Dallas. However, the IT and Information Security industry cluster has increased in employment.

The major anchors to San Antonio's Information Technology industry are the Federal Government, major corporations (AT&T, Valero, and USAA) and Rackspace. The City is home to a major National Security Agency data center and an Air Force Air Intelligence, Surveillance and Reconnaissance Agency center, which employ thousands of IT workers. Each of the largest corporations in San Antonio employs large numbers of IT workers, as well.

Related to federal centers in San Antonio is the growing information security sector in San Antonio. This is due to the presence of these centers and the workforce they generate. Aiding to the strength of this industry also are the educational institutes, specifically UTSA. UTSA is the highest ranked school in the country for cyber security based on a Hewlett Packard survey of IT Security professionals.

Lastly, Rackspace Inc.—an IT hosting company, is a major anchor the burgeoning tech scene in San Antonio. Rackspace was started in San Antonio by three founders who were students at one time at Trinity University. The company began with the intent to develop internet applications but realized that there was a demand for web-hosting that was unmet. The company grew out of the decision to shift its focus on internet hosting services. Rackspace now has over 4,000 employees with its headquarters located in a converted mall in Windcrest, TX a suburban enclave of San Antonio. Based on interviews with regional business leaders, it is understood that Rackspace has been xxx to attract skilled workers to San Antonio. To build a tech culture in San Antonio, the CEO of Rackspace Graham Weston created Geekdom. Geekdom is a co-working space and technology incubator.

As a result of Rackspace location in San Antonio, other related internet hosting companies have located in San Antonio, which is generating a collection of employers and workers in this industry. Peer 1 Hosting, a Canada based company, recently located an office within The Pearl.

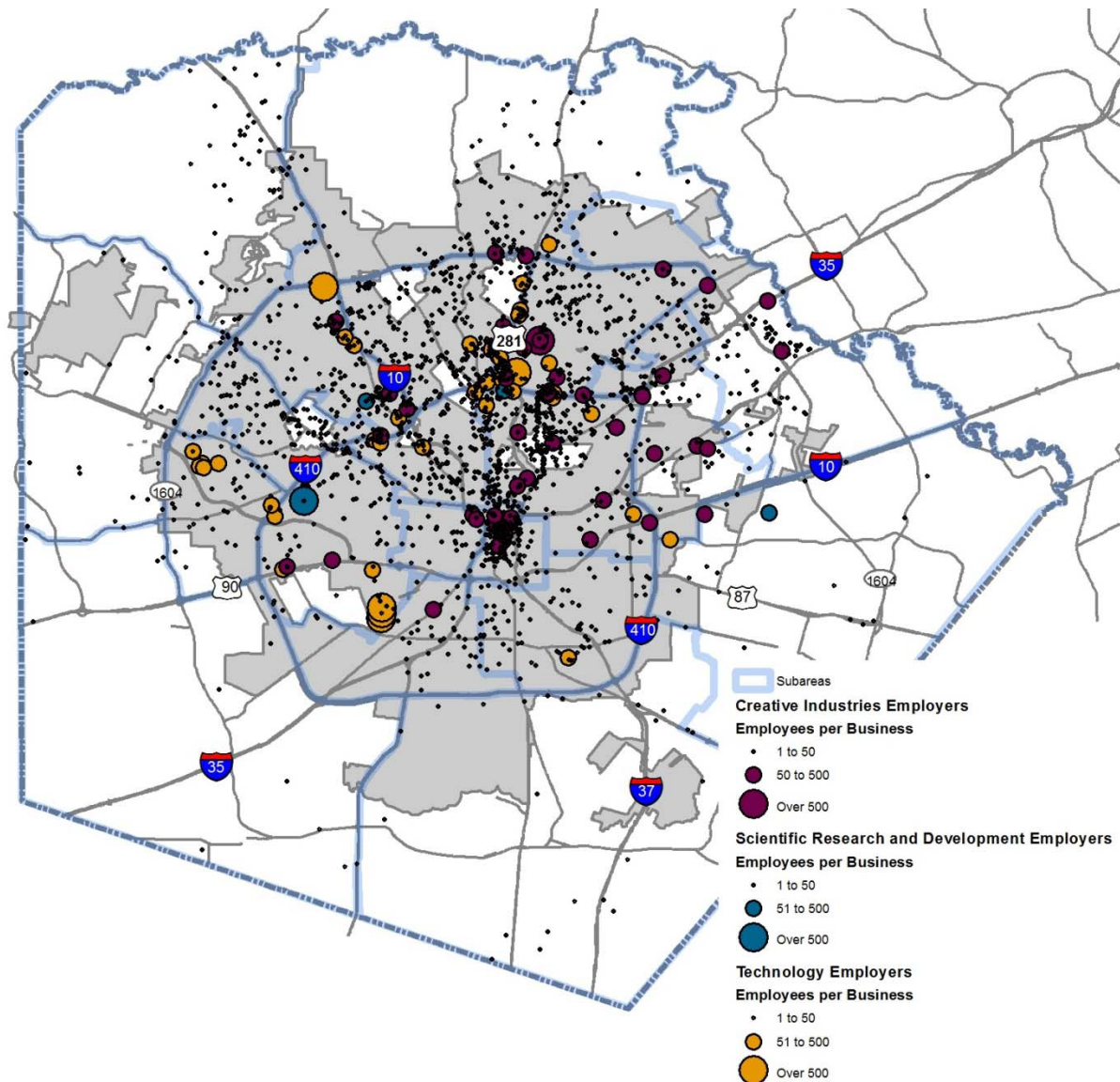
### Advanced Manufacturing, Aerospace and Transportation Equipment Manufacturing

Another major component to San Antonio's technology industries are high-tech or advanced manufacturing. Advanced Manufacturing, Aerospace, and transportation equipment manufacturing are all target industry clusters for the SAEDF. However, both Advanced Manufacturing and Aerospace (as defined by EPS) decreased in employment since 2000. Transportation Equipment Manufacturing doubled in employment since 2000, almost entirely related to opening of the Toyota manufacturing plant in the southern portion of the City.

Aerospace is a significant industry cluster within San Antonio anchored by the presence of major aerospace companies Boeing, Standard Aero, and General Dynamics. Aircraft manufacturing accounts for 30 percent of the employment within the industry cluster, which largely consists of airport related employment aside from manufacturing. The presence of the two Air Force bases is also a major driver of this industry.

Luring Toyota to San Antonio was a major accomplishment for economic development officials. The new plant brought over 3,000 jobs to the City. The operations at Toyota are performed completely within the plant and the plant has generated a limited amount of additional activity as a result. However, it has attracted interest from other similar companies and may attract similar plants.

**Figure 8**  
**San Antonio Creative, Scientific R&D, and Technology Industries Employers**

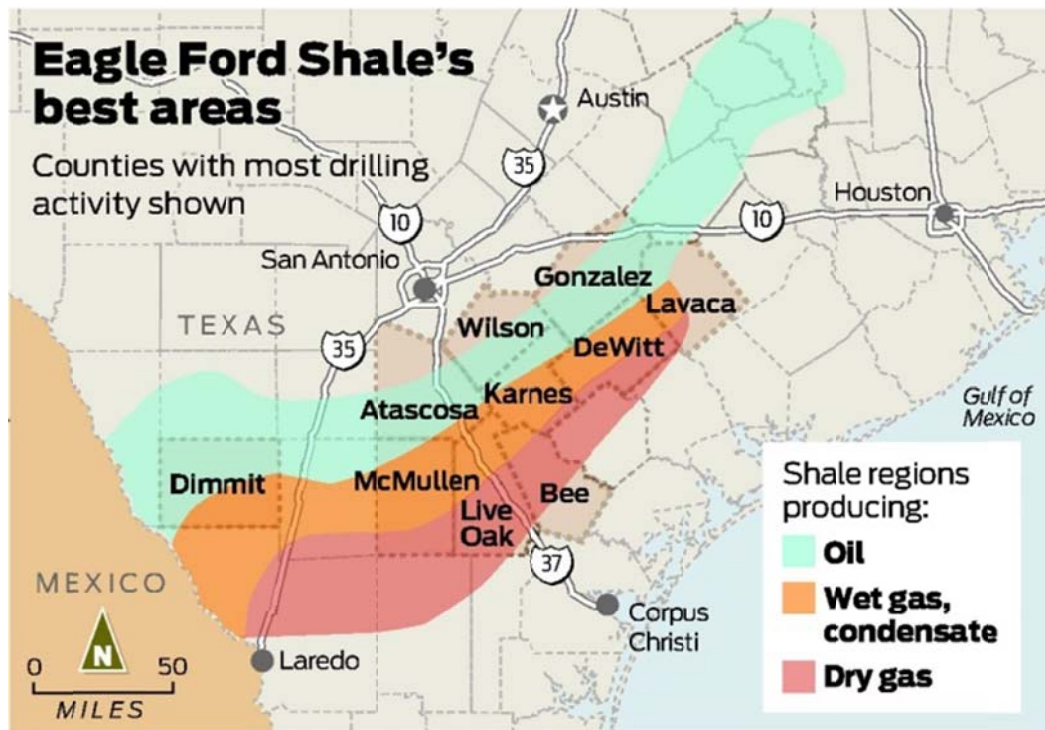


## Oil and Gas and the Eagle Ford Shale

Oil and Gas industry employment is 2,205 within Bexar County. The industry has grown by 1,264 jobs in the past 13 years at an annual rate of 7.4 percent. The employment for this industry in relatively low and fixed location employment is limited mainly to management and administration of the companies involved in the activity. However, the industry does drive significant induced employment with services that support oil and gas in proximity to drilling activity. San Antonio is close to one of the most active oil and gas drilling plays in the nation, which is the Eagle Ford Shale Formation.

The primary active area within the Eagle Ford Shale area for drilling is along I-37 between San Antonio and Corpus Christi. San Antonio is the closest major city and metropolitan area to the oil and gas drilling activity, and therefore will be the location of a majority of the support services related to the drilling activity. A 2013 study of the Economic Impact of the Eagle Ford Shale completed by the University of Texas at San Antonio Center for Community and Business Research illustrated the major impact the oil and gas activity has and will have on San Antonio. The report found that oil and gas development expenditures in the Eagle Ford Shale were expected to total \$28 million in 2013 alone. The study also estimated that the activity in oil and gas fields will generate \$582 million in direct economic impacts on Bexar County and \$6.65 billion in total economic impacts on Bexar County by 2022. The study estimated that 15,000 indirect jobs and 9,000 induced jobs will be generated by 2022. EPS estimates that employment within the Oil and Gas industry will increase by 6,211 jobs at an annual rate 4.9 percent by 2040.

Figure 9  
Eagle Ford Shale Formation



San Antonio Express-News

## **Talent Attraction**

Traditional economic development theory held that workers will locate to available jobs, therefore, economic development activities were focused primarily on attracting companies. The availability of a job is no longer the main driving factor for people's decisions. Americans are moving less, a trend that has been occurring for several decades. When they do move, more often people make decisions based on the community they want to live in. The quality of life appears to be equal, if not more important, than a specific job. As a result, employers are locating where their target workforce resides or wants to be. This is happening on both national and regional level. Companies are choosing to locate or relocate in cities that have workers they want and near similar companies. On a local and regional level, the location of company is being driven by where employees want to live and recreate. Investment in the quality of neighborhoods and communities within the City should be a major component to their economic development efforts.

## Forecast Methodology and Benchmarks

EPS used a combination of benchmarks and historic trends to develop a forecast for employment within Bexar County. Benchmarks included historic trends by target industries and employment groups, the Texas Workforce Commission's 10 year forecast for the Alamo Workforce Development Area, and Woods and Poole's employment forecast for Bexar County.

A challenge in conducting economic analysis and monitoring a region's economy is that complete and up-to-date data is not available from published sources. The U.S. Bureau of Labor Statistics (BLS) provides funds to state agencies to track wage and salary jobs (jobs covered by unemployment insurance). BLS data does not include sole proprietors (self-employed) or agricultural jobs and therefore accounts for approximately 75 to 85 percent of total jobs. BLS data provides more detail on individual industries than other sources. The U.S. Bureau of Economic Analysis (BEA) compiles data on total jobs, but assembles estimates from multiple sources of employment data including the BLS, U.S. Census, and IRS. As a result BEA, job estimates lag 18 to 24 months from the current time period. BLS data is more current, lagging 12 months, but does not include agricultural and sole proprietor employment and therefore does not account for all jobs. BLS publishes a more current series called the Current Employment Statistics (CES), which lags one to two months at the county level. However, the CES only tracks private sector jobs covered by unemployment insurance and provides no detail by industry; it does not include the public sector or the self-employed.

While these differences in data sources may seem like substantial challenge, these sources still provide a wealth of data to describe a local economy. Nevertheless, one should be aware of the limitations with them.

The EPS analysis draws from all of these sources, and particularly from BLS data for Bexar County. The purpose of the analysis is to determine the demand for employment and development by specific area of the City. Sole proprietors and agricultural jobs do not typically require new, urban development to facilitate their jobs growth. The forecast of future development demand therefore is based on jobs that will generate demand for new development. Some industries (i.e. construction) have large portions of jobs that do not have a single location or primary location for the job, and do not generate demand for development to "house" the job; therefore, portions of some industries were estimated to not generate development demand. Employment trend analysis was completed using publicly available quarterly census of employment and wage (QCEW) data by NAICS industry. To analyze location of employment, EPS used proprietary QCEW microdata made available to local public agencies by the State of Texas. The QCEW microdata set used by EPS were provided by AACOG, which augmented the data set with other secondary data sources to improve the locational accuracy of the data set.

The employment forecast was organized to correspond with the City's target industries and to group industries with similar attributes into four categories. The four categories used are:

- Traditional Economic Drivers
- Industry Cluster and other Drivers
- Business Support Industries, and
- Community Support Industries

The industries in each of the four categories are meant to reflect the composition of the City's economy and its economic development efforts. Industries all consist of one or multiple many three digit NAICS industries. The industries within the Industry Clusters and Other Drivers category are meant to reflect the industry clusters the City has targeted but are simplified to allow for replication and due to data limitations. As well, the use of three digit industries also for the ability to use secondary employment forecasts, which are either, based on two or three digit NAICS codes. The data related to historic trends and future potential of the "Industry Clusters" are not meant to show the true performance of the cluster as defined by the SAEDF and may indicate trends that do not reflect the size or strength of that cluster. The ultimate goal of this forecast is to project demand for development by geography within the City in order to augment the AAMPO's TAZ specific employment forecasts and to compare development demand to land capacity within the City.

### Historic Trends

The change in employment from 2000 to 2012 in the four major employment categories is shown **Table 6**. The industries within the Traditional Economic Drivers category generated the vast majority of employment growth (Approximately 80 percent) in Bexar County since 2000. The collection of industries in the Industry Clusters and Other Drivers category lost employment, in aggregate, since 2000, within decrease of 14,600 jobs. Most significant was the loss of over 8,000 telecommunications jobs. Employment in Business Support Industries increased by 25,440 jobs from 2000 to 2012, with half (12,774 jobs) of the employment gains in the Finance industry. Community Support Industries increased in employment by 9,664 jobs and grew an annual rate of 0.6 percent, which is half of the County total employment and population growth rate over the same period of 1.3 percent annually. Retail Trade accounts for 60 percent of employment in this category. Retail Trade grew slightly at 0.2 percent during this time period, which is likely due to the national economic recession. Retail Trade growth traditionally matches with household growth in a region. The employment trends in the industries used from 2000 to 2012 and 2005 to 2012 were used to augment EPS employment forecast.

The average annual wages by industry are shown in **Appendix Table 2**. The average annual wages of the top performing industries in San Antonio illustrate the downside to reliance on the traditional economic drivers for economic growth. The average annual wage for a worker in the Traditional Economic Drivers industries is \$36,179, while the average for Bexar County for all industries is \$43,918. The accommodations and food service industry consists of the greatest amount of workers whose average annual wage is \$18,123 which indicates how low the wages earned by residents employed in the tourism industry are. The average wages for industries within the Industry Clusters is the highest of all the categories at \$58,012. The average wage for Business Support Industries is \$53,724 and \$33,289 for Community Support Industries. There is a correlation between location of each industry and their corresponding wages, with the average income of residents in that area. Employment within the central business district is consistent primarily of tourism related activity, which has a low average wage. Many of the neighborhoods and areas surrounding the CBD, particularly to the south, east and west, are neighborhoods with a relatively low average household income. Industries in the City with higher average wages are predominately located in the northern employment centers.



**Table 6**  
**Employment by Employment Categories and Industry Definitions, 2000 to 2012**

Cluster	3 Digit NAICS	2000	2012	Change 2000-2012		
				#	Ann #	Ann %
<b>Traditional Economic Drivers</b>						
Accommodation and Food Service	721, 722	62,798	86,723	23,925	1,994	2.7%
Educational services	611	57,390	73,399	16,009	1,334	2.1%
Healthcare	621, 622, 623, 624, 35% of 923	<u>72,156</u>	<u>113,034</u>	<u>40,877</u>	<u>3,406</u>	<u>3.8%</u>
<b>Subtotal</b>		<b>192,344</b>	<b>273,156</b>	<b>80,811</b>	<b>6,734</b>	<b>3.0%</b>
<b>Industry Clusters and Other Drivers</b>						
Advanced Manufacturing	321, 322, 326, 327, 331, 332, 333, 335, 337, 339	17,174	12,204	-4,970	-414	-2.8%
Aerospace	481, 927	3,499	1,290	-2,209	-184	-8.0%
Agricultural and Food Technology	111, 112, 311, 312	8,542	9,093	551	46	0.5%
Agriculture - Non-Food	113, 115	110	58	-52	-4	-5.2%
Biotechnology	325	1,404	1,069	-335	-28	-2.2%
Information	511, 512, 513	7,294	6,841	-453	-38	-0.5%
IT and Information Security	323, 334, 516, 518, 519	10,565	11,302	737	61	0.6%
Mining, except oil and gas	212, 10% of 213	748	221	-527	-44	-9.7%
Oil and Gas	211, 324, 90% of 213	941	2,205	1,264	105	7.4%
Other Manufacturing	313, 314, 315, 316	5,764	670	-5,094	-425	-16.4%
Telecommunications	517	13,066	4,792	-8,274	-690	-8.0%
Transportation Equipment Manufacturing	336	<u>4,901</u>	<u>9,659</u>	<u>4,758</u>	<u>397</u>	<u>5.8%</u>
<b>Subtotal</b>		<b>74,008</b>	<b>59,404</b>	<b>-14,604</b>	<b>-1,217</b>	<b>-1.8%</b>
<b>Business Support Industries</b>						
Administrative, waste and support services	561, 562	53,514	52,173	-1,341	-112	-0.2%
Construction	236, 237, 238	35,772	33,083	-2,689	-224	-0.6%
Finance and Insurance	522, 523, 524, 525	39,509	52,283	12,774	1,065	2.4%
Logistics	483, 484, 486, 488, 492, 493	16,875	16,784	-91	-8	0.0%
Management of companies and enterprises	551	3,411	8,691	5,280	440	8.1%
Professional and technical services	541	29,248	38,940	9,692	808	2.4%
Real Estate	531, 532, 533	11,923	12,780	857	71	0.6%
Transportation Services	485, 487	1,642	1,549	-93	-8	-0.5%
Utilities	221	4,896	5,585	689	57	1.1%
Wholesale Trade	423, 424, 425	<u>24,129</u>	<u>24,491</u>	<u>362</u>	<u>30</u>	<u>0.1%</u>
<b>Subtotal</b>		<b>220,919</b>	<b>246,359</b>	<b>25,440</b>	<b>2,120</b>	<b>0.9%</b>
<b>Community Support Industries</b>						
Arts and Entertainment	711, 712, 713	8,534	10,909	2,375	198	2.1%
Other Services	811, 812, 813, 814	21,503	23,895	2,392	199	0.9%
Public Administration	921, 922, 924, 925, 926, 65% of 923	16,243	18,794	2,552	213	1.2%
Retail Trade	441, 442, 443, 444, 445, 446, 447, 448, 451, 452, 453, 454, 491	<u>83,606</u>	<u>85,951</u>	<u>2,345</u>	<u>195</u>	<u>0.2%</u>
<b>Subtotal</b>		<b>129,886</b>	<b>139,549</b>	<b>9,664</b>	<b>805</b>	<b>0.6%</b>

Source: San Antonio Economic Development Foundation; BLS; Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Forecast.xlsx\Cluster Performance-EPS Def

## **Texas Workforce Development Areas**

The Texas Workforce Commission (TWC) has developed employment forecasts by 3 digit NAICS industries for 2010 to 2020 for each of its 28 workforce development areas (WDAs). The Alamo Workforce Development Area (WDA) includes Bexar County and 11 surrounding counties. Using the forecast rates for each 3 digit NAICS industry, EPS developed an estimated growth rate for each of the industries used in this study.

The forecast estimates that employment in the Alamo WDA to grow by The Traditional Economic Drivers industries are forecast to grow by 97,000 jobs by 2020 and grow at annual rate of 2.7 percent, which is slightly lower than the 3.0 percent annual rate between 2000 and 2012. Industry Clusters and Other Drivers industries are estimated to grow by 10,090 jobs and at an annual rate of 1.3 percent. Business Support Services are expected to grow by 51,610 jobs and at an annual rate of 1.8 percent. Community Support Services are estimated to grow by 23,440 jobs.

## **Woods and Poole**

Woods and Poole is a secondary data source that provides economic forecasts for every county in the U.S. The 2012 to 2040 forecast for Bexar County was used as benchmark forecast for this analysis. The Woods and Poole forecast rates for each industry match closely with the TWC, within some exceptions. Woods and Poole has lower projected growth rates for industries within the Industry Clusters and Other Drivers category, 0.5 percent versus 1.3 percent for the TWC forecast.

## **Benchmark Growth Rates**

The benchmark growth rates used to develop EPS's forecast are shown in **Table 7**. EPS used a combination of historic trends compared to the forecasts of the work previous deserted. The historic trends included a 12-year period from 2000 to 2012, a seven-year period from 2005 to 2012, and a two-year period from 2010 to 2012. The purpose of the differing time periods is to illustrate how industries have changed since 2000, which includes two national economic recessions, and to determine how the most recent recession and subsequent growth affected the Bexar County economy from its peak to current, and how the past two years have varied from growth prior to the recession. These benchmark growth rates are used to estimate the rate of growth for each industry which in turn is used to build a countywide forecast.

**Table 7**  
**Employment Categories Benchmark Growth Rates**

	<b>BLS 2000- 2012</b>	<b>BLS 2005- 2012</b>	<b>BLS 2010- 2012</b>	<b>Alamo WDA 2010-2020</b>	<b>Woods &amp; Poole</b>
<b>Traditional Economic Drivers</b>					
Accommodation and Food Service	2.7%	3.0%	4.1%	2.2%	2.1%
Educational services	2.1%	3.6%	-1.4%	3.0%	2.9%
Healthcare	<u>3.8%</u>	<u>3.8%</u>	<u>3.2%</u>	<u>2.9%</u>	<u>3.1%</u>
<b>Traditional Subtotal</b>	<b>3.0%</b>	<b>3.5%</b>	<b>2.2%</b>	<b>2.7%</b>	<b>2.7%</b>
<b>Industry Clusters and Other Drivers</b>					
Advanced Manufacturing	-2.8%	-3.4%	2.5%	0.8%	0.0%
Aerospace	-8.0%	-8.1%	3.1%	1.7%	2.0%
Agricultural and Food Technology	0.5%	2.1%	1.7%	1.2%	1.3%
Agriculture - Non-Food	-5.2%	0.5%	-7.6%	1.1%	1.3%
Biotechnology	-2.2%	-0.7%	3.0%	0.9%	1.3%
Information	-0.5%	-2.2%	-2.1%	0.0%	1.3%
IT and Information Security	0.6%	1.9%	5.3%	1.4%	1.3%
Mining, except oil and gas	-9.7%	-7.4%	-20.3%	2.0%	0.2%
Oil and Gas	7.4%	7.9%	5.6%	4.9%	0.2%
Other Manufacturing	-16.4%	-16.3%	-17.2%	-0.8%	0.0%
Telecommunications	-8.0%	-3.8%	2.0%	1.0%	1.3%
Transportation Equipment Manufacturing	<u>5.8%</u>	<u>10.9%</u>	<u>8.3%</u>	<u>2.6%</u>	<u>0.0%</u>
<b>Industry Cluster Subtotal</b>	<b>-1.8%</b>	<b>-0.1%</b>	<b>2.8%</b>	<b>1.3%</b>	<b>0.5%</b>
<b>Business Support Industries</b>					
Administrative, waste and support services	-0.2%	0.4%	2.1%	2.2%	2.8%
Construction	-0.6%	-1.9%	-4.4%	1.3%	0.8%
Finance and Insurance	2.4%	2.2%	3.3%	1.7%	1.4%
Logistics	0.0%	-0.2%	2.6%	1.9%	2.0%
Management of companies and enterprises	8.1%	4.6%	4.7%	3.0%	3.4%
Professional and technical services	2.4%	1.9%	2.9%	2.2%	2.5%
Real Estate	0.6%	-0.3%	2.5%	1.7%	1.2%
Transportation Services	-0.5%	2.7%	11.9%	2.0%	2.0%
Utilities	1.1%	1.5%	-1.5%	2.1%	0.2%
Wholesale Trade	<u>0.1%</u>	<u>0.8%</u>	<u>3.7%</u>	<u>1.2%</u>	<u>0.8%</u>
<b>Business Support Subtotal</b>	<b>0.9%</b>	<b>0.8%</b>	<b>1.7%</b>	<b>1.8%</b>	<b>1.9%</b>
<b>Community Support Industries</b>					
Arts and Entertainment	2.1%	3.0%	2.3%	2.1%	2.3%
Other Services	0.9%	2.1%	2.5%	1.4%	2.2%
Public Administration	1.2%	1.6%	-2.2%	0.0%	1.0%
Retail Trade	<u>0.2%</u>	<u>0.3%</u>	<u>1.2%</u>	<u>1.3%</u>	<u>1.6%</u>
<b>Community Support Subtotal</b>	<b>0.6%</b>	<b>0.9%</b>	<b>1.0%</b>	<b>1.4%</b>	<b>1.6%</b>

Source: Woods & Poole, Texas Workforce Commission, BLS, San Antonio-Bexar County MPO, Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Forecast.xlsx Forecast Rates

## Alamo Area Metropolitan Planning Area Forecast

Concurrent to this study, the Alamo Area Metropolitan Planning Organization (AAMPO), in conjunction with the Alamo Area Council of Governments (AACOG), was completing an update to its thirty year planning forecast for the MPO area, which includes Bexar, Comal, Guadalupe, Kendall, and Wilson Counties. One purpose of this study for COSA was to aid the forecasting effort by generating a COSA specific forecast based on the factors measured in this study. The original intent was for the COSA specific forecast to be used as one of the three growth scenarios developed by the MPO. The process and timeline of the MPO project was ahead of the timing of this project, therefore the COSA specific forecast was used to augment the preferred scenario selected by the AAMPO board. The intent of this analysis was to determine how the forecast growth in San Antonio and Bexar County will impact development geographically over the next 30 years. Therefore, EPS used the county-wide forecast for total employment as a control total and was tasked with determining where this growth will occur and in which employment sectors in order to forecast development and land demand within the City.

**Table 8** depicts the Bexar County wide forecast for employment. EPS used the estimated growth of 675,283 new jobs from 2010 to 2040 as the control total. The AAMPO forecast employment shows growth of by 2.1 percent annually. The forecast for each sector matches the same forecast rate for the four main employment sectors used by the MPO including Basic, Service, Retail and Education. Jobs in each of sector are used to estimate travel demand for each Traffic Analysis Zone (TAZ) based on the trip generation typical for industries in each of these sectors.

As illustrated in previous tables, the San Antonio economy has grown at widely variant rates between sectors and larger employment groups. Forecasting employment growth at the same rate for each sector may create a situation where planned traffic may not match with the actual traffic generated. EPS forecast growth by 29 specific industries to develop a granular analysis for development demand. The EPS forecast can subsequently be recalculated into the AAMPO's four categories by subarea and activity center within Bexar County (to be shown and explained in later sections). The AAMPO ultimately used the EPS forecast for subareas and activity centers but did not use the forecast by sector to modify its countywide forecast.

**Table 8**  
**AAMPO Employment Forecast, 2010 to 2040**

Sector	2010	2040	Change 2010 to 2040		
			Total	Ann. #	Ann. %
Basic	233,446	432,108	198,662	6,622	2.1%
Service	182,074	338,768	156,694	5,223	2.1%
Retail	308,107	570,540	262,433	8,748	2.1%
Education	58,272	115,766	57,494	1,916	2.3%
<b>Total</b>	<b>781,899</b>	<b>1,457,182</b>	<b>675,283</b>	<b>22,509</b>	<b>2.1%</b>

Source: AACOG; AAMPO; Economic & Planning Systems

\\epsdc02\proj\133029-San Antonio Comp Plan Initial Studies\Data\133029-5COUNTY\_TAZ\_2010-2040\_May\_22\_2014.xlsx]Employment

## EPS Employment Forecast

EPS generated a forecast for employment within Bexar County from 2012 to 2040 based on the growth rates expected for each industry in the four major employment categories, as shown in **Table 9**. The estimated annual rate of job growth, 2.1 percent, is the control rate for the forecast which provides the total estimated growth in employment. The allocation of jobs by industry is based on the industry specific forecasts, calibrated to ensure consistency with the control rate.

The Traditional Economic Drivers industries are forecast to increase in employment by 306,000 jobs and grow at an annual rate of 2.7 percent. These industries are forecast to continue to be the driving industries for the City. The Industry Clusters and Other Drivers category is estimated to increase in employment by 34,200 jobs by 2040 and increase at an annual rate of 1.6 percent. Growth in this category is estimated to be driven by gains in oil and gas, manufacturing, and activities related to aerospace and transportation equipment manufacturing, and growth in the information industries, specifically IT and information security industries. Employment in Business Support Industries is estimated to increase by 166,000 jobs and grow at an annual rate of 1.9 percent. Administrative, waste and support services, finance and insurance, and professional and technical services are expected to generate the majority of new jobs in this category. Lastly, Community Support Industries are estimated to increase by 1.3 percent annually and by 63,500 jobs.

**Table 9**  
**EPS Bexar County Employment Forecast, 2012 to 2040**

Cluster	2012	2020	2030	2040	Change 2012-2040		
					#	Ann #	Ann %
<b>Traditional Economic Drivers</b>							
Accommodation and Food Service	86,723	103,215	128,307	159,500	72,777	2,599	2.2%
Educational services	73,399	92,980	124,957	167,932	94,533	3,376	3.0%
Healthcare	113,034	142,079	189,097	251,674	138,640	4,951	2.9%
<b>Subtotal</b>	<b>273,156</b>	<b>338,274</b>	<b>442,361</b>	<b>579,105</b>	<b>305,949</b>	<b>10,927</b>	<b>2.7%</b>
<b>Industry Clusters and Other Drivers</b>							
Advanced Manufacturing	12,204	13,007	14,086	15,254	3,050	109	0.8%
Aerospace	1,290	1,476	1,747	2,068	778	28	1.7%
Agricultural and Food Technology	9,093	10,003	11,271	12,699	3,606	129	1.2%
Agriculture - Non-Food	58	63	71	79	21	1	1.1%
Biotechnology	1,069	1,148	1,256	1,374	305	11	0.9%
Information	6,841	7,586	8,632	9,822	2,981	106	1.3%
IT and Information Security	11,302	12,632	14,516	16,681	5,379	192	1.4%
Mining, except oil and gas	221	259	316	385	164	6	2.0%
Oil and Gas	2,205	3,233	5,216	8,416	6,211	222	4.9%
Other Manufacturing	670	670	670	670	0	0	0.0%
Telecommunications	4,792	5,189	5,732	6,332	1,540	55	1.0%
Transportation Equipment Manufacturing	9,659	11,861	15,332	19,818	10,159	363	2.6%
<b>Subtotal</b>	<b>59,404</b>	<b>67,128</b>	<b>78,844</b>	<b>93,597</b>	<b>34,193</b>	<b>1,221</b>	<b>1.6%</b>
<b>Business Support Industries</b>							
Administrative, waste and support services	52,173	62,094	77,190	95,956	43,783	1,564	2.2%
Construction	33,083	36,684	41,742	47,497	14,414	515	1.3%
Finance and Insurance	52,283	59,831	70,817	83,820	31,537	1,126	1.7%
Logistics	16,784	19,511	23,552	28,430	11,646	416	1.9%
Management of companies and enterprises	8,691	11,009	14,796	19,884	11,193	400	3.0%
Professional and technical services	38,940	46,345	57,612	71,618	32,678	1,167	2.2%
Real Estate	12,780	14,625	17,310	20,489	7,709	275	1.7%
Transportation Services	1,549	1,815	2,212	2,697	1,148	41	2.0%
Utilities	5,585	6,096	6,801	7,587	2,002	71	1.1%
Wholesale Trade	24,491	26,943	30,357	34,203	9,712	347	1.2%
<b>Subtotal</b>	<b>246,359</b>	<b>284,955</b>	<b>342,389</b>	<b>412,180</b>	<b>165,821</b>	<b>5,922</b>	<b>1.9%</b>
<b>Community Support Industries</b>							
Arts and Entertainment	10,909	12,882	15,858	19,521	8,612	308	2.1%
Other Services	23,895	26,706	30,690	35,267	11,372	406	1.4%
Public Administration (except Military)	18,794	20,352	22,481	24,833	6,038	216	1.0%
Retail Trade	85,951	95,307	108,448	123,400	37,449	1,337	1.3%
<b>Subtotal</b>	<b>139,549</b>	<b>155,247</b>	<b>177,476</b>	<b>203,021</b>	<b>63,472</b>	<b>2,267</b>	<b>1.3%</b>
<b>Total</b>	<b>718,468</b>	<b>845,604</b>	<b>1,041,070</b>	<b>1,287,903</b>	<b>569,435</b>	<b>20,337</b>	<b>2.1%</b>

Source: Woods & Poole, Texas Workforce Commission, BLS, San Antonio-Bexar County MPO, Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Forecast.xlsx\Forecast

The employment forecast was recalculated to match AAMPO categories and to illustrate the growth expected for each of the AAMPO's categories. As shown in **Table 10**, Basic employment is expected to grow by 1.5 percent annually, Retail by 1.4 percent annually, Service by 2.3 percent annually, and Education by 3.0 percent annually. The variations in rates for the categories may produce differences in overall traffic demand within Bexar County from the forecast provided by the MPO. The major implications, however, are more likely to be seen in the development projections for various land use types included in specific forecasts later in the report.

**Table 10**  
**Wage and Salary Employment Forecast by MPO Category, 2012-2040**

Cluster	2012	2020	2030	2040	Change 2012-2040		
					#	Ann #	Ann %
Basic	136,104	152,988	177,776	207,678	71,574	2,556	1.5%
Retail	96,860	108,190	124,306	142,921	46,061	1,645	1.4%
Service	412,105	491,446	614,032	769,372	357,267	12,760	2.3%
Education	73,399	92,980	124,957	167,932	94,533	3,376	3.0%
<b>Total</b>	<b>718,468</b>	<b>845,604</b>	<b>1,041,070</b>	<b>1,287,903</b>	<b>569,435</b>	<b>20,337</b>	<b>2.1%</b>

Source: Woods & Poole, Texas Workforce Commission, BLS, AAMPO, Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Forecast.xlsx\RePack MPO

## Commercial and Industrial Development Trends

The commercial and industrial real estate market was analyzed to determine where the major concentration of commercial and industrial development are within the City and to determine areas with experiencing the most development pressure. The office, retail and industrial space inventory for each of the 20 study subareas are provided in **Appendix Tables 3-5**.

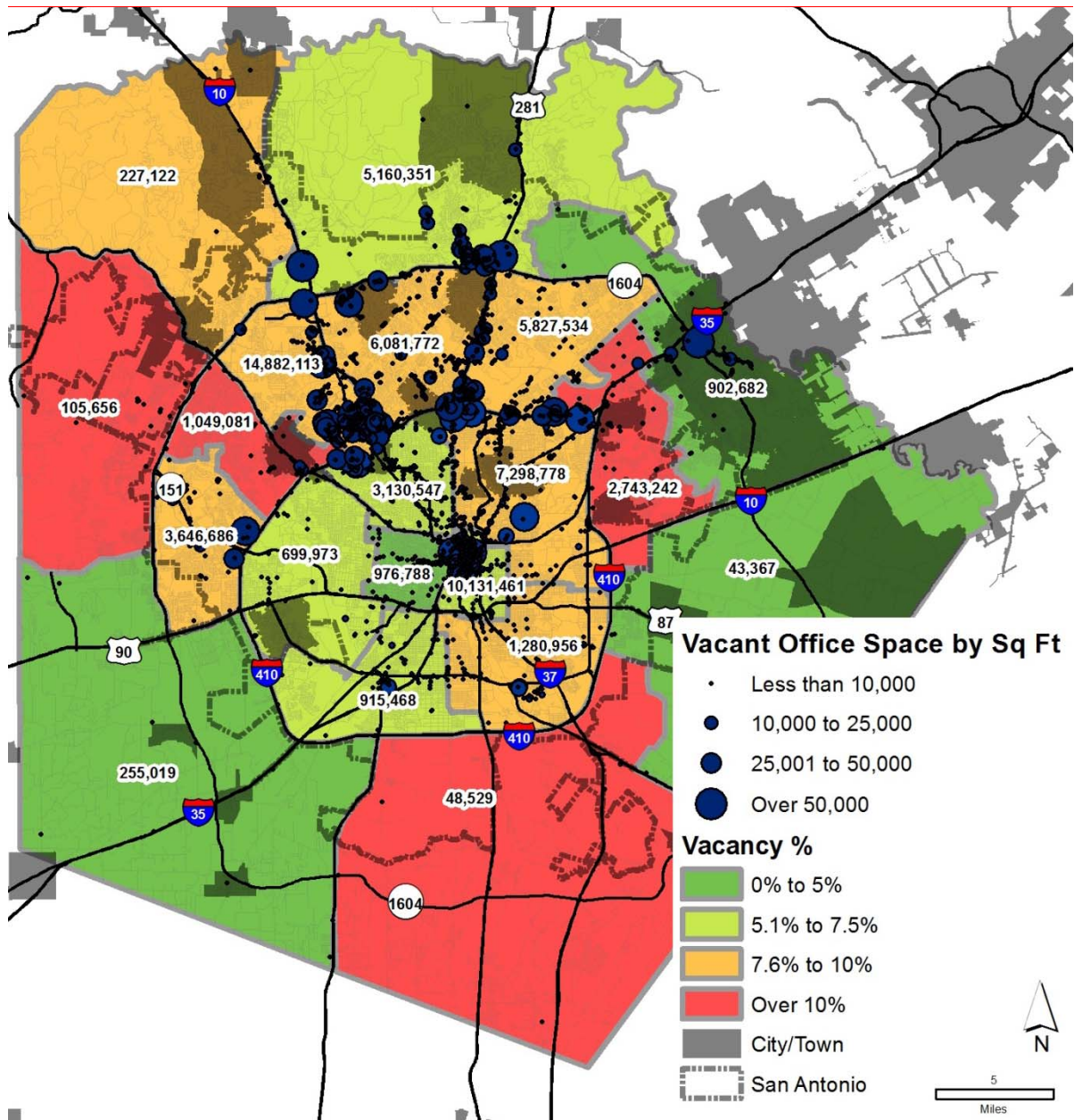
### Office Development

There is a total of 65.4 million square feet of office space in Bexar County according to CoStar. The office market in San Antonio is dominated by subareas along the I-10 and US Highway 281 corridors. The total square feet of office space in each subarea is shown in **Figure 10**, along with the vacancy rate in each subarea. The Inside 1604 Super Subarea has the largest office space inventory with 34 million square feet. The subarea with the most office space, Inside 1604 Northwest, has 14.8 million square feet and includes the South Texas Medical Center. The Inside 410 Super Subarea has 24.4 million square feet of office space with Inside 410 Central being the largest subarea with 10.1 million square feet of office space and encompasses the Central Business District.

The inventory of office space increased by 11.3 million square feet between 2005 and 2013 (shown in **Appendix Table 3**). The Inside 1604 Super Subarea captured the most office development since 2005 (62 percent, 7 million square feet). However, the Outside 1604 North subarea captured the most office space development with an increase of 2.6 million square feet of office inventory. Despite having 37 percent of office space in San Antonio, the Inside 410 Super Subarea only capture 12 percent of the office development since 2005 (1.3 million square feet).



Figure 10  
Bexar County Office Inventory and Vacancy

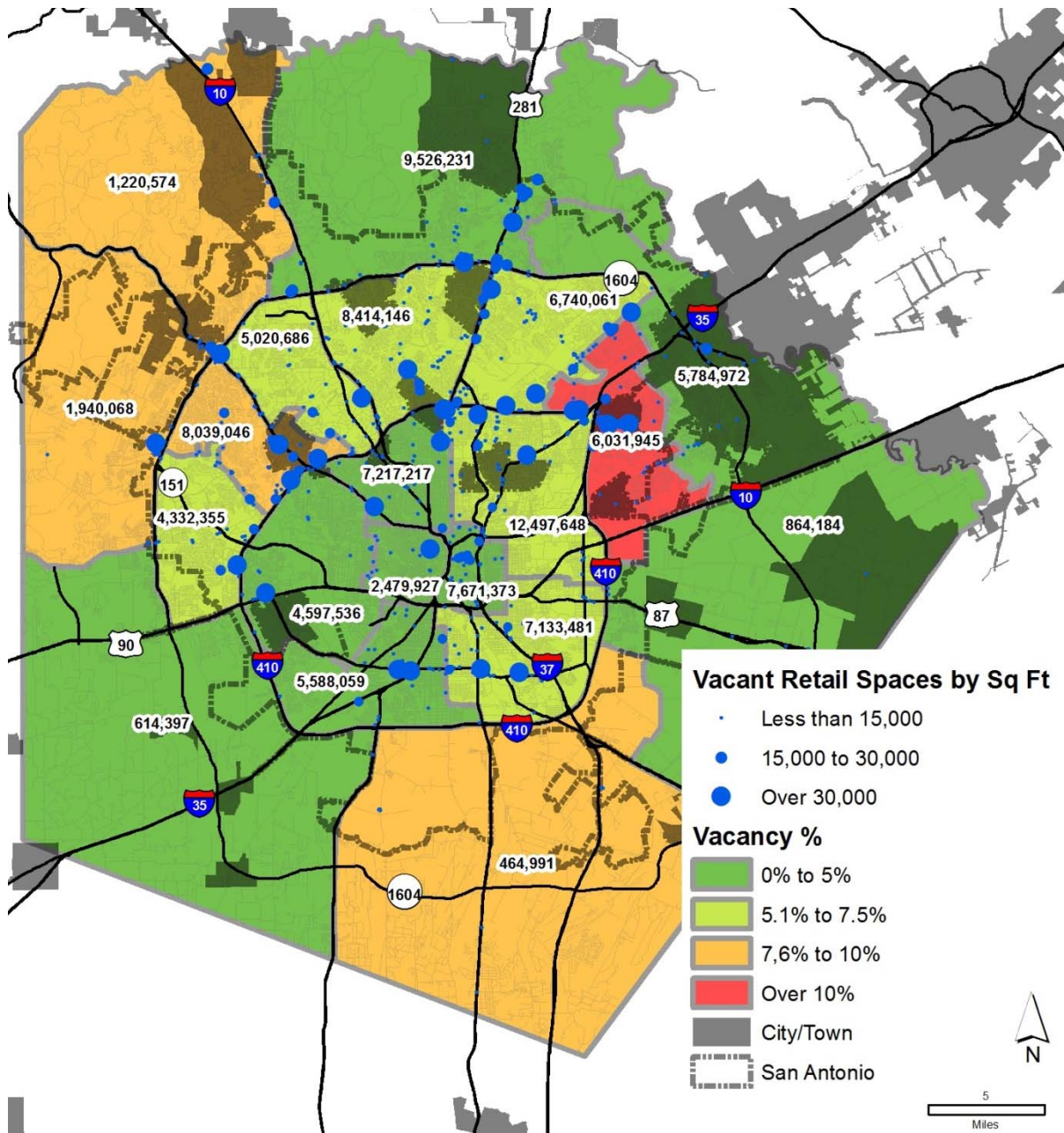


## Retail Development

There is a total of 106.2 million square feet of retail space in Bexar County according to CoStar. Traditionally the retail market has been centered in the Inside 410 Super Subarea in San Antonio. The Inside 410 Super Subarea has 47.1 million square feet of retail and accounts for 44 percent of the retail space in Bexar County. The Inside 410 Northeast subarea has the most retail space of any subarea with 12.5 million square feet and is home two major retail destinations, the Quarry Marketplace and the North Star Mall. Retail development in the recent years has followed household growth closely, with the outer subareas (particularly in the north portion of the County) capturing the majority of retail development. The Outside 1604 North subarea has the second most retail space of the subareas, with 9.5 million square feet, and is anchored by the Shops at La Cantera (1.3 million sq. ft.) and The RIM shopping center (1.5 million sq. ft.).

The inventory of retail space increased by 16.2 million square feet between 2006 and 2013 (shown in **Appendix Table 4**). The Outside 1604 North subarea increased by 6.4 million square feet of retail space since 2006, which was 40 percent of all retail development in the County. Vacancy rates for retail space in San Antonio are relatively low, with all but one subareas having an average vacancy rate below 10 percent.

Figure 11  
Bexar County Retail Inventory and Vacancy



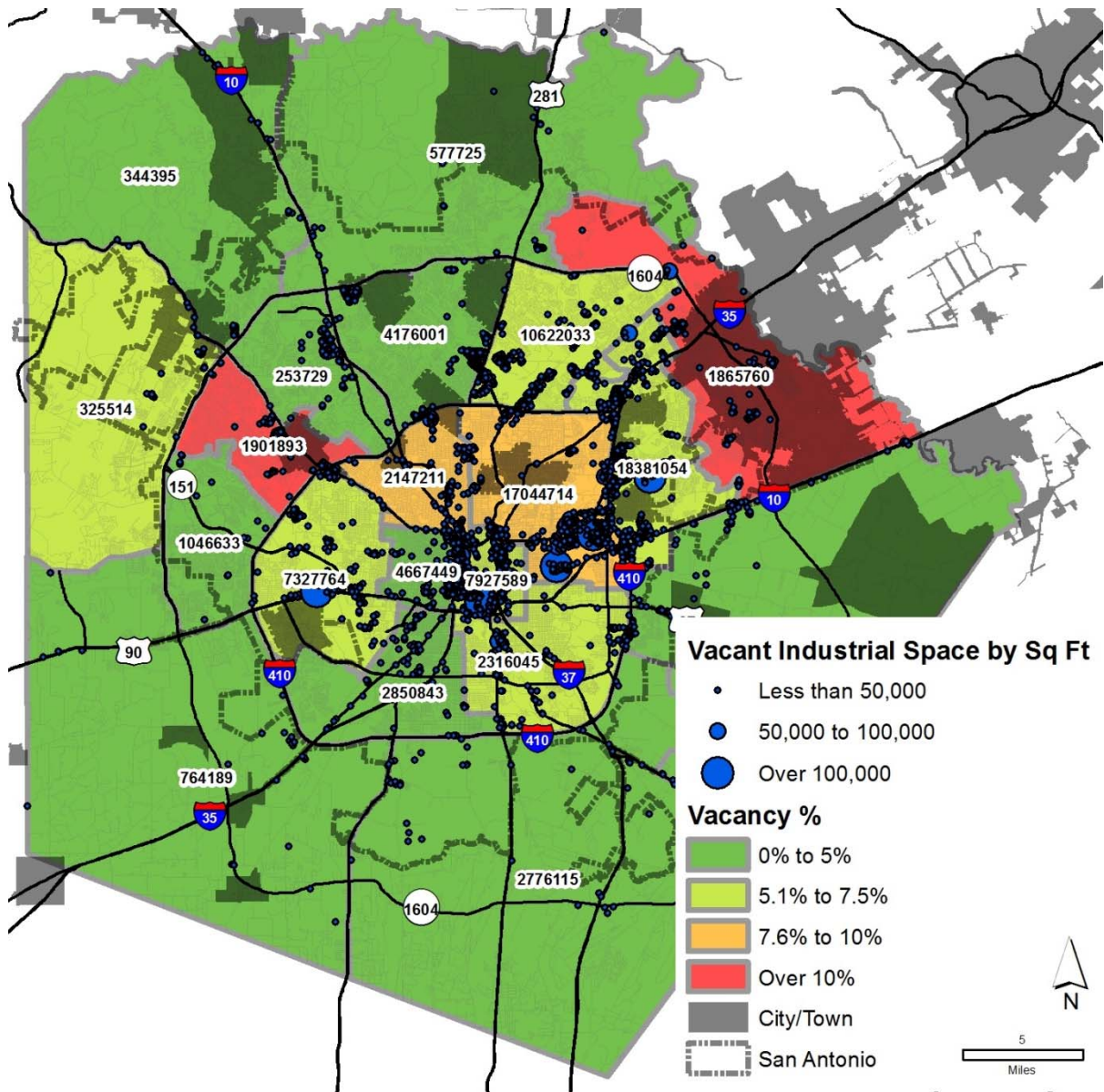
## Industrial Development

There is a total of 91.9 million square feet of industrial space in Bexar County according to CoStar. The industrial market in San Antonio traditionally has been located in the northeast portion of the City along the I-35 and I-10 corridors. Three subareas, Inside 410 Northeast (17 million sq. ft.), Inside 1604 Northeast (10.6 million sq. ft.), and Inside 1604 Northeast Kirby-Windcrest (18.4 million sq. ft.), account for 50 percent of the industrial space in Bexar County.

The central portions of San Antonio have a large amount of industrial buildings and space, much of which is past its useful age. The average year built of industrial space in CoStar's CBD market area is 1953, while the average for the Northeast market area is 1980. The Inside 410 Central subarea has 7.9 million square feet of industrial space, but the subarea has only increased in space by 38,787 square feet since 2005. Demand for industrial space has shifted primarily to two portions of the City. The Inside 1604 Northeast and Northeast Kirby-Windcrest subareas captured 30 percent of the industrial development since 2005, building on the subareas position as the primary industrial location in the City. However, the southwestern portion of the City also captured new development. The Inside 410 West subarea captured the most industrial development in the City since 2005, with 1.6 million square feet, of any subarea. Much of this development was within Port San Antonio, illustrating the strength of that employment center. It should be noted that the Far South subarea also captured 1.6 million square feet of industrial space since 2005, however the Toyota plant accounted for 1.5 million of it. As a whole, the inventory of industrial space increased by 8.2 million square feet between 2005 and 2013 (shown in **Appendix Table 5**). Vacancy rates for industrial space in San Antonio are relatively low, with only one subarea having an average vacancy rate above 10 percent.



Figure 12  
Bexar County Industrial Inventory and Vacancy



## Future Employment Development Opportunities

### Brooks City Base

Brooks City Base is a 1,200 acre mixed-use development on the site of the former Brooks Air Force Base southeast of downtown San Antonio. Brooks City Base is aiming to become a destination research and technology center. Currently, the base contains over 2 million square feet of laboratory, office, educational, light industrial and recreation space in a master planned “campus-style” setting. Brooks City Base’s location, available real estate, infrastructure and various economic development incentives provide for a unique opportunity in the San Antonio region. The Brooks Development Authority has stated a goal of 1,000 residential units for the community with about 500 single and multi-family residences already constructed. Currently about one third of the campus is developed, leaving roughly 750 acres open for future development.

Brooks City Base is one of many U.S. military bases that have been transitioned from military operations to redevelopment projects due to base decommissioning initiatives over the past 20 years. The most successful base redevelopment projects have resulted when a development authority is created and a concrete plan for redevelopment of the base is implemented by a development authority. The Brooks Development Authority is currently working on the third iteration of a master plan for the redevelopment of the base and recently hired Austin-based firm Live Oak-Gottesman as a master developer to help manage the transition toward a vibrant mixed-use community.

The businesses located at Brooks employ approximately 2,500 workers (nearly matching the 3,000 employed when it was an active base). There are 17,500 jobs located within three miles of the base. The Eagle Ford Shale formation southeast of San Antonio continues to provide many jobs and adds pressure for residential housing units and retail services, especially in the southeastern area of the city.

Some notable development progress at Brooks and in the surrounding area includes:

- Nexolon America, LLC is building a 240,000 square foot solar manufacturing facility at Brooks that will employ 400 people. Nexolon recently renamed itself as Mission Solar Energy, LLC.
- There is 1.5 million square feet of retail space on SE Military Drive along the northern border of Brooks from I-37 to South Presa Street. The majority of this space, 1.05 million square feet, has been built since 2005. Demand for this retail development has been driven primarily by the recent housing development in the area and the location at the confluence of I-37, south of SE Military Drive, to I-410.
- In June 2014, the University of the Incarnate Word (UIW) announced that Brooks will be the site of its new School of Osteopathic Medicine. When it opens in August of 2016, the school will occupy almost 24 acres in the northwest corner of the Brooks. The development of the campus will comprise two phases, incorporating a total of seven buildings that will house classrooms, administrative and faculty offices, laboratories, a student center, and an auditorium. A large portion of the campus will incorporate existing buildings.

The Brooks City Base is located within a growing sector of the San Antonio area and is well-positioned to capture growth for residential and commercial uses. The amount of vacant land at this location combined with efforts of the Brooks Development Authority to attract key employers

will generate demand for retail and residential development that typically follow employment. The 2,400 jobs at Brooks that have been established since the conversion from its military past, with additional employers currently constructing new facilities, demonstrates that the site has established itself as an employment center and can be expected to attract jobs into the future.

### **Texas A&M San Antonio**

Texas A&M University- San Antonio established a major campus in 2009 south of I-410 east of Zarzamora Road. The university is small currently, with only 4,500 students, but it is in a unique position to define its growth within the campus's 700 acres of land. The current Campus Development Plan serves as a guide for additions and improvements to accommodate their stated goal of 25,000 students by 2025. In order to successfully achieve this growth level, it is estimated that between 1.4 and 1.5 million square feet of classroom, research, office and support facilities will need to be constructed, or nearly 10 times the current available space on the campus. The University currently has some programs scattered throughout the City including its School of Business located Brooks City Bases, which it will likely consolidate to the main campus once space is available.

As the University continues to expand, the Main Campus will develop to accommodate the needs of the increasing student population. The master plan is shown in **Figure 13**. For fall 2014, the Central Academic Building and the Patriots' Casa will open in addition to the original building on Main Campus. After enrollment reaches 5,000 another phase of development will begin when two academic buildings will be added. When enrollment reaches 10,000 students, construction will begin on another phase of development, which will include a stand-alone library, student center, and residential facilities. The final phase of development will begin once enrollment surpasses 25,000 students. In all there will be nine academic buildings, a residential area in the northeast corner of campus, a separate dining hall, general use building, and fine arts and administration buildings. The campus will also ultimately have full athletic facilities.

**Figure 13**  
**Texas A&M-San Antonio Campus Master Plan**



## **Port San Antonio**

Port San Antonio is the redevelopment of the former Kelly Air Force Base adjacent to Lackland Air Force Base. The project is 1,900 acres in total that now has over 80 private and public organizations and 12,000 employees. The employment is primarily in the aerospace, logistics, manufacturing and military industries. There is 8 million square feet of development at Port San Antonio, which is primarily industrial space but does include some office and institutional space. Port San Antonio is a foreign-trade zone and has direct air, rail and highway access. Only about 40 percent of the Port's available land is developed. There are approximately 1,000 acres for the construction of new buildings. The project has an estimated capacity of 35,000 jobs. Port San Antonio is home to the region's longest runway. In 2013, almost 400 acres of additional land became along the runway to support the expansion of the aerospace industry.



## Development Typology

Future development within San Antonio is estimated to fit within seven general development types. The development types were developed through analysis of existing conditions, recent development trends in the region, and from national building trends. The development types are designed to describe the general nature of the building and also the density of the building and the site it is located on. Industrial uses are expected to fit within two types of development types, a conventional industrial and small format. There are two development types for retail uses, auto-oriented and urban. For office uses there are three types; low, mid and high-rise office. The description of development types are shown in **Table 11**. The forecast density measured by floor area ratio, which is the ratio between building space to the land area of the parcel the building is built on, is also shown. Lastly, the estimated allocation (or capture) of space by development type is also provided.

**Table 11**  
**Employment Development Typology**

Employment		Floor Area Ratio	Allocation
<b>Industrial</b>			
Conventional Industrial	Warehouse, manufacturing, distribution minimum floor plate of 30,000 square feet	0.15	77%
Small Format Industrial/Flex	Flexible, Service, Showroom uses with smaller floor plate and less space per tenant, floor plate less than 30,000 square feet	0.30	<u>23%</u>
<b>Industry Total</b>			<b>100%</b>
<b>Retail</b>			
Auto-oriented Service/Retail	Mixture of stand alone, medium to large format retail spaces, strip retail and commercial spaces oriented around major arterial roads with off-street surface parking lots	0.20	64%
Urban Service/Retail	Retail space within street and pedestrian oriented buildings, stand alone or multitenant/use, with limited or no off-street parking and or structured parking	0.50	<u>36%</u>
<b>Retail Total</b>			<b>100%</b>
<b>Office</b>			
Low-Rise Office	Stand alone single and multitenant office buildings with mostly or all off-street surface parking lots, one to 3 stories	0.35	28%
Mid-rise Office	Stand alone single and multitenant office buildings with mostly on-street and structured parking, 4 to 10 plus stories, potential for ground floor retail	2.00	49%
High-rise office	Multitenant office space in large, city block size buildings with structured parking and 10 plus stories	10	<u>23%</u>
<b>Office Total</b>			<b>100%</b>

Source: Economic & Planning Systems

The existing distribution of square feet of development within the employment development typology is shown in **Table 12**. Industrial space is split fairly consistently throughout the City at  $\frac{3}{4}$  conventional industrial space and  $\frac{1}{4}$  small format, as shown. Retail space in the Inside 410 Super Subarea is split 75 percent auto-oriented and 25 percent urban. The newer development, primarily low density development, in the Outside 1604 and South and East Super Subareas have been split 80 percent auto oriented and 20 percent urban.

**Table 12**  
**Employment Development Typology**

Employment	Inside 410	Inside 1604	Outside	Citywide
<b>Industrial</b>				
Conventional Industrial				77%
Small Format Industrial/Flex				<u>23%</u>
<b>Industry Total</b>				<b>100%</b>
<b>Retail</b>				
Auto-oriented Service/Retail	75%	85%	80%	
Urban Service/Retail	<u>25%</u>	<u>15%</u>	<u>20%</u>	
<b>Retail Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	
<b>Office</b>				
Low-Rise Office	50%	60%		
Mid-rise Office	30%	30%		
High-rise office	<u>20%</u>	<u>10%</u>		
<b>Office Total</b>	<b>100%</b>	<b>100%</b>		

Source: CoStar; Economic & Planning Systems

## Estimate Development Demand

The percent of jobs by development type for each of the 29 industries within the four employment categories based on a correlation of jobs to physical development within the region, research on the building demands of each industry and national industry standards. The percent of jobs in each development type by industry is provided in **Appendix Table 6**. The percent of jobs by industry in each development type is used to estimate the number of jobs that for each development type. The forecast jobs by industry are allocated to each development type, and this allocation will ultimately be used to estimate development and land demand based on the density estimates for each development type. The estimated jobs by industry for each industry are shown in **Table 13**.

**Table 13**  
**Forecast New Jobs by Development Type, 2010 to 2040**

	New Jobs 2012-2040	2012-2040								
		Industrial		Office			Retail		Other	
		Conventional Industrial	Small Format Industrial	Low	Mid	High	Auto Oriented	Urban	Hospitality	Civic / Institutional
<b>Traditional Economic Drivers</b>										
Accommodation and Food Service	72,777	0	0	0	0	0	25,472	25,472	21,833	0
Educational services	94,533	0	0	9,453	0	0	0	4,727	0	80,353
Healthcare	138,640	0	0	13,864	27,728	13,864	6,932	6,932	0	69,320
<b>Subtotal</b>	<b>305,949</b>	<b>0</b>	<b>0</b>	<b>23,317</b>	<b>27,728</b>	<b>13,864</b>	<b>32,404</b>	<b>37,130</b>	<b>21,833</b>	<b>149,673</b>
<b>Industry Clusters and Other Drivers</b>										
Advanced Manufacturing	3,050	1,678	915	153	153	153	0	0	0	0
Aerospace	778	389	233	0	0	0	0	0	0	156
Agricultural and Food Technology	3,606	1,262	541	180	180	180	180	0	0	0
Agriculture - Non-Food	21	4	2	2	5	1	0	0	0	0
Biotechnology	305	46	137	30	30	15	0	0	0	46
Information	2,981	0	149	298	1,341	894	149	149	0	0
IT and Information Security	5,379	0	269	538	2,152	1,345	269	269	0	538
Mining, except oil and gas	164	16	8	16	41	16	0	0	0	0
Oil and Gas	6,211	621	311	621	1,553	621	0	0	0	0
Other Manufacturing	0	0	0	0	0	0	0	0	0	0
Telecommunications	1,540	77	77	154	462	308	231	231	0	0
Transportation Equipment Manufacturing	10,159	7,111	1,524	0	508	508	0	0	0	508
<b>Subtotal</b>	<b>34,193</b>	<b>11,204</b>	<b>4,166</b>	<b>1,993</b>	<b>6,425</b>	<b>4,041</b>	<b>829</b>	<b>649</b>	<b>0</b>	<b>1,247</b>
<b>Business Support Industries</b>										
Administrative, waste and support services	43,783	4,378	4,378	6,567	15,324	8,757	2,189	2,189	0	0
Construction	14,414	1,441	1,441	2,883	2,162	721	1,441	0	0	0
Finance and Insurance	31,537	0	0	3,154	11,038	7,884	4,731	4,731	0	0
Logistics	11,646	8,152	2,329	0	582	582	0	0	0	0
Management of companies and enterprises	11,193	0	0	1,119	5,597	4,477	0	0	0	0
Professional and technical services	32,678	0	3,268	6,536	13,071	6,536	1,634	1,634	0	0
Real Estate	7,709	0	0	2,313	3,084	771	771	771	0	0
Transportation Services	1,148	344	115	115	115	115	0	0	0	0
Utilities	2,002	801	400	100	50	50	0	0	0	0
Wholesale Trade	9,712	4,856	2,914	486	243	243	486	486	0	0
<b>Subtotal</b>	<b>165,821</b>	<b>19,973</b>	<b>14,845</b>	<b>23,272</b>	<b>51,265</b>	<b>30,135</b>	<b>11,251</b>	<b>9,810</b>	<b>0</b>	<b>0</b>
<b>Community Support Industries</b>										
Arts and Entertainment	8,612	0	431	0	0	0	1,722	1,722	431	4,306
Other Services	11,372	0	0	1,137	1,706	569	1,137	1,137	0	0
Public Administration	6,038	0	604	604	1,208	604	302	302	0	2,415
Retail Trade	37,449	3,745	0	0	936	936	18,725	11,235	1,872	0
<b>Subtotal</b>	<b>63,472</b>	<b>3,745</b>	<b>1,034</b>	<b>1,741</b>	<b>3,850</b>	<b>2,109</b>	<b>21,886</b>	<b>14,396</b>	<b>2,303</b>	<b>6,721</b>

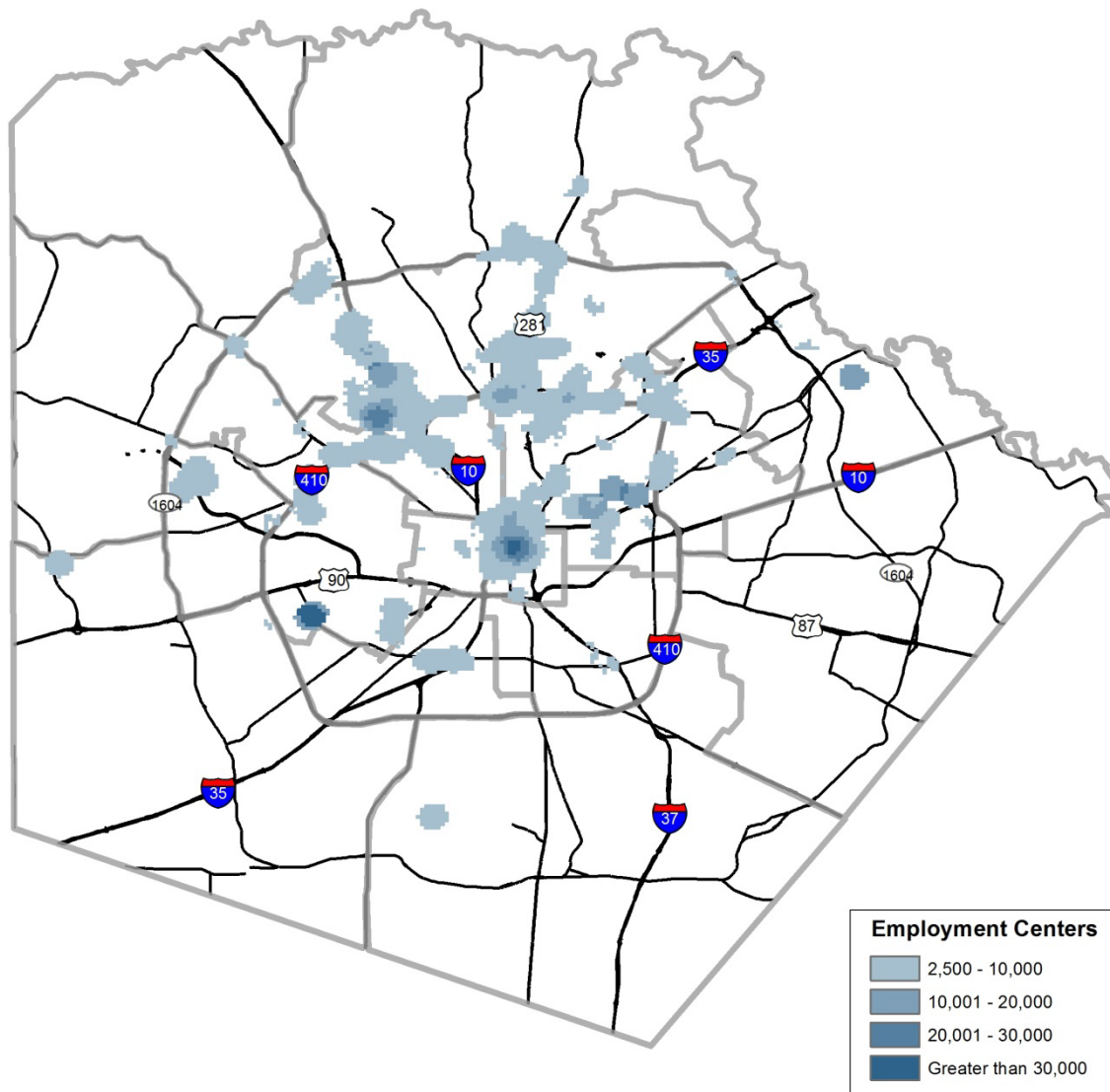
Source: Economic & Planning Systems

H:\13029-San Antonio Comp Plan Initial Studies\Models\13029-Employment Development Demand.xlsx\Jobs to Space

## Employment “Activity Centers”

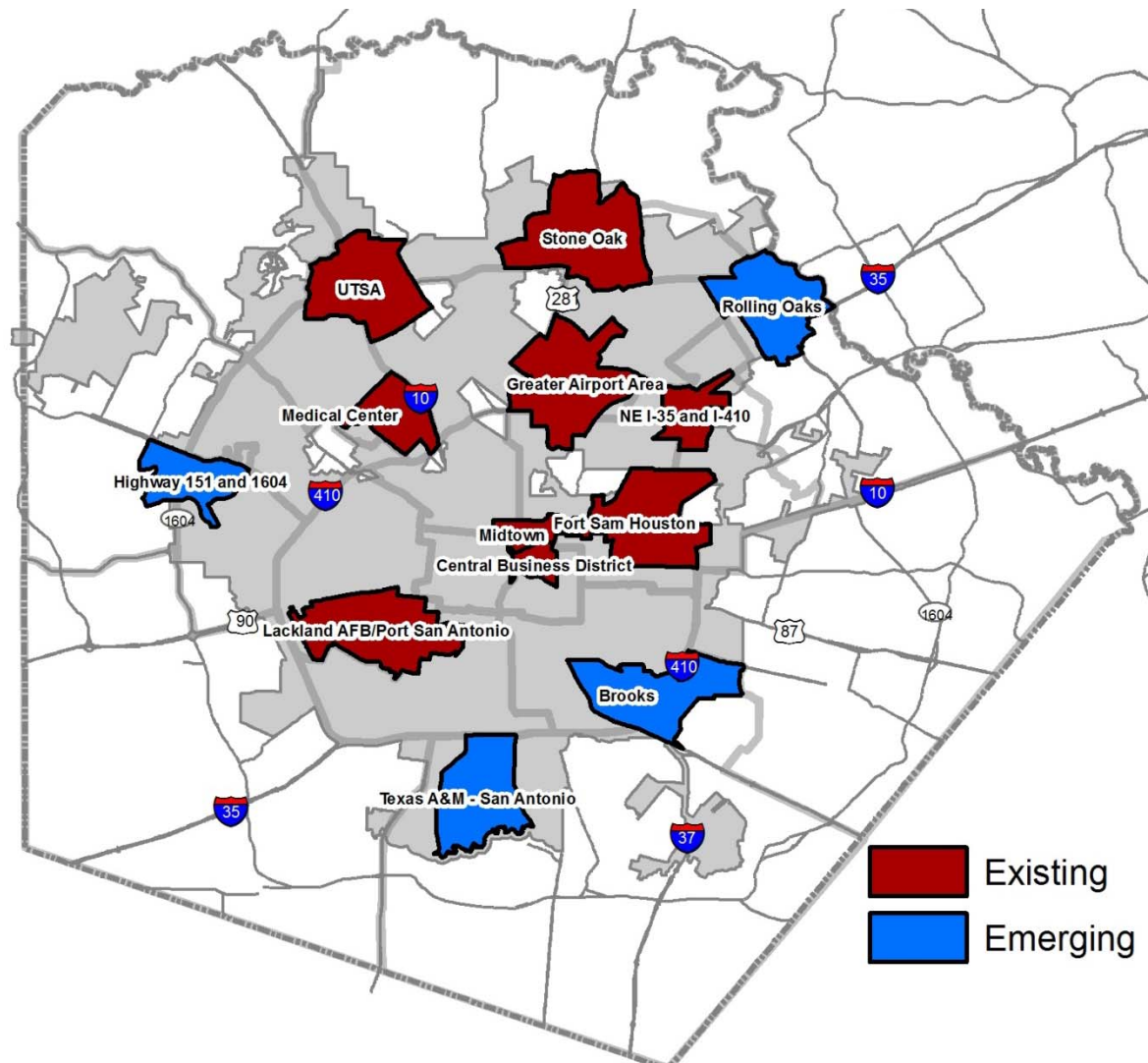
Employment in San Antonio has a polycentric pattern. Due to the composition of the economy in San Antonio and presence of multiple major drivers of job spread across the county (i.e. Military Bases), the employment base in San Antonio is dispersed throughout the County. There are multiple major concentrations of employment in San Antonio. With the exception of the CBD, South Texas Medical Center and the military bases, the development pattern of employment uses appears to be largely haphazard. It is difficult to identify discernable major concentrations of employment within the City aside from the defined concentrations. This is a result largely due to the lack of land use controls and master plans to guide/attract employment growth and the major economic drivers present in San Antonio. An analysis of the density of jobs within Bexar County, however, shows that jobs within the county are fairly concentrated into centers/nodes, as shown **Figure 14**. Employment has been concentrating nodes despite planning efforts to encourage this.

**Figure 14**  
**Bexar County Major Employment Concentrations**



EPS has identified 13 employment activity centers within Bexar County, nine existing centers and four emerging, as shown in **Figure 15**. The location of existing employment centers was defined as areas with significant concentration of jobs, over 15,000, within a collection of contiguous TAZs, and the location of major, large employers. The four emerging centers were identified based on a combination of significant recent development, major infrastructure assets (highways, existing/planned transit lines), and employment driven master planned developments. Other potential areas were considered but lacked the cohesive collection of employment or amenities that would support large employment gains.

**Figure 15**  
**Employment Activity Centers**



## Historic Capture

Initially, these employment centers were identified in order to understand the composition of areas that have high employment density. However, after analysis of the concentration of jobs within each center, it was determined that these centers have captured a significant amount of employment and function as major employment centers despite the lack of a coordinated plan for many of them. Half of all jobs in Bexar County are located in these employment centers, as shown in **Table 14** (and by all industries in **Appendix Table 7**). As well, approximately half of all jobs in three of the employment categories are located within these centers. Jobs within community support industries are more spread out and only 34 percent are in the centers, due to their reliance of being located in certain proximities to households to serve customers.

The employment activity center with the most employment within Bexar County is the Greater Airport Area, with 65,000 jobs. The Greater Airport Area is likely thought of mainly the employment activity related to the actual San Antonio International Airport, however the majority of the jobs in this center are not related to the airport. The Greater Airport Area functions in many ways as a traditional Central Business District with a large mixture of uses and jobs within all industries with the majority of jobs within the Business Support Services industries due to its central location.

The second largest employment center is the Medical Center area (64,000 jobs), which includes the South Texas Medical Center and USAA. The jobs within this center are primarily either in Traditional Economic Drivers industries (Healthcare) or Business Support Industries (Finance), with very few jobs within the other categories. The Central Business District has an estimated 44,000 jobs and is the fifth largest center and functions as the center of the tourism economy, public administration activities, and arts and cultural activity. The CBD has a relatively low proportion of jobs within the Business Support Services industries, which would be typically high in other major city CBDs.

The centers also seem to be predominately oriented towards one or few market niches and therefore have jobs mainly within one of the four employment categories. **Figure 16** shows the percent proportion of jobs by employment category in each center. This reinforces the finding that employment centers in San Antonio have been generated mainly by the intentional concentration of employers within similar industries.

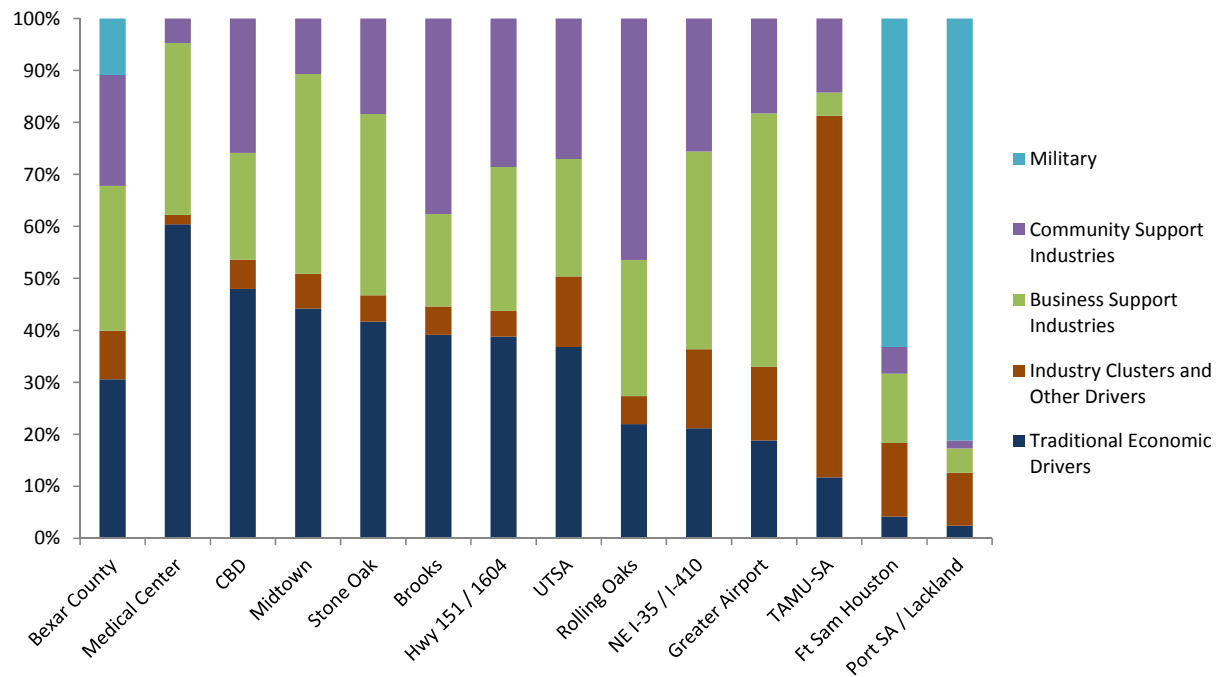
**Table 14**  
**Jobs by Employment Category by Employment Activity Center**

Employment Groups	Total Jobs	Current Jobs in Centers		Existing Employment Centers									Emerging Employment Centers			
		#	%	Greater Airport	Medical Center	CBD	Port SA / Lackland	Ft Sam Houston	Stone Oak	NE I-35 / I-410	UTSA	Midtown	Hwy 151 / 1604	TAMU-SA	Brooks	Rolling Oaks
Traditional Economic Drivers	238,201	112,770	47%	12,239	38,542	21,258	1,209	2,587	8,869	3,179	6,863	7,492	5,510	365	2,826	1,831
Industry Clusters and Other Drivers	72,926	37,546	51%	9,223	1,160	2,501	5,168	8,771	1,078	2,282	2,529	1,126	702	2,161	392	453
Business Support Industries	217,011	103,861	48%	31,629	21,117	9,086	2,365	8,263	7,427	5,716	4,202	6,514	3,930	139	1,287	2,186
Community Support Industries	166,233	56,099	34%	11,905	3,015	11,480	775	3,198	3,920	3,844	5,047	1,815	4,060	444	2,717	3,879
Military	84,848	80,237	95%	0	0	0	41,039	39,198	0	0	0	0	0	0	0	0
<b>Total</b>	<b>779,219</b>	<b>390,513</b>	<b>50%</b>	<b>64,996</b>	<b>63,834</b>	<b>44,325</b>	<b>50,556</b>	<b>62,017</b>	<b>21,294</b>	<b>15,021</b>	<b>18,641</b>	<b>16,947</b>	<b>14,202</b>	<b>3,109</b>	<b>7,222</b>	<b>8,349</b>

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Centers\_4-27 Revision at 50%\xlsx\Jobs by Center (2)

**Figure 16**  
**Activity Center Percent Employment by Employment Category**



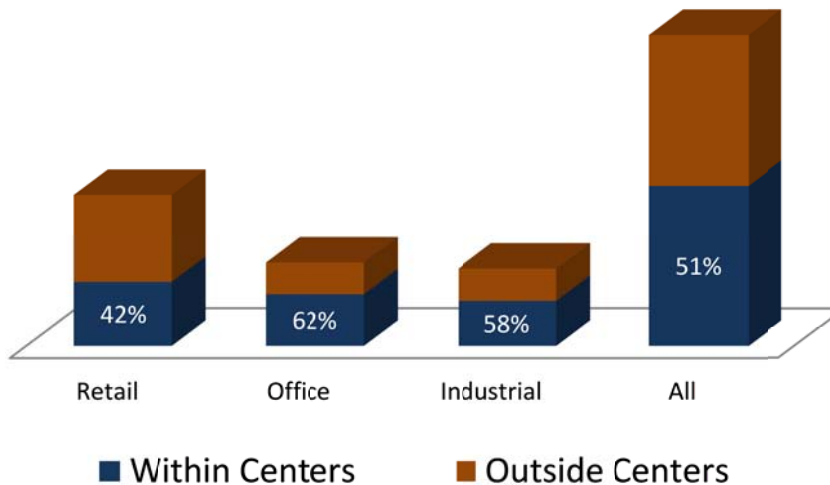


## Recent Development

Furthering the importance of these centers is the discovery that over half of recent non-residential development (since 2005) has occurred within these 13 centers, as shown **Figure 17**. Sixty percent of office and industrial development has occurred within the centers, as well as 42 percent of retail development, which is higher than the proportion of retail trade jobs within centers. Historically employment has gravitated to these centers and recent development is continuing this trend.

Future employment and development is expected to continue in this pattern for multiple reasons, including land capacity, but primarily due to the desire of employers to locate in these centralized locations. Emerging centers in San Antonio are located in areas where two major highways intersect and major anchors and master planned developments are located. To gain traction in the market for a major employment centers these elements, and other are essential, and there are limited opportunities for this to occur elsewhere within the County. Over the planning horizon for this project, EPS estimates that at least 50 percent of new jobs will locate in these centers and the City has the opportunity to capture 60 percent or more within the centers. The estimate of 50 percent of new jobs formed the bases for the forecast of employment within the County.

**Figure 17**  
**New Non-Residential Development by Use within Bexar County, 2005 to 2013**

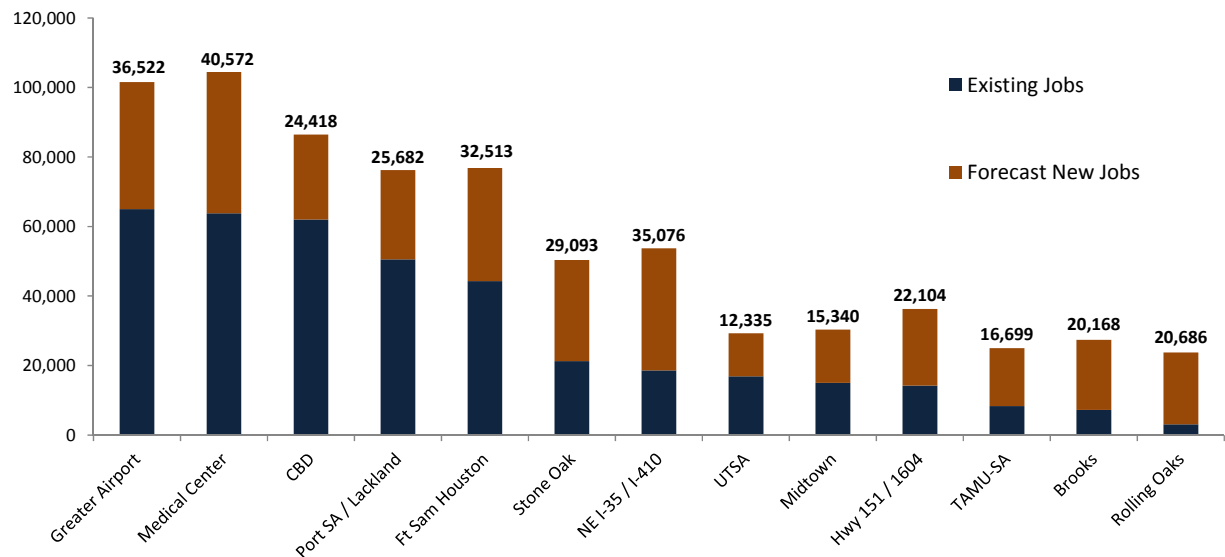


## Activity Center Employment Forecast

Fifty percent of the forecast new jobs in Bexar County were spread among the 13 employment activity centers. The distribution of jobs by center is based four factors; the historic capture of jobs by industry, recent employment changes by industry, recent development trends, major development plans, and the employment composition of each center. The historic capture of jobs by center by industry is shown in **Appendix Table 8**. The forecast percent capture of future employment by industry for each center is shown in **Appendix Table 9**.

The forecast total new jobs for each center are shown in **Figure 18**. The Medical Center is forecast to capture the most amount of jobs of all centers, 40,600. The Greater Airport is estimated to capture the second most amount of job growth with 36,522 new jobs by 2040.

**Figure 18**  
**Forecast New Jobs by Employment Activity Center**



The allocation of jobs within each industry to development space used for the Bexar County employment forecast, **Appendix Table 9**, was used to allocate jobs by industry for each center into jobs by development type for each center. The allocation of jobs by development type is shown in **Table 15**.

**Table 15**  
**Forecast New Jobs by Activity Center by Development Type, 2010 to 2040**

	Industrial		Office			Service/Retail		Other		Total
	Conventional Industrial	Small Format Industrial	Low	Mid	High	Auto Oriented	Urban	Hospitality	Civic / Institutional	
<b>Existing</b>										
Greater Airport	2,967	1,570	2,698	6,639	4,215	3,509	3,332	1,518	4,409	30,858
Medical Center	245	343	3,526	6,747	3,715	2,771	2,849	522	14,089	34,807
CBD	695	610	2,295	4,016	2,208	3,822	3,765	2,007	8,282	27,700
Port SA / Lackland	4,310	1,664	1,673	3,229	1,911	1,893	1,812	763	4,381	21,635
Ft Sam Houston	3,907	1,422	1,471	2,565	1,447	1,531	1,465	522	6,215	20,545
Stone Oak	505	524	2,414	4,993	2,841	2,957	2,727	1,053	6,359	24,372
NE I-35 / I-410	1,748	802	1,015	1,811	1,093	1,409	1,362	522	3,202	12,963
UTSA	569	465	2,721	4,714	2,886	3,224	3,246	1,094	10,510	29,430
Midtown	325	298	1,030	1,639	860	984	971	282	4,124	10,515
<b>Emerging</b>										
Hwy 151 / 1604	327	398	1,925	3,964	2,304	2,159	1,961	555	5,195	18,789
TAMU-SA	1,962	621	1,442	1,642	964	1,380	1,548	531	7,344	17,434
Brooks	477	413	1,712	2,918	1,458	1,539	1,470	522	6,160	16,668
Rolling Oaks	680	442	1,340	2,616	1,555	1,944	1,735	558	3,146	14,017
<b>Total</b>	<b>18,718</b>	<b>9,571</b>	<b>25,264</b>	<b>47,492</b>	<b>27,457</b>	<b>29,124</b>	<b>28,243</b>	<b>10,449</b>	<b>83,415</b>	<b>279,733</b>

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment\_Centers\_4-27 Revision at 50%\xlsx\Dev Type by Area

## Non Employment Activity Center Job Forecast

The other 50 percent of jobs not forecast for Employment Activity Centers was forecast by subarea. The majority of jobs not in centers are within community and business support industries where demand is driven by households and the location of new households. The new jobs are allocated by subarea based on the housing demand analysis completed for this project and described later in this report. The distribution of jobs by subarea is shown in **Table 16**.

**Table 16**  
**Non-Activity Center Employment Forecast by Subarea, 2010 to 2040**

	Estimated Capture	Forecast Jobs	Historic Emp. Capture		Future Housing Units	
			Change	Capture	Change	Capture
<b>Non-Center Jobs</b>		<b>297,283</b>				
<b>Inside 410</b>						
Central	5%	13,972	-3,652	-4%	26,584	5%
Central West	3%	7,898	-6,297	-7%	15,027	3%
Northeast	3%	8,175	2,645	3%	15,555	3%
Northwest	1%	2,805	7,874	9%	5,338	1%
Southeast	5%	13,618	2,472	3%	25,911	5%
Southwest	4%	10,916	1,685	2%	20,769	4%
West	3%	8,017	1,387	2%	15,254	3%
<b>Subtotal</b>	<b>22%</b>	<b>65,402</b>	<b>6,114</b>	<b>7%</b>	<b>124,437</b>	<b>22%</b>
<b>Inside 1604</b>						
North	5%	15,968	11,042	12%	30,380	5%
Northeast	2%	7,405	5,580	6%	14,089	2%
Northeast Kirby-Windcrest	4%	12,140	-4,059	-5%	23,099	4%
Northwest	4%	11,286	31,952	36%	21,474	4%
West	5%	15,618	9,645	11%	29,715	5%
West Leon Valley	2%	6,963	2,894	3%	13,248	2%
<b>Subtotal</b>	<b>23%</b>	<b>69,380</b>	<b>57,054</b>	<b>64%</b>	<b>132,004</b>	<b>23%</b>
<b>Outside 1604</b>						
North	10%	28,503	22,221	25%	54,231	10%
Northeast	7%	20,073	3,948	4%	38,191	7%
Northwest	4%	11,080	-8,879	-10%	21,081	4%
West	14%	40,365	2,558	3%	76,799	14%
<b>Subtotal</b>	<b>34%</b>	<b>100,021</b>	<b>19,848</b>	<b>22%</b>	<b>190,303</b>	<b>34%</b>
<b>South and East</b>						
Far East	4%	10,533	784	1%	20,040	4%
Far South	8%	22,871	6,191	7%	43,516	8%
Far Southwest	10%	29,077	-688	-1%	55,322	10%
<b>Subtotal</b>	<b>21%</b>	<b>62,481</b>	<b>6,287</b>	<b>7%</b>	<b>118,878</b>	<b>21%</b>
<b>Total</b>		<b>297,283</b>	<b>89,303</b>		<b>565,621</b>	

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Development Demand.xlsx\Non-Center Jobs Allocation

## Employment Land Demand

The forecast jobs for Bexar County, forecast by employment activity center and by subarea were converted to estimated development building square feet and land acres to estimate demand for land within the County by area. The factors used to estimate the demand for development and land are shown in **Table 17**. The factors are based on existing average development patterns and densities found in San Antonio and on national industry standards. The estimated average square feet of building space per employee in San Antonio is 370. The same average square feet of building space per employee was maintained within the forecast.

**Table 17**  
**Building and Land Demand Factors**

Factors	Industrial		Office			Retail		Other	
	Conventional	Small Format	Low	Mid	High	Auto	Urban	Hospitality	Civic /
	Industrial	Industrial				Oriented			Institutional
Square Feet per Employee	750	400	275	250	225	500	300	500	400
Floor Area Ratio	0.15	0.30	0.35	2.00	10.00	0.20	0.50	1.00	0.50

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Development Demand.xlsx\Conversion Factors

The forecast jobs are multiplied by the square feet per employee factor to generate building square feet demand by development type, which is shown for Bexar County, Employment Activity Centers, and Non-Center jobs by Subarea in **Appendix Tables 10-12**. The estimated demand for building square feet was converted to land demand. The estimated demand for acres for employment is 13,645, which is shown in Table X. The estimated demand for industrial uses is 4,612 acres, 3,449 acres for office uses, 6,488 acres for retail uses and 3,166 acres for hotel and institutional uses.

The same process for land demand used for Bexar County was used for the Activity Center jobs. The estimated total demand for land for employment uses within Activity Centers is 8,718 acres, as shown in **Table 18**. Greater Airport Activity Center has the highest demand for land at 1,056 acres.

The demand for land subarea from non-activity center jobs is 11,203 acres, as shown in table X. The subarea with most land demand is Outside 1604 West. The demand for land within the Outside 1604 Super Subarea is 3,769 acres, which is the most for the Super Subareas. The Inside 410 Super Subarea demand for land is 2,465 acres and 2,615 acres for Inside 1604 Super Subarea, and 2,355 acre for South and East Super Subarea. The total demand for land for each subarea and Activity Center are compared to the land supply estimated in Component 1 later in this report.

**Table 18**  
**Bexar County Employment Land Demand (Acres), 2012 to 2040**

Cluster	2012-2040									Total Acres Demand
	Industrial		Office			Retail		Other		
	Convention al Industrial	Small Format Industrial	Low	Mid	High	Auto Oriented	Urban	Hospitality	Civic / Institutional	
<b>Traditional Economic Drivers</b>										
Accommodation and Food Service	0	0	0	0	0	1,459	350	250	0	2,059
Educational services	0	0	170	0	0	0	65	0	1,473	1,708
Healthcare	0	0	250	87	7	397	95	0	1,270	2,107
Subtotal	0	0	420	87	7	1,856	510	250	2,743	5,874
<b>Industry Clusters and Other Drivers</b>										
Advanced Manufacturing	192	28	3	0	0	0	0	0	0	223
Aerospace	45	7	0	0	0	0	0	0	3	55
Agricultural and Food Technology	145	16	3	1	0	10	0	0	0	175
Agriculture - Non-Food	0	0	0	0	0	0	0	0	0	1
Biotechnology	5	4	1	0	0	0	0	0	1	11
Information	0	5	5	4	0	9	2	0	0	25
IT and Information Security	0	8	10	7	1	15	4	0	10	54
Mining, except oil and gas	2	0	0	0	0	0	0	0	0	2
Oil and Gas	71	9	11	5	0	0	0	0	0	97
Other Manufacturing	0	0	0	0	0	0	0	0	0	0
Telecommunications	9	2	3	1	0	13	3	0	0	32
Transportation Equipment Manufacturing	815	47	0	2	0	0	0	0	9	872
Subtotal	1,283	127	36	20	2	47	9	0	23	1,548
<b>Business Support Industries</b>										
Administrative, waste and support services	502	134	118	48	5	125	30	0	0	962
Construction	165	44	52	7	0	83	0	0	0	351
Finance and Insurance	0	0	57	35	4	271	65	0	0	432
Logistics	934	71	0	2	0	0	0	0	0	1,007
Management of companies and enterprises	0	0	20	18	2	0	0	0	0	40
Professional and technical services	0	100	118	41	3	94	22	0	0	378
Real Estate	0	0	42	10	0	44	11	0	0	106
Transportation Services	39	4	2	0	0	0	0	0	0	45
Utilities	92	12	2	0	0	0	0	0	0	106
Wholesale Trade	556	89	9	1	0	28	7	0	0	689
Subtotal	2,288	453	419	161	16	644	135	0	0	4,117
<b>Community Support Industries</b>										
Arts and Entertainment	0	13	0	0	0	99	24	5	79	219
Other Services	0	0	20	5	0	65	16	0	0	107
Public Administration (except ....)	0	18	11	4	0	17	4	0	44	99
Retail Trade	429	0	0	3	0	1,072	154	21	0	1,681
Subtotal	429	32	31	12	1	1,253	198	26	123	2,106
Total	4,000	612	906	281	26	3,801	852	276	2,889	13,645

Source: Economic & Planning Systems  
H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Development Demand.xlsx\Acreage Demand

**Table 19**  
**San Antonio Activity Center Employment Land Demand (Acres), 2012 to 2040**

	Industrial		Office			Service/Retail		Other		Total
	Conventional Industrial	Small Format Industrial	Low	Mid	High	Auto Oriented	Urban	Hospitality	Civic / Institutional	
	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	
<b>Existing</b>										
Greater Airport	341	48	49	19	2	201	46	17	81	804
Medical Center	28	10	64	19	2	159	39	6	259	586
CBD	80	19	41	12	1	219	52	23	152	599
Port SA / Lackland	495	51	30	9	1	109	25	9	80	809
Ft Sam Houston	448	44	27	7	1	88	20	6	114	755
Stone Oak	58	16	44	14	1	170	38	12	117	469
NE I-35 / I-410	201	25	18	5	1	81	19	6	59	414
UTSA	65	14	49	14	1	185	45	13	193	579
Midtown	37	9	19	5	0	56	13	3	76	219
<b>Emerging</b>										
Hwy 151 / 1604	38	12	35	11	1	124	27	6	95	350
TAMU-SA	225	19	26	5	0	79	21	6	135	517
Brooks	55	13	31	8	1	88	20	6	113	335
Rolling Oaks	78	14	24	8	1	112	24	6	58	324
<b>Total</b>	<b>2,148</b>	<b>293</b>	<b>456</b>	<b>136</b>	<b>14</b>	<b>1,671</b>	<b>389</b>	<b>120</b>	<b>1,532</b>	<b>6,760</b>

Source: Economic & Planning Systems  
H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Centers\_4-27 Revision at 50%\.xlsx\Acre Demand

Table 20  
Bexar County Non-Activity Center Employment Land Demand, 2012 to 2040

Capture		Retail/Office/ Other	Industrial
<b>Non-Center Development</b>		<b>4,959</b>	<b>2,173</b>
<b>Inside 410</b>			
Central	5%	233	102
Central West	3%	132	58
Northeast	3%	136	60
Northwest	1%	47	21
Southeast	5%	227	100
Southwest	4%	182	80
West	<u>3%</u>	<u>134</u>	<u>59</u>
<b>Subtotal</b>	<b>22%</b>	<b>1,091</b>	<b>478</b>
<b>Inside 1604</b>			
North	5%	266	117
Northeast	2%	124	54
Northeast Kirby-Windcrest	4%	203	89
Northwest	4%	188	83
West	5%	261	114
West Leon Valley	<u>2%</u>	<u>116</u>	<u>51</u>
<b>Subtotal</b>	<b>23%</b>	<b>1,157</b>	<b>507</b>
<b>Outside 1604</b>			
North	10%	475	208
Northeast	7%	335	147
Northwest	4%	185	81
West	<u>14%</u>	<u>673</u>	<u>295</u>
<b>Subtotal</b>	<b>34%</b>	<b>1,668</b>	<b>731</b>
<b>South and East</b>			
Far East	4%	176	77
Far South	8%	381	167
Far Southwest	<u>10%</u>	<u>485</u>	<u>213</u>
<b>Subtotal</b>	<b>21%</b>	<b>1,042</b>	<b>457</b>

Source: Economic & Planning Systems

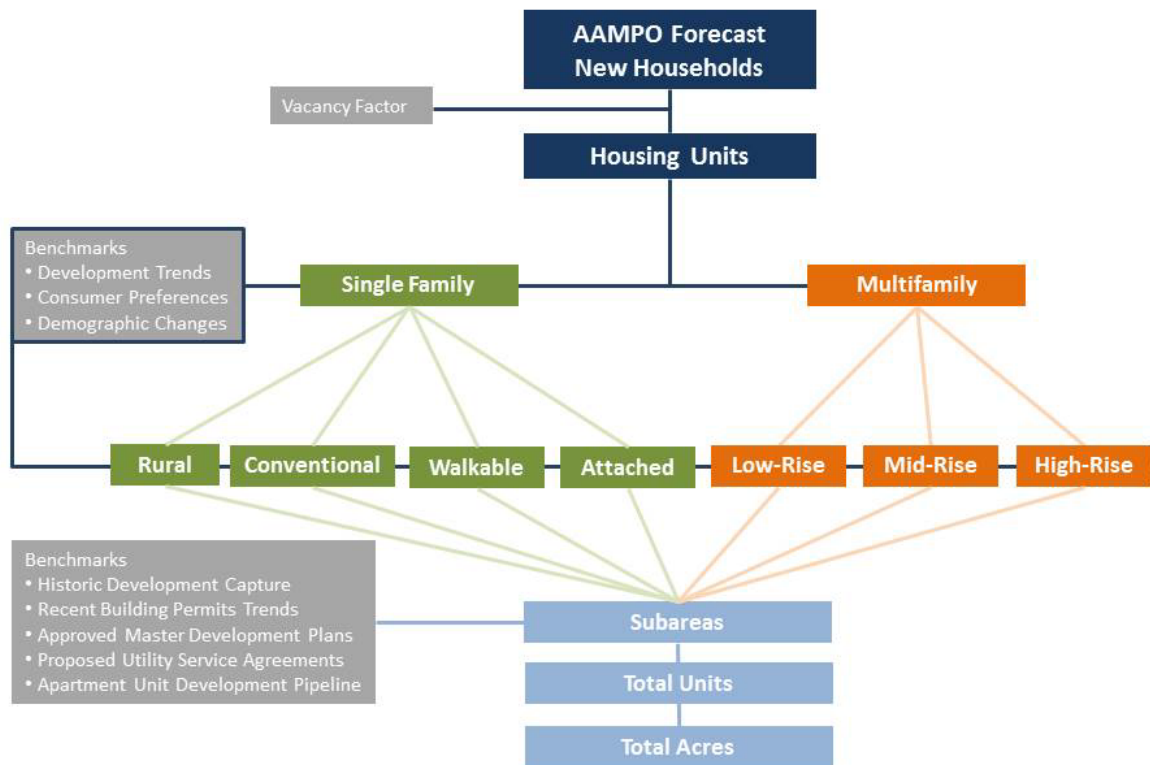
H:\133029-San Antonio Comp Plan Initial Studies\Models\[133029-Employment Development Demand.xlsx]Non-Center Land Demand

### 3. HOUSING FORECAST

#### Methodology

The demand for housing by subarea within San Antonio is estimated using the methodology illustrated in **Figure 19**. The forecast total new households for Bexar County provided by the AAMPO are factored by a vacancy factor to estimate demand for housing units. The estimated new housing units are split between single family and multifamily units and by the seven housing types developed. The estimated demand by housing type is derived using benchmark rates based on development trends, analysis of consumer preferences, and demographic changes and impacts on housing demand. Another set of benchmarks is used to allocate the demand for housing units by subarea. The estimated density of housing units is developed through the housing typology generated for this analysis. The density estimates are used to estimate total demand for acres by subarea.

**Figure 19**  
**Housing Forecast Methodology**



Excellent Chart



## Recent Regional Trends and Development

The San Antonio Metropolitan Statistical Area (MSA) grew by 513,079 residents and 181,303 households from 2000 to 2012. Population and households grew at the same annual rate of 2.4 percent, as shown in **Table 21**. During that time, San Antonio (which accounts for 78 percent of the population in Bexar County) grew by 190,641 residents and 66,268 households at an annual rate of 1.3 percent. Bexar County population and households increased at a faster annual rate than the City at 1.8 and 1.7 percent respectively. Between 2000 and 2012 San Antonio accounted for 58 percent of population growth in Bexar County compared to 100 percent of the population increase in the County the decade prior. Approximately 41,000 new households were formed within Bexar County between 2000 and 2012 not within San Antonio—many of which were in unincorporated portions of the County.

**Table 21**  
**San Antonio MSA Population and Household, 2000 to 2012**

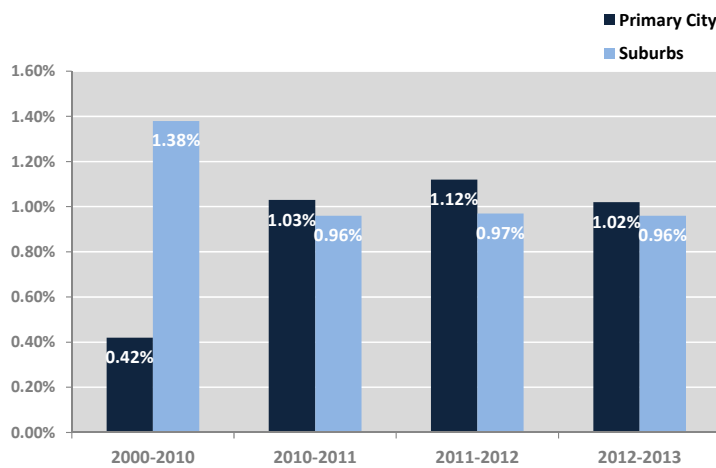
			Change 2000 - 2012		
			Total #	Ann #	Ann %
2000	2012				
<b>Population</b>					
City of San Antonio	1,144,646	1,335,287	190,641	15,887	1.3%
Bexar County	1,392,839	1,719,902	327,063	27,255	1.8%
San Antonio MSA	1,592,383	2,105,462	513,079	42,757	2.4%
<b>Households</b>					
City of San Antonio	405,474	471,742	66,268	5,522	1.3%
Bexar County	488,889	596,862	107,973	8,998	1.7%
San Antonio MSA	559,946	741,249	181,303	15,109	2.4%

Source: US Census Bureau; US Census ACS; Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Data\133029-demog.xlsx]Pop\_HH

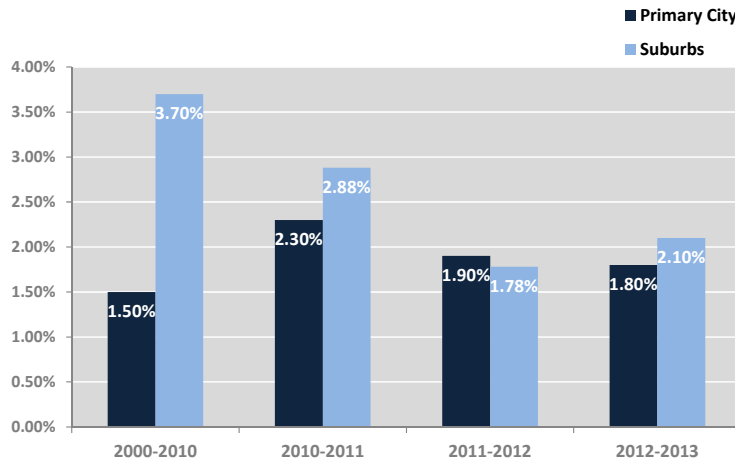
When looking at national trends, growth in the suburban communities in a metropolitan region has outpaced growth in the primary city of that region for several decades. This trend reversed in the country's 51 largest metropolitan areas in 2011 for the first time since the 1920's as growth in the inner core surpasses suburban rates. Between 2000 and 2010, suburbs around the primary city in the 51 largest metropolitan areas in the U.S. grew in population at an annual rate of 1.38 percent compared to primary cities that grew by .42 percent annually. In the three subsequent years, 2011, 2012 and 2013, primary cities have grown at a faster rate than the suburbs, as shown in **Figure 20**. The longevity of this recent shift can be debated but it does indicate a growing demand to live in primary cities that is at least equal to the demand to live within the surrounding suburbs.

**Figure 20**  
**U.S. Primary City and Suburban Population Growth, 2000 to 2013**



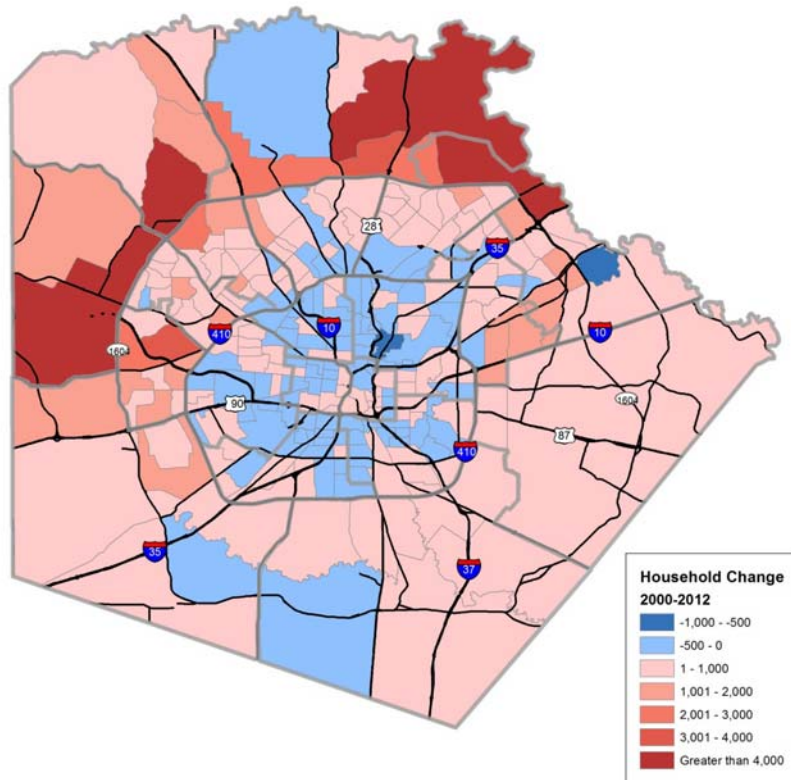
Historically, including the decade from 2000 to 2010, the suburban growth rates have outpaced San Antonio. In fact, during that time period the suburban communities grew at over twice the rate of the City. However, over the past three years, the growth rates have been mixed. The alternating growth rates, as shown in **Figure 21**, is likely due to many factors but three primary ones includes an increased demand for multifamily housing which has been primarily been developed in San Antonio, a national trend of increased demand for primary cities, and decrease in single family home production which has primarily occurred in the suburban areas.

**Figure 21**  
**San Antonio Primary City and Suburban Population Growth, 2000 to 2013**



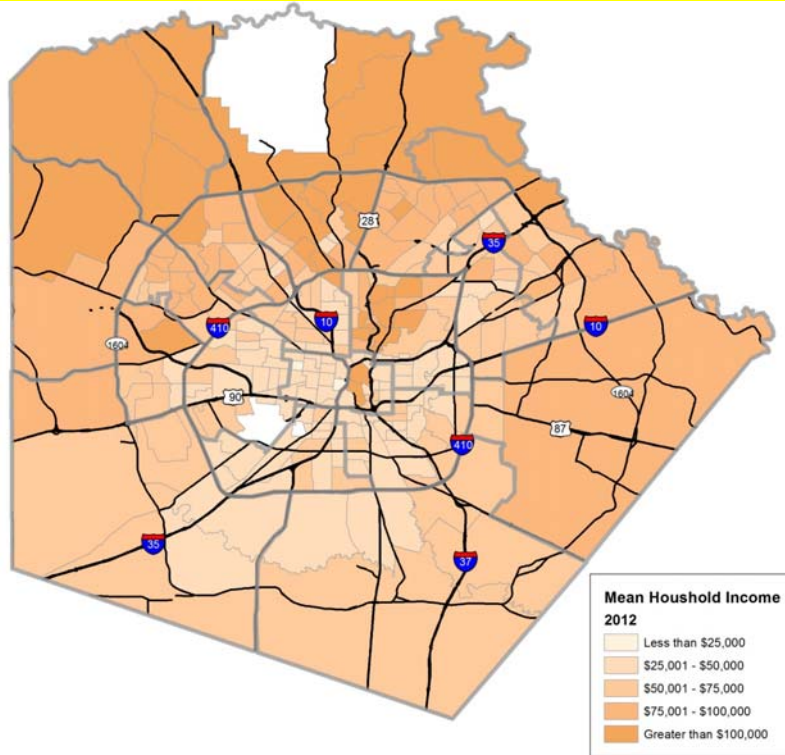
**Figure 22** illustrates where the major changes in households occurred in Bexar County between 2000 and 2012. The areas experiencing the greatest amount of household growth were primarily outside the 1604 loop to the north and west. The areas within the I-410 loop are a mixture of areas that increased in households and ones that decreased.

**Figure 22**  
**San Antonio Change in Households by U.S. Census Tract, 2000 to 2012**



The average household income by Census Tract in Bexar County is shown in **Figure 23**. The higher average household incomes are generally located in the northern portions of the City. The areas of the City that have experienced large changes in household growth are also among the areas with the highest average incomes. The wealthier households in the City are choosing to locate in the northern portion of the City with exception of some pockets of the inner part of the City around downtown and Alamo Heights.

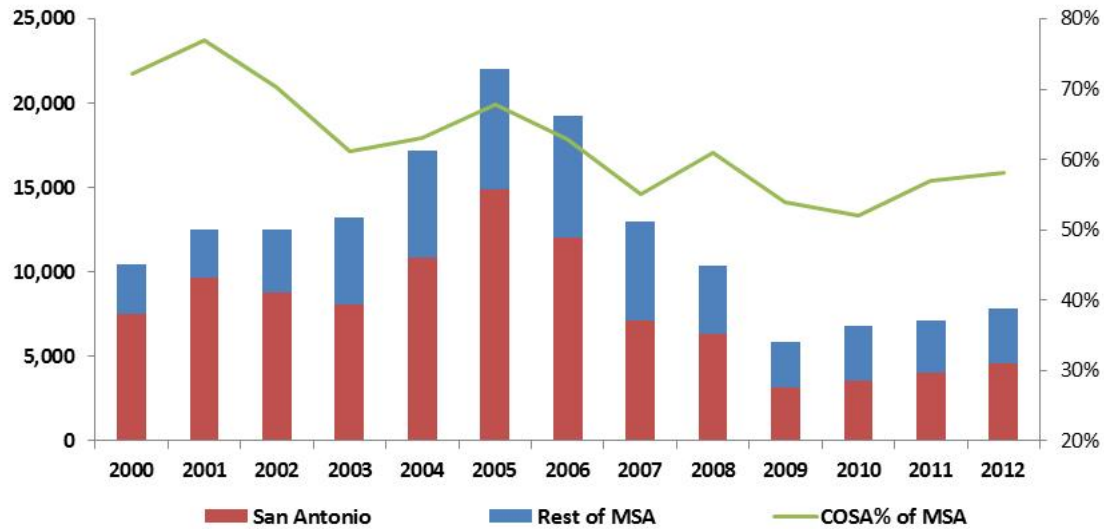
**Figure 23**  
**San Antonio Average Household Income by U.S. Census Tract, 2012**



Residential construction in the San Antonio MSA peaked in 2005 when 22,000 residential building permits were issued. Between 2000 and 2012, the region averaged 12,200 permits per year. In 2009 there were 5,800 permits issued—the lowest of any year during the period. Average annual permits have remained below 8,000 permits since 2008.

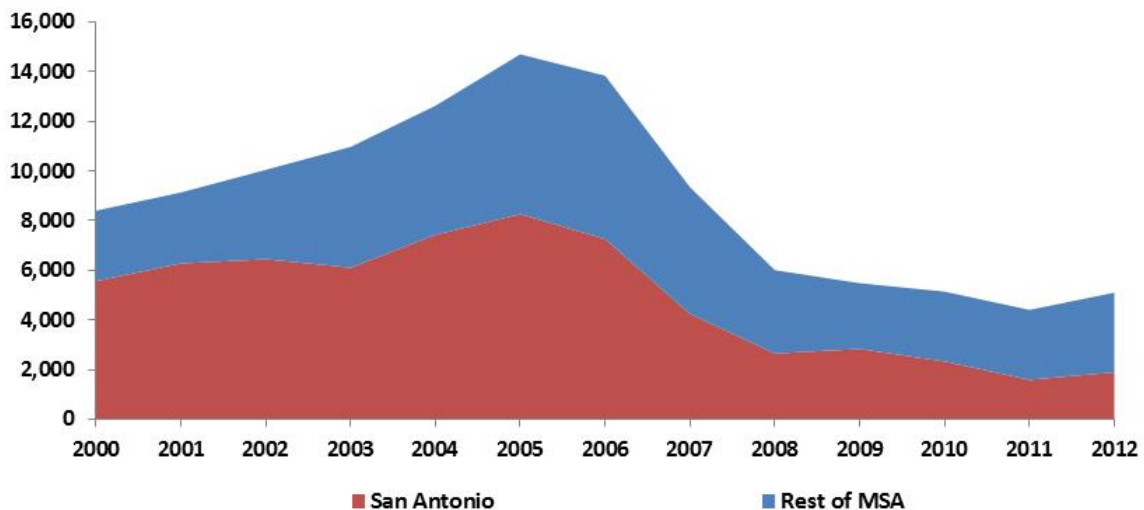
San Antonio during this period averaged 7,750 permits annually, with a high of 15,000 permits in 2005 and a low of 3,150 permits in 2009. San Antonio's percent capture of MSA permits has decreased since 2000. In 2001 the City accounted for 77 percent of permits in the region. The percent of units permitted in San Antonio was 58 percent in 2012, which is less than the average from 2000 to 2012 of 64 percent.

**Figure 24**  
**San Antonio MSA Residential Building Permits per Year, 2000 to 2012**



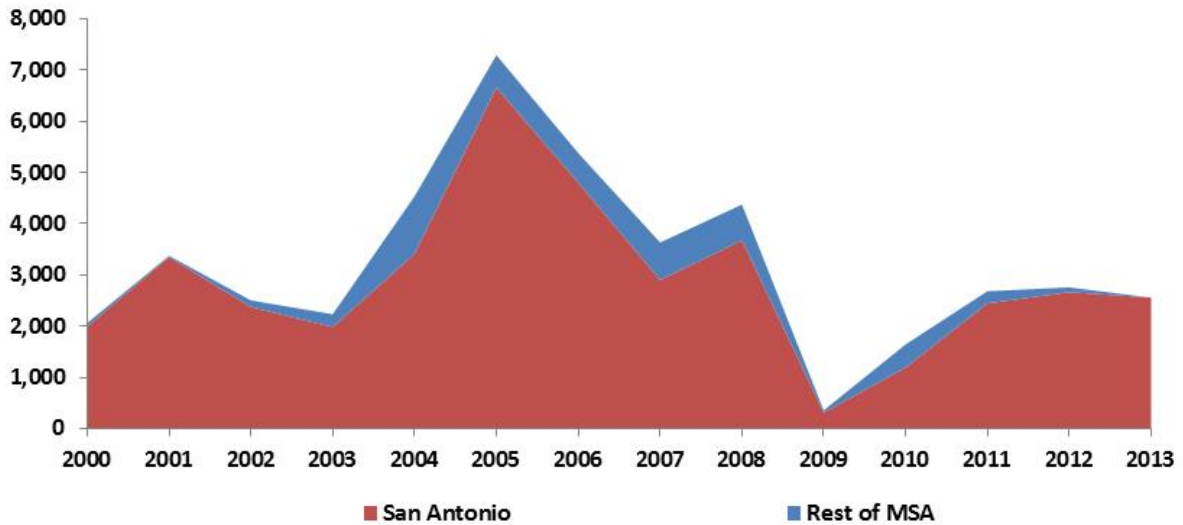
The annual single family residential building permits from 2000 to 2012 for San Antonio and the San Antonio MSA are shown in **Figure 25**. The annual number of single family permits between 2000 and 2012 was 8,866, with most permits issued in 2005 (14,706). However, the least amount of single family permits was in 2011, with 4,410 permits, which is in contrast to the overall low in 2009. The year-to-year changes in the amount of single family construction activity for San Antonio and the rest of the MSA is fairly consistent. However, the City's capture of single family building permits has decreased steadily from 2000 when its capture of single family permits was 66 percent. In 2012, the City only captured 37 percent of single family housing permits in the MSA, a drop of 26 percentage points.

**Figure 25**  
**San Antonio MSA Single Family Building Permits per Year, 2000 to 2012**



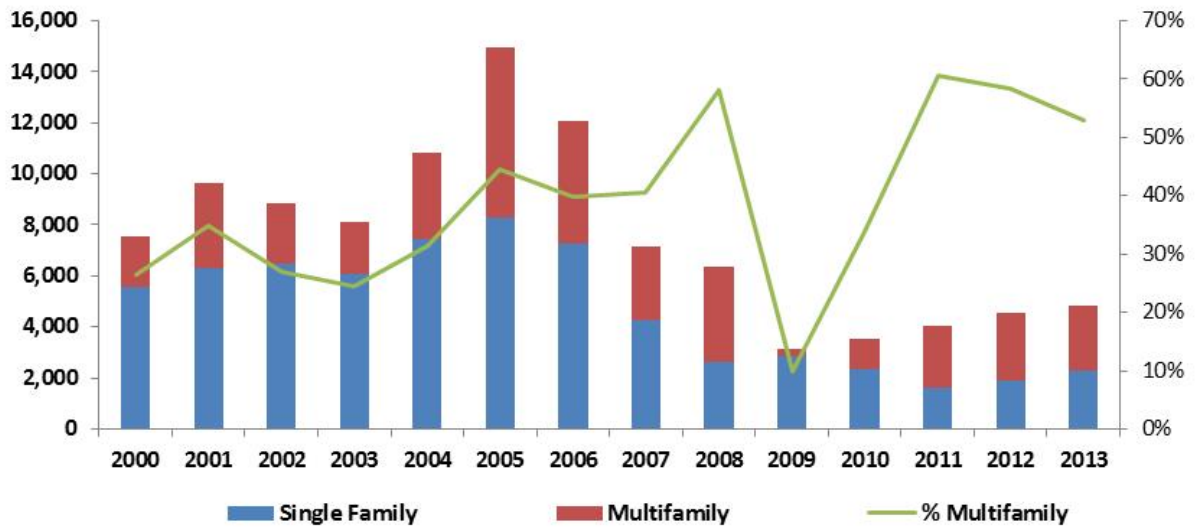
There was an average of 3,300 multifamily units permitted between 2000 and 2012. Multifamily units accounted for 27 percent of the units permitted in the MSA for the 12-year period. The peaks and lows of multifamily permits matched closely with overall permit activity for the MSA. San Antonio captured approximately 90 percent of the multifamily units permitted in the MSA since 2000, as shown in **Figure 26**.

**Figure 26**  
**San Antonio MSA Multifamily Building Permits per Year, 2000 to 2012**



Multifamily permits are growing as a percentage of all construction activity in the City. In 2000 it was 26 percent; in 2013 it was 53 percent. Except for a recessionary year in 2009, the trend reflects a consistent incremental change in the composition of construction activity. The average annual number of single family homes permitted in San Antonio between 2000 and 2012 was 4,800. The City has not permitted more than 3,000 units annually since 2007. The number of single family units permitted in 2012 was 1,900, which is 40 percent of the average over the previous 13 years. There as an average of 2,900 multifamily units permitted annually in San Antonio since 2000. In 2011 and 2012, there was approximately 2,500 multifamily units permitted annually, which is just below the 14 year average. Multifamily construction seems to have returned to rates seen in the early part of the 2000's, while single family construction has not. As a result, multifamily units have accounted for the majority of units permitted in the City since 2011. The percent of permitted units that were multifamily units in San Antonio between 2000 and 2012 are shown in **Figure 27**. Over the 14 year period, 39 percent of units permitted were multifamily units.

**Figure 27**  
**San Antonio Residential Building Permits per Year, 2000 to 2012**



## Housing Demand Benchmarks

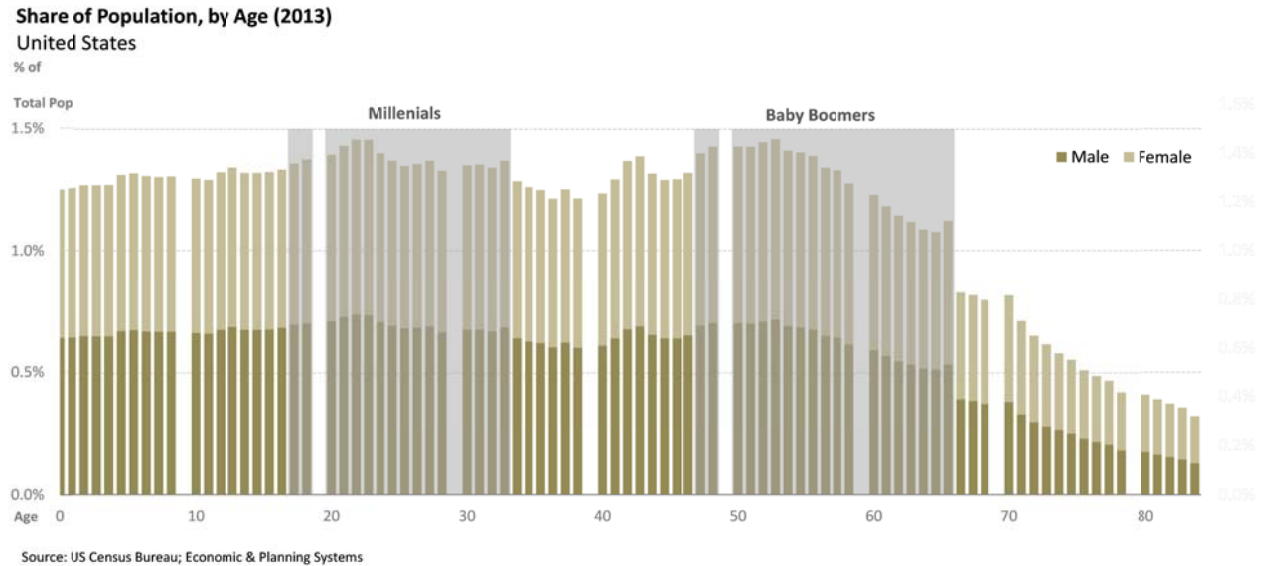
The demand for future housing in San Antonio is likely to be different than historic pattern with the City. Significant shifts in the demographic composition of the nation and San Antonio are having major effects on housing preference. Shifting housing preferences in San Antonio can already be seen in development trends in the past five years, as well as the pipeline of planned development. In order to more accurately project future housing demand by subarea in San Antonio, analysis of national consumer preferences, changing demographic composition, and recent development trends was completed to generate benchmark factors to be used forecast growth. The analysis is used to better estimate the demand for housing type and housing locations within the City.

### Shifting Demographics

Recent development and economic trends, especially for housing demand, are being shaped by two major consumer groups. The Baby Boomer and Gen Y, or Millennial, generations are the two largest age cohorts in the U.S. People born in 1950, now 53/54, for many years have represented the most predominate age in the U.S. This is no longer the case, as age 22 is now the most predominate age. The Millennial generation has significantly different lifestyles and consumer preferences than their parents and the previous generation. Many of these people are choosing to delay marriage and having children. They also prefer a variety of housing options and value the amenities in and around their household and neighborhood often times more than the amenities of the household itself. As this group shifts out of their teenage and college aged years and become the heads of households, the preferences and demand for housing will become different than the primary preferences that have dominate the U.S. for the past 50 years.

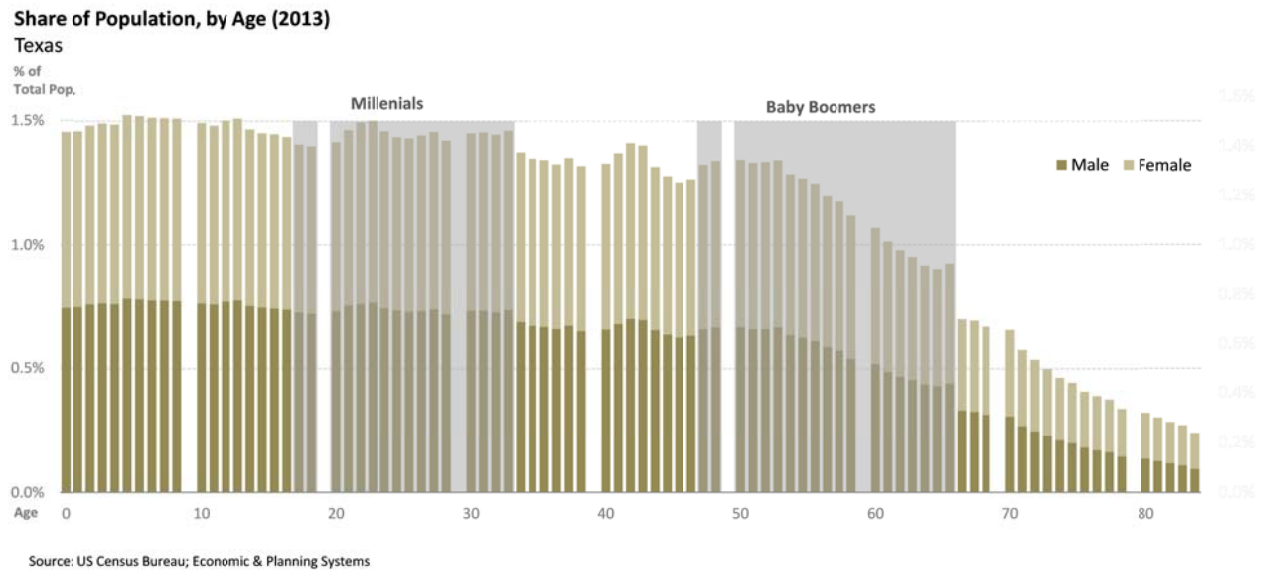


**Figure 28**  
**United States Share of Population by Age, 2013**



The demographic composition of Texas is on average younger than the nation. Texas has a higher proportion of its population that is within the Millennial generation. The most predominate age in Texas is 6, shown in **Figure 29**. The baby boomer generation is less prevalent in Texas than the U.S. as a whole, with a smaller proportion of the population within this demographic. The housing preferences within Texas will be largely dictated by the demands of the Millennial generation and even younger demographic cohorts.

**Figure 29**  
**Texas Share of Population by Age, 2013**



## Consumer Preferences

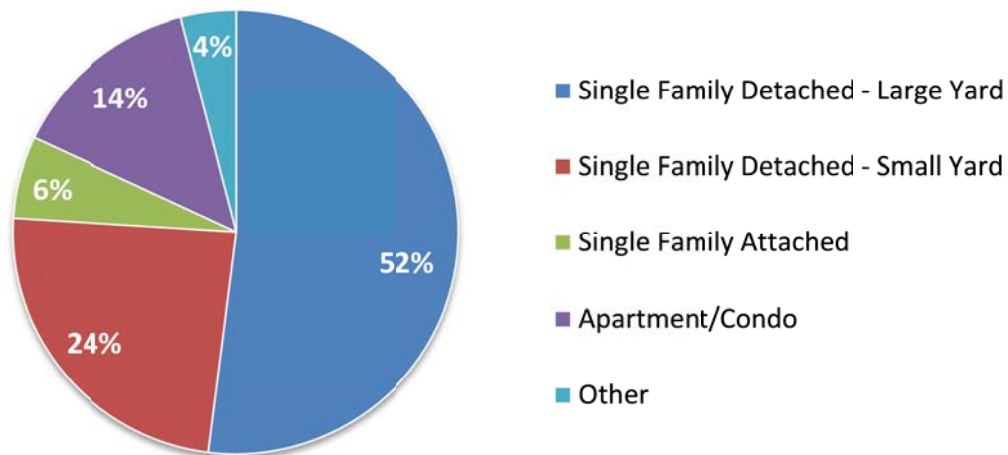
EPS reviewed two national surveys on housing preference to augment historic trends and planned development in order to estimate the demand for housing by type. The two surveys were performed in 2013. The first is the National Association of Realtors (NAR) 2013 Community Preference Survey. The second is the Focus on Housing and Community portion of a larger development related survey completed by the Urban Land Institute (ULI) entitled America in 2013.

### 2013 NAR's Community Preference Survey

The National Association of Realtors' 2013 preference survey is an update to similar studies the group has completed, with the previous survey completed in 2011. The 2013 survey had similar general findings to the 2011 survey, but some impactful changes have emerged that will be summarized below. The survey included 1,500 responses from people over the age of 18 from a larger potential response pool. The survey response pool was selected to ensure the responds used reflect the population proportion for each state and total adult age population across the nation.

The analysis of the survey results completed by the firm used to complete the survey for NAR illustrated that housing preferences have not shifted greatly, declaring "American's overwhelmingly prefer to live in a detached home", backed by the finding that 76 percent of respondents said they would prefer to live in a single family detached house, which is down from 80 percent in 2011. As well, when asked whether respondents would prefer a large yard or small yard, over 52 percent responded with preference for a large yard, as shown in **Figure 30**.

**Figure 30**  
**NAR Community Preference Survey - Housing Type Preference**



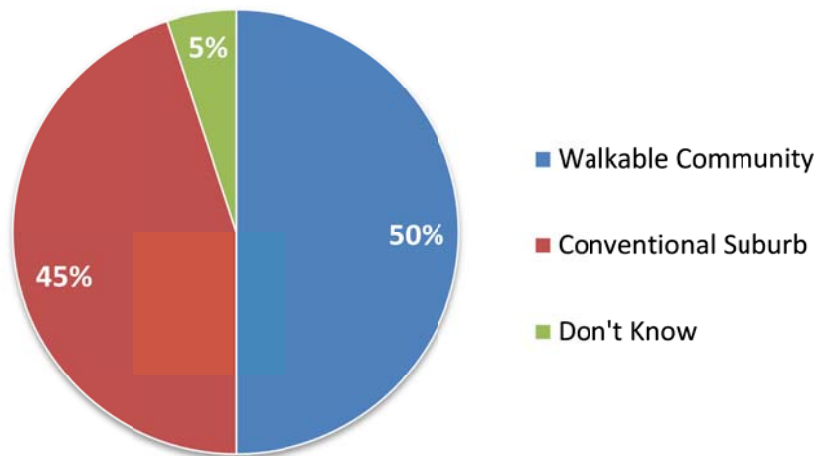
These survey responses in isolation do not indicate any change to the housing preferences of the past 60+ years in America. However, the survey had a series of community style and community trade-off type questions, which illustrate a shift in historic trends and better indicates which elements of their house and community respondents valued.

Respondents were asked to choose between two types of communities:

- “Walkable Community” defined as a community where: *There is a mix of single-family detached houses, townhouses, apartments and condominiums. Places such as shopping, restaurants, a library, and a school are within a few blocks of your home and you can either walk or drive. Parking is limited when you decide to drive to local stores, restaurants and other places. Public transportation, such as bus, subway, light rail, or commuter rail, is nearby.*
- “Conventional Suburb” defined as a community where: *There are only single-family houses. Places such as shopping, restaurants, a library, and a school are within a few miles of your home and you have to drive to most. There is enough parking when you drive to local stores, restaurants and other places. Public transportation, such as bus, subway, light rail, or commuter rail, is distant or unavailable.*

Half of the survey respondents preferred a “Walkable Community” as shown in **Figure 31**, while 45 percent preferred a conventional suburb. This survey indicates a split preference for both walkable and conventional neighborhoods. However, in the majority of America and especially San Antonio the existing housing stock and neighborhoods are predominately a “Conventional Suburb”.

**Figure 31**  
**NAR Community Preference Survey - Neighborhood Type Preference**

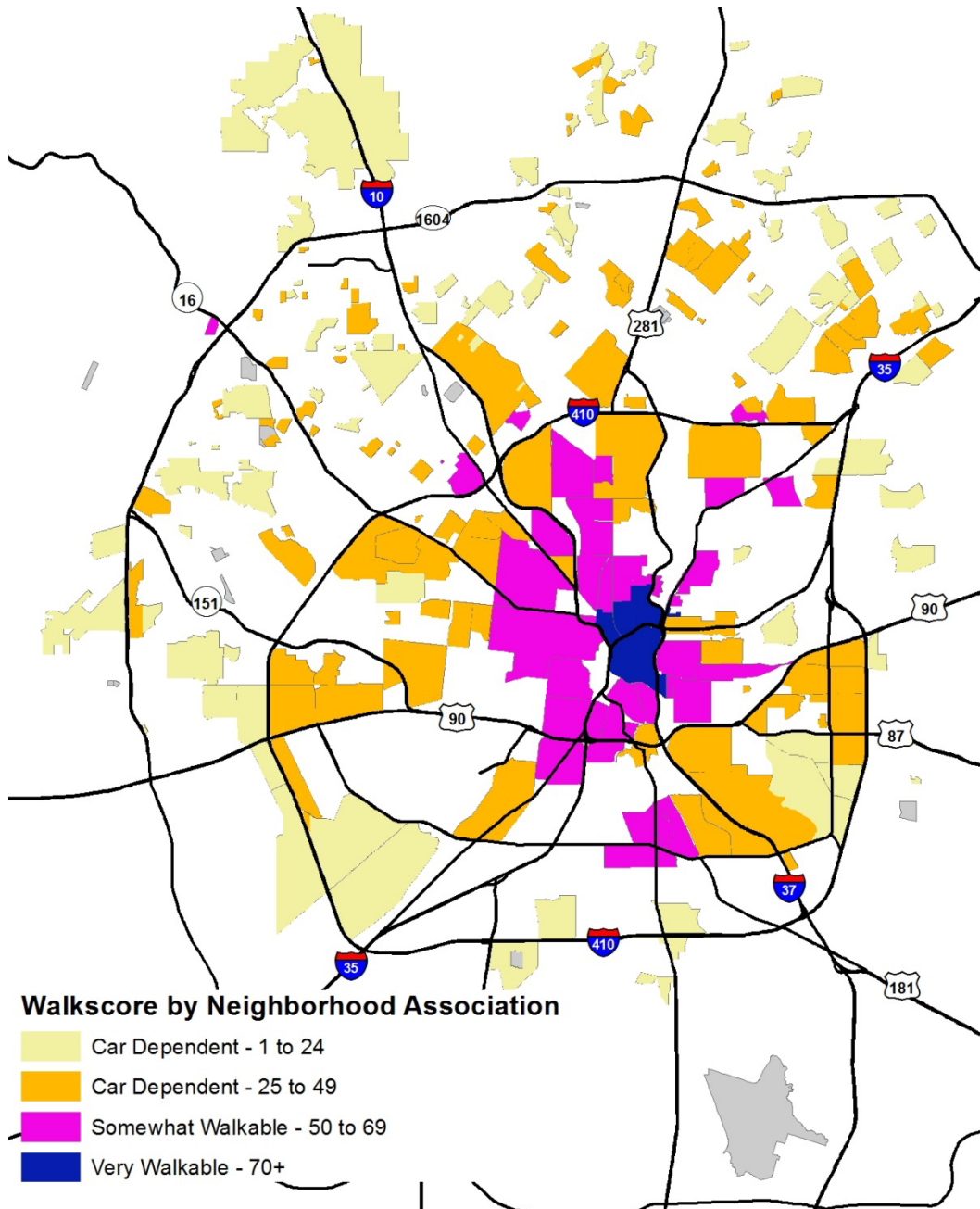


**Figure 32** shows the Walk Score for the majority of registered neighborhood groups in San Antonio. The creators of Walk Score defined their purpose of the score to “measure the walkability of any address using a patented system. For each address, Walk Score analyzes hundreds of walking routes to nearby amenities. Points are awarded based on the distance to amenities in each category”.

The Walk Score is a good indication on how walkable an address, neighborhood, or city is and allowed EPS to determine how prevalent walkable neighborhoods are in San Antonio. The Walk Scores for 368 neighborhoods were determined. Of these 368 neighborhoods, 50 had a Walk

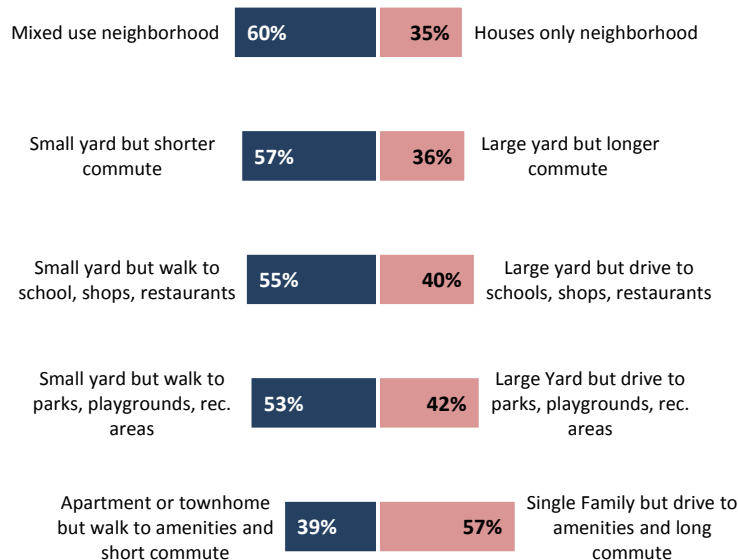
Score of 50 or higher indicating that the neighborhood is "Somewhat Walkable" or "Very Walkable". Only three neighborhoods, Downtown, Five Points, and Tobin Hill, have a Walk Score of 70 or higher, which is considered very walkable. Using the Walk Score of these 368 neighborhoods provides a proxy for how well the neighborhoods in San Antonio match current national housing demands. Based on the Walk Score only 14 percent of neighborhoods are "walkable".

**Figure 32**  
**San Antonio Walk Score by Neighborhood Association**



A set of five additional trade-off questions were asked in the survey that help illustrate which elements of housing types and community amenities are more important. The results reinforced the previous question measuring preferences for walkable or conventional suburban neighborhoods. **Figure 33** shows the respondents preference for the five questions. Sixty percent of respondents said they would prefer to live in a mixed use community as opposed to 35 percent who would like to live in a neighborhood with houses only. Fifty-seven percent of respondents said they preferred a small yard if it meant a short commute. Over half of respondents indicated they would prefer a smaller yard if it meant they could easily walk to schools, shops and restaurants, and parks, playgrounds, and recreation areas, as opposed to having a large yard but having to drive to these amenities. Despite the overwhelming preference for a single family detached home, nearly 40 percent of respondents said they would prefer to be able to walk to amenities and have a short commute to work even if they had to live in an apartment or townhome.

**Figure 33**  
**NAR Community Preference Survey – Preference Trade-off Responses**



For all respondents, regardless of neighborhood preference, the proximity to walkable community amenities such as stores, restaurants, schools, and libraries was the most appealing attribute of walkable communities. Also, the preference for and importance of neighborhoods with availability of sidewalks and places to walk, as well as being within an easy walk to other places and things in the community, increased substantially from 2011 to 2013. The two major themes found were a growing demand for walkable neighborhoods and a desire to live somewhere that doesn't require a long commute to work.

### ***ULI's America in 2013 – Focus on Housing and Community***

America in 2013 is a national survey conducted on behalf the ULI Terwilliger Center for Housing and the ULI Infrastructure Initiative. The survey was intended measure Americans satisfaction with the quality of life in their community and community preferences. The survey splits responses out among four age generations; Gen Y (18 to 34), Gen X (35 to 47), Baby Boomers (48 to 66), and Silent Generation (67 to 82). The findings from this survey summarized for this report focus on the community preference responses and not the community satisfaction.

The qualities of a community most important to respondents were similar to the NAR study. Neighborhood safety, quality of schools, space between neighbors (privacy), and short distance to work or school are characteristics ranked as highly important by over 70 percent of respondents. Gen Y respondents placed higher importance on quality of schools, distance to work, and walkability than the other generation groups. However, the Baby Boomer respondents had the highest percent of respondents preferring communities with a shorter commute and smaller homes. Gen Y had the highest percent preference (62 percent) for communities with close proximity to shops, restaurants and offices. Over half of all respondents expressed a preference for communities with the following attributes; shorter commute/smaller home, proximity to shops, restaurants, and offices, mix of incomes, and public transportation options. This survey matched closely with the NAR survey but also illustrated that Gen Y and Baby Boomers generations have a greater preference for walkable communities and shorter commutes.

### ***Survey Implications on Housing Demand***

The analysis of the housing preference surveys and existing housing conditions in San Antonio indicates there is unmet demand for walkable neighborhoods based on existing conditions and consumer preferences. The demand by housing type in the future will more closely match consumer preferences and San Antonio should plan for and encourage the development of more walkable neighborhoods. To facilitate this, the forecast demand for housing types must and will shift away from the predominately large lot single family detached homes that dominate the region currently. The implication for this analysis is that more small lot, attached and multifamily homes will be in demand than previously, as well as neighborhoods with high walk scores will be more in demand.

## Regional Housing Forecast

The AAMPO forecast future population and households within Bexar County from 2010 to 2040, as shown in **Table 22**. The County is estimated to grow by 1.1 million residents and 519,600 households. Households are estimated to increase by an average annual rate of 2.1 percent, which is at a faster rate than population (1.7 percent). The population to household ratio for the County is 2.82 and is estimated to decrease to 2.50 by 2040. This is a significant decrease in household size for an area as large as Bexar County. This shift downwards, if it materializes, will have major impacts on the size (smaller) and type (more variety) of households in demand in Bexar County.

**Table 22**  
**Bexar County Housing Unit Forecast, 2010 to 2040**

Description	2000	2010	Forecast				Change 2010-2040		
			2010	2020	2030	2040	Total #	Ann. #	Ann. %
<b>Bexar County</b>									
Population	1,392,931	1,714,773	1,714,773	2,023,320	2,387,386	2,816,959	1,102,186	36,740	1.7%
Households	488,942	608,931	608,931	747,967	918,749	1,128,525	519,594	17,320	2.1%
Pop./HH Ratio	2.85	2.82	2.82	2.71	2.60	2.50			

Source: AAMPO, Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Housing Forecast.xlsx\1-MPO Forecast

To estimate the demand for new housing development (units) the forecast new households are factored up to match the current countywide housing unit vacancy rate of 8 percent. The forecast new households are estimated to generate demand for 565,621 new housing units by 2040, as shown **Table 23**.

**Table 23**  
**Bexar County Housing Unit Forecast, 2010 to 2040**

Description	Factor	2010	2020	2030	2040	Change 2010-2040	
						Total #	Ann. #
<b>Bexar County</b>							
Households		608,931	747,967	918,749	1,128,525	519,594	17,320
Housing Units	<b>8% Vacancy</b>	662,872	814,224	1,000,134	1,228,493	565,621	18,854

Source: AAMPO, Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Housing Forecast.xlsx\2-HH and HU

## Housing Typology

Future residential development within San Antonio is estimated to fit within seven general development types in two categories. The development types were developed through analysis of existing conditions, consumer preference analysis, recent demographic and development trends in the region, and from national trends. The development types are designed to describe the general nature of the building and also the density of the building and the site it is located on. Housing development is estimated to fit into two categories; Single Family and Multifamily. Within Single Family there are four types; rural residential, conventional suburban, walkable, and single family attached. Within Multifamily, there are three types based on increasing density averages; low, mid, and high rise. The description, assumed density (units per acre), and estimated allocation of space by type are provided in **Table 24**.

**Table 24**  
**Housing Development Typology**

Typologies	Description	Density/Intensity	Allocation
<b>Housing</b>			
<b>Single Family</b>			
Rural Residential	Single family homes with limited roadway access and minimum lot size of one acre	1 Units per Acre	5%
Conventional Suburban	Single family detached home on larger lots with large yards, large setbacks	5 Units per Acre	30%
Walkable	Single family detached on small lot with small yard, limited setbacks	8 Units per Acre	25%
Single Family Attached	Attached single family duplex or townhomes, with small yard	12 Units per Acre	5%
<b>Multifamily</b>			
Low Rise Multifamily	Garden style apartment or condo, 2 to 3 story with parking on surface lots or detached garages	30 Units per Acre	15%
Mid Rise Multifamily	Apartment and condo units within 4 to 6 stories with limited parking or parking structure	60 Units per Acre	15%
High-rise Multifamily	Apartment and condo units within buildings with 7 plus stories, structured parking, ground floor retail and service office space	100 Units per Acre	5%



Based on the AAMPO forecast for households, there will be an estimated demand for 565,612 units between 2010 and 2040 or 18,854 units per year. Sixty five percent of the new units are estimated to be units within the Single Family category and thirty five percent within the multifamily category. The estimated demand for units by housing type is shown in **Table 25**.

**Table 25**  
**Bexar County Forecast New Housing Units by Housing Type, 2010-2040**

Housing Types	Factor	2020	2030	2040	Change 2010-2040	
					Total #	Ann. #
		<b>2010-2020</b>	<b>2020-2030</b>	<b>2030-2040</b>		
<b>New Housing Demand</b>						
New Housing Units		151,352	185,910	228,359	565,621	18,854
<b>Single Family</b>						
Rural	5%	7,568	9,296	11,418	28,281	943
Large Lot	30%	45,406	55,773	68,508	169,686	5,656
Small Lot	25%	37,838	46,478	57,090	141,405	4,714
Attached	5%	<u>7,568</u>	<u>9,296</u>	<u>11,418</u>	<u>28,281</u>	<u>943</u>
<b>Single Family Total</b>	<b>65%</b>	<b>98,379</b>	<b>120,842</b>	<b>148,433</b>	<b>367,654</b>	<b>12,255</b>
<b>Multifamily</b>						
Low-Rise	15%	22,703	27,887	34,254	84,843	2,828
Mid-Rise	15%	22,703	27,887	34,254	84,843	2,828
High-Rise	5%	<u>7,568</u>	<u>9,296</u>	<u>11,418</u>	<u>28,281</u>	<u>943</u>
<b>Multifamily Total</b>	<b>35%</b>	<b>52,973</b>	<b>65,069</b>	<b>79,926</b>	<b>197,967</b>	<b>6,599</b>
<b>Total</b>	<b>100%</b>	<b>151,352</b>	<b>185,910</b>	<b>228,359</b>	<b>565,621</b>	<b>18,854</b>

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Housing Forecast.xlsx\3-Housing Types

## Housing Location Demand Benchmarks

A set of benchmark measures were used to estimate demand for housing by subarea and type. The measures are intended to show historic trends and also provide basis for forecasting future demand. The benchmark measures include and are shown in **Tables 26 and 27**:

- Existing housing conditions and distribution
- Change in housing units by subarea by type between 2010 and 2012
- Residential building permits between 2008 and 2012
- Planned and proposed apartment units by subarea (apartment unit pipeline)
- Percent capture of Equivalent Dwelling Units (EDUs) within proposed Utility Service Agreements by subarea
- Planned housing units within approved master development plans since 2000

The measures provide a mixture of historic trends, recent trends, and planned development to guide an estimate of future units. The aggregate set of measures also provides guidance for specific housing types. For example apartment pipeline information is a good indicator of the location of demand for multifamily units, while approved master development plans is a good indicator of near term single family housing demand. The forecast was completed by subarea within two time periods, 2010 to 2020 and 2020 to 2040. The forecast for the first time period is more reliant on planned development and trends. The forecast for the second time period considers additional factors, most importantly the land capacity for housing.

**Table 26** shows the number of housing units and estimated residential density for each subarea based on the acreage within residentially zoned parcels and estimates of dwelling units from the U.S. Census and AAMPO. The Inside 1604 Super Subarea has the most housing units of the four Super Subareas within 265,469 units, followed closely by the Inside 410 Super Subarea with 250,711. The Inside 410 Central subarea, which includes the central business district, has the highest residential density at 10.5 units per residential acre. Housing density throughout the City is fairly consistent, as the average density of housing in the Inside 410 and Inside 1604 Super Subareas are 6.8 and 7.0 respectively.

**Table 26**  
**Bexar County Existing Housing Conditions by Subarea**

	Residential			
	Parcels	Acres	DU/Acre	DUs
<b>Inside 410</b>				
Central	9,359	1,548	10.5	16,275
Central West	16,808	2,674	8.5	22,744
Northeast	24,258	6,311	8.3	52,236
Northwest	28,738	6,299	6.8	42,567
Southeast	30,598	7,255	5.9	42,510
Southwest	30,751	6,818	5.6	37,951
West	<u>25,564</u>	<u>5,837</u>	<u>6.2</u>	<u>36,428</u>
<b>Subtotal</b>	<b>166,076</b>	<b>36,742</b>	<b>6.8</b>	<b>250,711</b>
<b>Inside 1604</b>				
North	24,704	8,008	6.8	54,339
Northeast	32,179	7,345	5.9	43,653
Northeast Kirby-Windcrest	25,600	5,089	8.0	40,546
Northwest	20,903	6,210	8.0	49,826
West	29,345	5,581	6.5	36,008
West Leon Valley	<u>28,185</u>	<u>5,711</u>	<u>7.2</u>	<u>41,097</u>
<b>Subtotal</b>	<b>160,916</b>	<b>37,943</b>	<b>7.0</b>	<b>265,469</b>
<b>Outside 1604</b>				
North	28,906	13,224	2.8	37,441
Northeast	14,725	3,558	10.7	38,026
Northwest	11,659	12,609	1.1	13,879
West	<u>21,746</u>	<u>8,526</u>	<u>2.5</u>	<u>20,957</u>
<b>Subtotal</b>	<b>77,036</b>	<b>37,917</b>	<b>2.9</b>	<b>110,303</b>
<b>South and East</b>				
Far East	5,173	6,722	1.2	8,017
Far South	7,657	14,797	0.8	11,874
Far Southwest	<u>10,958</u>	<u>11,514</u>	<u>1.2</u>	<u>14,112</u>
<b>Subtotal</b>	<b>23,788</b>	<b>33,032</b>	<b>1.0</b>	<b>34,003</b>

Source: Bexar County Assessor; Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Housing Forecast.xlsx\Existing Conditions

The remainder of the benchmark measures used to forecast housing demand is shown in **Table 27**. The first measure in the table is the change in housing units by subarea by either single family (4 units or less) or multifamily (5+ units). The Inside 1604 Super Subarea captured most housing units, 37 percent of single family and 53 percent of multifamily. The Inside 410 Super Subarea captured 18 percent of single family units and 15 percent of multifamily units. Notable in the Inside 410 Super Subarea is the 5 percent capture in the both the Southeast and Southwest subareas. The Outside 1605 North subarea captured the highest percent of units any subarea with 18.4 percent of all single family units and 21.6 percent of multifamily units. The Inside 1604 West had second highest percent capture of units of all subareas.

The number of residential building permits issued by subarea, from 2008 to 2012, was analyzed to show how recent building trends affect future market demand. The building permit data cover for-sale housing units only and provide a good reinforcement to the housing unit changes identified elsewhere between 2000 and 2012. The building permit trends match almost exactly with the 2000 to 2012 trend for single family units. This data does not include multifamily permits due to data limitations and permit categorization.

Apartment units under construction, planned, and proposed were analyzed based on a data set from Austin Investors, a secondary market data provider for apartments active in Austin and San Antonio. The apartment unit pipeline data is meant as a proxy for multifamily, rental building permits. The pipeline data shows the recent, major shift of development demand for apartments to the urban core of San Antonio. Thirty percent of the units in the pipeline are within the Inside 410 Super Subarea, specifically 9 percent in the Central subarea and 13 percent in the Southeast subarea. The data indicates, also, continued strong demand in the Inside 1604 Super Subarea, which has 43 percent of the pipeline units.

The proposed Utility Service Agreements (USAs) from SAWS are used to show locations where developers are requesting new infrastructure to serve new development. The use of water EDUs is the best proxy to housing demand. USAs are required for projects needing an upgrade of existing infrastructure or new infrastructure to serve the project with water and sewer. The data likely under-represents developed areas and smaller, infill projects that do not need USAs. The proposed USAs also indicate where major developments are being planned, but are not necessarily active yet. The data set reinforces other data showing strong demand for planned development in the Outside 1604 Super Subarea and more specifically in the West and North subareas, which collectively account for 46 percent of the proposed EDUs. Also illustrated are the major development plans in the southern portion of Bexar County, which is a new trend for San Antonio.

The last benchmark is approved master development plans within San Antonio and Unincorporated Bexar County since 2000. This data set under-represents developed areas, as they are not required for many infill and redevelopment projects. The major trend indicated by this data set is the shift of market momentum to the west, southwest, and south, from the northern portions of Bexar County. Available land in the northern portion of the County is becoming scarce due to environmental, topographical, and political boundaries and therefore demand is shifting to areas of the County where land is less constrained. The Outside 1604 West subarea accounts for 24 percent of the units approved within master development plans. The units within the Far South and Far Southwest, collectively, account for 28 percent of units within approved master development plans.

**Table 27**  
**Bexar County Housing Forecast Benchmark Measures**

Subarea	Single Family Units Built Since 2000 (% of Units)	Multifamily Units Built Since 2000 (% of Units)	Res. Building Permits		Apartment Unit Pipeline		Proposed Utility Service Agreements (% of EDUs)	Approved Master Dev. Plans	
			# of Permits (2008 to 2012)	% of Permits	Units	% Capture (% of Units)		Units	% of Total
<b>Inside 410</b>									
Central	0.9%	2.3%	95	1%	1,422	8.6%	2.5%	601	0.5%
Central West	1.2%	2.3%	132	1%	0	0.0%	0.0%	0	0.0%
Northeast	0.9%	2.2%	97	1%	1,040	6.3%	1.3%	0	0.0%
Northwest	0.6%	1.3%	67	1%	84	0.5%	0.0%	0	0.0%
Southeast	5.3%	0.1%	566	5%	2,195	13.3%	9.4%	1,881	1.6%
Southwest	5.1%	3.7%	548	5%	252	1.5%	0.1%	1,240	1.1%
West	<u>3.6%</u>	<u>2.8%</u>	<u>385</u>	<u>4%</u>	<u>0</u>	<u>0.0%</u>	<u>0.4%</u>	<u>250</u>	<u>0.2%</u>
<b>Subtotal</b>	<b>17.6%</b>	<b>14.7%</b>	<b>1,890</b>	<b>18%</b>	<b>4,993</b>	<b>30.3%</b>	<b>13.8%</b>	<b>3,972</b>	<b>3.4%</b>
<b>Inside 1604</b>									
North	3.0%	11.9%	319	3%	1,841	11.2%	1.6%	877	0.8%
Northeast	1.7%	4.1%	182	2%	228	1.4%	3.0%	154	0.1%
Northeast Kirby-Windcrest	5.5%	5.1%	587	5%	200	1.2%	0.7%	6,032	5.2%
Northwest	9.4%	18.4%	1,004	9%	1,894	11.5%	2.2%	2,685	2.3%
West	14.1%	8.5%	1,506	14%	2,989	18.1%	4.8%	6,273	5.4%
West Leon Valley	<u>3.6%</u>	<u>5.0%</u>	<u>386</u>	<u>4%</u>	<u>0</u>	<u>0.0%</u>	<u>0.5%</u>	<u>170</u>	<u>0.1%</u>
<b>Subtotal</b>	<b>37.2%</b>	<b>53.0%</b>	<b>3,984</b>	<b>37%</b>	<b>7,152</b>	<b>43.3%</b>	<b>12.8%</b>	<b>16,191</b>	<b>14.0%</b>
<b>Outside 1604</b>									
North	18.4%	21.6%	1,975	18%	2,095	12.7%	16.2%	14,834	12.8%
Northeast	3.9%	6.0%	419	4%	2,260	13.7%	1.1%	3,924	3.4%
Northwest	6.7%	-0.5%	720	7%	0	0.0%	2.4%	12,210	10.5%
West	<u>3.7%</u>	<u>1.7%</u>	<u>395</u>	<u>4%</u>	<u>0</u>	<u>0.0%</u>	<u>30.4%</u>	<u>28,013</u>	<u>24.2%</u>
<b>Subtotal</b>	<b>32.8%</b>	<b>28.8%</b>	<b>3,509</b>	<b>33%</b>	<b>4,355</b>	<b>26.4%</b>	<b>50.1%</b>	<b>58,981</b>	<b>50.9%</b>
<b>South and East</b>									
Far East	3.5%	0.2%	375	4%	0	0.0%	2.5%	3,983	3.4%
Far South	4.0%	2.4%	433	4%	0	0.0%	9.7%	12,259	10.6%
Far Southwest	<u>4.9%</u>	<u>0.9%</u>	<u>520</u>	<u>5%</u>	<u>0</u>	<u>0.0%</u>	<u>11.2%</u>	<u>20,504</u>	<u>17.7%</u>
<b>Subtotal</b>	<b>12.4%</b>	<b>3.5%</b>	<b>1,328</b>	<b>12%</b>	<b>0</b>	<b>0.0%</b>	<b>23.4%</b>	<b>36,746</b>	<b>31.7%</b>

Source: Economic & Planning Systems; American Comm. Survey City of San Antonio Austin Investors SAWS City of San Antonio  
H:\133029-San Antonio Comp. Plan Initial Studies\Models\133029-Housing Forecast.xlsx\Benchmarks

## Subarea Housing Capture and Land Demand

The benchmark measures combined with the evaluation of land availability were used to estimate demand by housing type for each subarea, which is shown in **Table 28**. The Inside 410 Super Subarea is estimated to capture 22 percent of all units by 2040, which equates to 124,000 units of which 56 percent are estimated to be multifamily units. The Inside 1604 Super Subarea is estimate to capture 23 percent of housing units. The Outside 1604 Super Subarea is estimated to capture 34 percent of units, or 190,000 units, by 2040 of which 82 percent are estimated to be single family. The South and East Super Subarea are estimated to capture 119,000 units or 21 percent of all units.

The allocation of housing units by type and subarea was completed to estimate housing land demand. The allocation estimates used for single family housing types are shown in **Appendix Table 13**. The allocation estimates used for multifamily housing types are shown in **Appendix Table 14**.

**Table 28**  
**Forecast Single Family and Multifamily Housing Units by Subarea, 2010 to 2040**

Subarea	Single Family Units				Multifamily Units				All Units	
	% Capture (2010-2020)	2010-2020	% Capture (2020-2040)	2020-2040	% Capture (2010-2020)	2010-2020	% Capture (2020-2040)	2020-2040	% Capture (2010-2040)	2010-2040
<b>Inside 410</b>										
Central	1%	492	1%	1,346	13%	6,622	13%	18,124	5%	26,584
Central West	1%	492	1%	1,346	3%	1,589	8%	11,600	3%	15,027
Northeast	1%	984	1%	2,693	6%	3,178	6%	8,700	3%	15,555
Northwest	1%	492	1%	1,346	3%	1,324	2%	2,175	1%	5,338
Southeast	5%	4,919	5%	13,464	6%	3,178	3%	4,350	5%	25,911
Southwest	5%	4,427	5%	12,117	3%	1,324	2%	2,900	4%	20,769
West	3%	2,951	3%	8,078	3%	1,324	2%	2,900	3%	15,254
<b>Subtotal</b>	<b>15%</b>	<b>14,757</b>	<b>15%</b>	<b>40,391</b>	<b>35%</b>	<b>18,541</b>	<b>35%</b>	<b>50,748</b>	<b>22%</b>	<b>124,437</b>
<b>Inside 1604</b>										
North	3%	2,459	2%	4,039	10%	5,032	13%	18,849	5%	30,380
Northeast	2%	1,476	2%	4,039	3%	1,324	5%	7,250	2%	14,089
Northeast Kirby-Windcrest	8%	7,378	4%	10,771	3%	1,324	3%	3,625	4%	23,099
Northwest	3%	2,459	3%	6,732	10%	5,032	5%	7,250	4%	21,474
West	5%	4,427	3%	6,732	15%	7,681	8%	10,875	5%	29,715
West Leon Valley	2%	1,476	3%	8,078	2%	795	2%	2,900	2%	13,248
<b>Subtotal</b>	<b>20%</b>	<b>19,676</b>	<b>15%</b>	<b>40,391</b>	<b>40%</b>	<b>21,189</b>	<b>35%</b>	<b>50,748</b>	<b>23%</b>	<b>132,004</b>
<b>Outside 1604</b>										
North	15%	14,757	10%	26,927	10%	5,297	5%	7,250	10%	54,231
Northeast	5%	4,919	8%	20,196	11%	5,827	5%	7,250	7%	38,191
Northwest	10%	9,838	3%	8,078	1%	265	2%	2,900	4%	21,081
West	20%	19,676	20%	52,509	1%	265	3%	4,350	14%	76,799
<b>Subtotal</b>	<b>50%</b>	<b>49,189</b>	<b>40%</b>	<b>107,710</b>	<b>22%</b>	<b>11,654</b>	<b>15%</b>	<b>21,749</b>	<b>34%</b>	<b>190,303</b>
<b>South and East</b>										
Far East	3%	2,951	5%	13,464	0%	0	3%	3,625	4%	20,040
Far South	5%	4,919	10%	26,927	2%	795	8%	10,875	8%	43,516
Far Southwest	7%	6,887	15%	40,391	2%	795	5%	7,250	10%	55,322
<b>Subtotal</b>	<b>15%</b>	<b>14,757</b>	<b>30%</b>	<b>80,782</b>	<b>3%</b>	<b>1,589</b>	<b>15%</b>	<b>21,749</b>	<b>21%</b>	<b>118,878</b>
<b>Total</b>	<b>100%</b>	<b>98,379</b>	<b>100%</b>	<b>269,275</b>	<b>100%</b>	<b>52,973</b>	<b>100%</b>	<b>144,994</b>		<b>565,621</b>

Source: Economic & Planning Systems;

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Housing Forecast.xlsx\4-Subarea Unit Forecast

The estimated demand for land (acres) to accommodate the forecast housing demand was estimated using the density factors determined for the seven housing types. There is an estimated demand for 86,776 acres of land to accommodate the estimate housing unit demand, as shown in **Table 29**. There is demand for 82,251 acres for single family development and 4,525 acres for multifamily development. The Outside 1604 Super Subarea accounts for 46 percent of the land demand, despite only capturing 34 percent of the housing unit demand, which reflects the market demand for lower density product. The Inside 410 and Inside 1604 Super Subarea are estimated to account for approximately 10 percent of the land demand while capturing 20 percent of units, respectively.

**Table 29**  
**Bexar County Housing Land Demand by Subarea, 2010 to 2040**

Subarea	Single Family Land Demand (Acres)					Multifamily Land Demand (Acres)				Total Demand
	Rural	Large Lot	Small Lot	Attached	Total	Low-Rise	Mid-Rise	High-Rise	Total	
<b>Units Per Acres</b>	<b>1</b>	<b>5</b>	<b>8</b>	<b>12</b>		<b>30</b>	<b>60</b>	<b>100</b>		
<b>Inside 410</b>										
Central	0	0	23	138	161	0	247	99	346	507
Central West	0	0	138	61	199	66	121	40	226	425
Northeast	0	0	280	119	400	79	95	38	212	612
Northwest	0	0	138	61	199	23	29	10	63	262
Southeast	0	1,375	1,150	191	2,717	125	51	7	183	2,900
Southwest	0	1,238	1,036	172	2,446	70	32	2	104	2,550
West	0	1,048	620	69	1,737	70	32	2	104	1,841
<b>Subtotal</b>	<b>0</b>	<b>3,660</b>	<b>3,386</b>	<b>812</b>	<b>7,858</b>	<b>435</b>	<b>607</b>	<b>198</b>	<b>1,240</b>	<b>9,098</b>
<b>Inside 1604</b>										
North	0	520	385	68	973	199	240	35	474	1,447
Northeast	0	441	327	58	826	71	86	13	170	996
Northeast Kirby-Windcrest	0	1,452	1,075	191	2,718	74	42	2	118	2,836
Northwest	0	735	545	97	1,376	164	93	18	275	1,651
West	0	1,004	696	46	1,747	278	156	9	443	2,190
West Leon Valley	0	860	596	40	1,496	62	25	4	90	1,586
<b>Subtotal</b>	<b>0</b>	<b>5,012</b>	<b>3,624</b>	<b>500</b>	<b>9,136</b>	<b>848</b>	<b>642</b>	<b>80</b>	<b>1,570</b>	<b>10,706</b>
<b>Outside 1604</b>										
North	4,168	4,168	1,824	174	10,334	273	66	4	343	10,677
Northeast	2,511	2,511	1,099	105	6,226	350	43	0	393	6,619
Northwest	5,303	1,612	448	75	7,438	69	17	1	87	7,525
West	3,609	7,940	3,158	301	15,008	124	15	0	139	15,147
<b>Subtotal</b>	<b>15,592</b>	<b>16,233</b>	<b>6,528</b>	<b>654</b>	<b>39,007</b>	<b>816</b>	<b>140</b>	<b>5</b>	<b>961</b>	<b>39,968</b>
<b>South and East</b>										
Far East	2,296	1,576	671	62	4,605	115	3	0	118	4,723
Far South	3,822	2,917	1,505	133	8,376	371	9	0	380	8,756
Far Southwest	6,572	4,539	1,962	197	13,269	242	13	0	255	13,525
<b>Subtotal</b>	<b>12,690</b>	<b>9,032</b>	<b>4,138</b>	<b>391</b>	<b>26,250</b>	<b>729</b>	<b>25</b>	<b>0</b>	<b>753</b>	<b>27,004</b>
<b>Total</b>	<b>28,282</b>	<b>33,937</b>	<b>17,675</b>	<b>2,357</b>	<b>82,251</b>	<b>2,828</b>	<b>1,413</b>	<b>283</b>	<b>4,525</b>	<b>86,776</b>

Source: Economic & Planning Systems

H:\13029-San Antonio Comp Plan Initial Studies\Models\13029-Housing Forecast.xlsx\7-Land Demand

## 4. LAND DEMAND AND CAPACITY

---

The estimated demand for jobs and housing units and the corresponding land demand are compared to the land supply estimated in Component 1. This chapter describes the findings from the comparison of land demand to supply (capacity) to illustrate areas where demand may exceed the capacity to accommodate growth. The analysis addresses for both employment and housing in terms of land use and for both activity centers and subareas, in terms of geography.

### Activity Centers

The land capacity for future development within Bexar County and San Antonio was estimated in the Component 1 Study by identifying vacant, redevelopment, and transformational areas. The Activity Centers identified within the analysis for the Component 2 study were analyzed using the findings of Component 1 study to identify capacity within these centers. There are an estimated 11,446 acres of residential land capacity, 8,252 acres of commercial land capacity, and 6,191 acres of industrial land capacity, as shown in **Table 30**.

**Table 30**  
**Activity Center Estimated Land Capacity by Use**

<b>Estimated Capacity</b>	<b>Residential</b> (Acres)	<b>Commercial</b> (Acres)	<b>Industrial</b> (Acres)
<b>Existing</b>			
Greater Airport	110	333	222
Medical Center	276	429	4
CBD	115	100	2
Port SA / Lackland	198	317	1,782
Ft Sam Houston	78	73	1,139
Stone Oak	2,106	1,339	1
NE I-35 / I-410	141	109	227
UTSA	1,327	2,417	45
Midtown	31	58	14
<b>Emerging</b>			
Hwy 151 / 1604	734	999	65
TAMU-SA	846	742	1,838
Brooks	4,185	619	609
Rolling Oaks	1,299	716	242
<b>Total</b>	<b>11,446</b>	<b>8,252</b>	<b>6,191</b>

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Centers\_4-27 Revision at 50%\.xlsx\Capacity by Zoning



## Employment Land

The demand for land in each Activity Center was estimated based on the forecast jobs for each center by industry and the corresponding building space utilization, floor area ratio, and land area requirements for the combination of projected jobs. The land demand is based on the assumption that the density of employment development that has occurred over the past decade will continue in each center. The total demand for land for employment uses in all Activity Centers is 8,718 acres and the total capacity is 14,747, however the pattern among centers is not uniform as three have substantial land surpluses and five have deficits. The average job density estimated for all the Activity Centers is 38 jobs per acre. The average building square feet per job in San Antonio is 370. For example, thirty eight jobs generate demand for 14,000 square feet of building space per acre, which translates into development built at a 0.3 Floor Area Ratio. The estimated jobs per acre and equivalent estimated density of development for commercial and industrial land uses are shown in **Table 31**.

There are five employment centers identified that have an estimated lack of land supply to accommodate the estimate demand. These five centers include; the Greater Airport Area, Medical Center, CBD, NE I-35/I-410, and Midtown. There is a significant lack of land supply in these five centers, particularly Greater Airport, Medical Center and CBD, which are the three non-military, oriented Activity Centers with the most employment in the region.

**Table 31**  
**Activity Center Employment Land Demand and Capacity Comparison**

	Existing Density				
	Demand (E)	Capacity (F)	Diff (F-E)	Jobs per Acre	FAR Equivalent
<b>Existing</b>					
Greater Airport	1,056	555	501	35	0.3
Medical Center	824	433	391	49	0.4
CBD	804	101	702	40	0.3
Port SA / Lackland	939	2,099	1,160	27	0.2
Ft Sam Houston	860	1,211	351	28	0.2
Stone Oak	667	1,340	673	44	0.4
NE I-35 / I-410	498	368	130	31	0.3
UTSA	789	2,463	1,674	44	0.4
Midtown	287	73	214	43	0.4
<b>Emerging</b>					
Hwy 151 / 1604	502	1,065	563	44	0.4
TAMU-SA	605	2,580	1,975	34	0.3
Brooks	447	1,229	781	45	0.4
Rolling Oaks	440	958	519	38	0.3
<b>Total</b>	<b>8,718</b>	<b>14,474</b>	<b>5,756</b>	<b>38</b>	<b>0.3</b>

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Summary Tables.xlsx\AC Employment

To address the potential lack of land supply in the five employment centers, an estimate of land demand under different density assumptions was completed. In this analysis, the development estimated within the lowest density development types was shifted to the more dense development types. This shift assumes that the market will build higher density (and higher cost) projects. The higher density formats achieve greater land utilization than typical suburban development, but remain within prototypes seen in the larger San Antonio region.

The shift resulted in an average jobs per acre that is two to three times higher than the original estimate. The overall average job per acre ratio for all Activity Centers is 49, up from 38, with only changes made to the five centers. The Greater Airport Area jobs per acre, for example increased from 35 to 93. The corresponding FAR needed to support this job acres density is 0.8. Development policy and land use regulation changes are likely needed to facilitate this dense development. As well, major changes to the infrastructure provided within some of these centers are needed, such as increased transit service, parking structures, roadway changes, and others.

The shift solves the capacity issues for three of the centers, but there are still capacity issues within the CBD and Midtown Activity Centers. These two centers are the most central centers and the best suited for high-density development. It is possible to accommodate the estimate demand in these centers as long as development is built at densities typically found in central

city areas and surrounding infrastructure and services support this level of density. To accommodate the estimated 24,400 jobs in the CBD within the 101 acres of capacity, the average development needs to be built at a 2.0 FAR. To accommodate the estimate 15,340 jobs in Midtown within the 73 acres of capacity, the average development needs to be built at a 1.8 FAR. The estimated land supply is based on countywide assumptions for parcels that are considered “redevelopable”. In denser areas with high demand for uses, the thresholds for redevelopment may be easier to overcome due to higher rental rates, the demand for higher density development, and the infrastructure to support high-density development. It is possible there is more capacity than estimated; however, it may be necessary for the City to aid in overcoming infrastructure and service barriers to encourage and facilitate higher density development.

**Table 32**  
**Activity Center Employment Land Demand with Increased Density**

	Increased Density				
	Demand (E)	Capacity (F)	Diff (F-E)	Jobs per Acre	FAR Equivalent
<b>Existing</b>					
Greater Airport	395	555	160	93	0.8
Medical Center	422	433	11	96	0.8
CBD	403	101	302	81	0.7
Port SA / Lackland	939	2,099	1,160	27	0.2
Ft Sam Houston	860	1,211	351	28	0.2
Stone Oak	667	1,340	673	44	0.4
NE I-35 / I-410	191	368	177	80	0.7
UTSA	789	2,463	1,674	44	0.4
Midtown	139	73	67	88	0.8
<b>Emerging</b>					
Hwy 151 / 1604	502	1,065	563	44	0.4
TAMU-SA	605	2,580	1,975	34	0.3
Brooks	447	1,229	781	45	0.4
Rolling Oaks	440	958	519	38	0.3
<b>Total</b>	<b>6,799</b>	<b>14,474</b>	<b>7,675</b>	<b>49</b>	<b>0.4</b>

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Summary Tables.xlsx\AC Employment

## Housing

This analysis assumes that Active Centers will function at their highest level if they are built within mixed use areas. Accordingly, in the analysis of capacity of residential zoned land and the estimated demand for housing by subarea, EPS estimates that the Activity Centers can accommodate 20 percent of the forecast housing units demand for Bexar County. As well, the Activity Centers have the capacity and demand potential to capture 50 percent of forecast multifamily units. Estimated potential capture of units, corresponding land demand, and land supply for housing in Activity Centers are shown in **Table 33**. Also shown is the estimated housing density needed to accommodate the potential demand. Land use regulations and policy changes are needed in some of the centers to encourage and facilitate higher density development.

**Table 33**  
**Activity Center Housing Demand and Capacity Comparison**

	<b>Total Units</b>	<b>Units per Acre</b>	<b>Demand (E)</b>	<b>Capacity (F)</b>	<b>Diff (F-E)</b>
<b>Existing</b>					
Greater Airport	4,600	40.0	115	110	5
Medical Center	9,800	40.0	245	276	31
CBD	9,100	75.0	121	115	6
Port SA / Lackland	5,000	30.0	167	198	32
Ft Sam Houston	3,100	40.0	78	78	0
Stone Oak	17,500	10.0	1,750	2,106	356
NE I-35 / I-410	4,000	30.0	133	141	8
UTSA	12,400	10.0	1,240	1,327	87
Midtown	2,300	55.0	42	31	11
<b>Emerging</b>					
Hwy 151 / 1604	6,300	10.0	630	734	104
TAMU-SA	6,800	10.0	680	846	166
Brooks	24,000	10.0	2,400	4,185	1,785
Rolling Oaks	8,100	10.0	810	1,299	489
<b>Total</b>	<b>113,000</b>	<b>13.4</b>	<b>8,411</b>	<b>11,446</b>	<b>3,035</b>

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Summary Tables.xlsx\AC Housing

## Subareas

Unlike the Activity Centers, there is not a lack of land supply to accommodate employment demand in the overall subareas, with the exception of the Inside 410 Central and Inside 1604 Northwest subareas. These subareas contain the CBD and Medical Center Activity Centers and the capacity issues in these subareas can be addressed, as noted previously, by increased development density. Although there is an evident excess supply of employment land by subarea (outside of Activity Centers), this mismatch of land supply in Activity Centers versus the subareas indicates a surplus of commercial and industrial land.

**Table 34**  
**Employment Land Demand and Capacity by Subarea**

Subarea	Total Demand (Acres)	Baseline Capacity (Acres)	Diff.
	(A)	(B)	(B-A)
<b>Inside 410</b>			
Central	1,358	326	1,033
Central West	189	181	8
Northeast	959	1,468	509
Northwest	167	141	25
Southeast	656	1,613	957
Southwest	393	2,292	1,899
West	717	2,197	1,480
<b>Subtotal</b>	<b>4,439</b>	<b>8,218</b>	<b>3,778</b>
<b>Inside 1604</b>			
North	702	814	112
Northeast	929	1,401	471
Northeast Kirby-Windcrest	937	2,796	1,859
Northwest	1,186	977	209
West	484	2,265	1,781
West Leon Valley	167	885	718
<b>Subtotal</b>	<b>4,405</b>	<b>9,138</b>	<b>4,733</b>
<b>Outside 1604</b>			
North	1,195	4,116	2,921
Northeast	883	2,671	1,789
Northwest	266	3,934	3,668
West	1,187	3,226	2,039
<b>Subtotal</b>	<b>3,531</b>	<b>13,947</b>	<b>10,416</b>
<b>South and East</b>			
Far East	253	6,776	6,523
Far South	1,187	13,349	12,162
Far Southwest	698	11,452	10,754
<b>Subtotal</b>	<b>2,137</b>	<b>31,577</b>	<b>29,439</b>
<b>Total</b>	<b>14,513</b>	<b>62,880</b>	<b>48,367</b>

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Summary Tables.xlsx\Summary 2

In aggregate, the region has a surplus of land capacity for residential uses. However, recognizing market factors, the City has certain areas with land supply deficits (while some are projected to have sizable excess capacity). The estimated land demand for housing in all subareas within Bexar County is 86,000 acres and land capacity in all of Bexar County is 167,000 acres, which indicates an excess of supply of 80,000 acres. Despite this excess supply regionally, there are several subareas, all within the Inside 410 and Inside 1604 Super Subareas, which have a lack of capacity. If housing continues at estimated housing densities or within the residential zoned land estimated to be part of the capacity, the City will have an insufficient land supply. There is an apparent excess of employment land outside of Activity Centers that may be suited for housing development. Large areas of under-utilized commercial and industrial property should be targeted for redevelopment to a mixture of uses with housing as primary component.

**Table 35**  
**Housing Land Demand and Capacity by Subarea**

Subarea	Total Demand (Acres)	Baseline Capacity (Acres)	Diff.
	(A)	(B)	(B-A)
<b>Inside 410</b>			
Central	507	293	215
Central West	425	252	173
Northeast	612	387	225
Northwest	262	102	160
Southeast	2,900	2,749	151
Southwest	2,550	2,779	228
West	1,841	2,529	687
<b>Subtotal</b>	<b>9,098</b>	<b>9,090</b>	<b>8</b>
<b>Inside 1604</b>			
North	1,447	1,062	385
Northeast	996	661	335
Northeast Kirby-Windcrest	2,836	2,420	416
Northwest	1,651	1,226	425
West	2,190	1,670	519
West Leon Valley <sup>1</sup>	1,586	621	965
<b>Subtotal</b>	<b>10,706</b>	<b>7,661</b>	<b>3,044</b>
<b>Outside 1604</b>			
North	10,677	12,607	1,930
Northeast	6,619	7,278	659
Northwest	7,525	14,787	7,262
West <sup>2</sup>	15,147	12,175	2,972
<b>Subtotal</b>	<b>39,968</b>	<b>46,847</b>	<b>6,879</b>
<b>South and East</b>			
Far East	4,723	25,914	21,191
Far South	8,756	39,005	30,249
Far Southwest	13,525	38,699	25,175
<b>Subtotal</b>	<b>27,004</b>	<b>103,619</b>	<b>76,615</b>
<b>Total</b>	<b>86,776</b>	<b>167,218</b>	<b>80,442</b>

<sup>1</sup> Land Capacity total does not include land within Leon Valley. The lack of land capacity is partially due to Leon Valley land not represented in total

<sup>2</sup> Land Capacity total does not include land within Non-Annexation Agreements in Unincorporated Bexar County. The lack land capacity is largely due to this land not being represented in the total.

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Summary Tables.xlsx\Summary 3

The demand for employment land and housing land were combined to identify any subareas with a lack of land supply. There are six subareas identified to have a lack of supply to accommodate estimate demand. Note two subareas, Inside 1604 West Leon Valley and Outside 1604 West, are shown to have a lack of capacity, however this is due land within Leon Valley or non-annexation agreements were not factored in to capacity. The capacity issues may be addressed by the market naturally as more parcels may be redeveloped than estimated. The lack of capacity, however, does show subareas where higher density development should be encourage and planned for in order to enable the private market to increase development densities and yield from land. The city also needs to plan and invest in the infrastructure, services and amenities in these areas needed to facilitate and attract higher density development.

**Table 36**  
**Total Land Demand and Capacity by Subarea**

Subarea	Total Demand (Acres)	Baseline Capacity (Acres)	Diff.
	(A)	(B)	(B-A)
<b>Inside 410</b>			
Central	1,865	618	1,247
Central West	615	433	181
Northeast	1,571	1,855	284
Northwest	429	243	185
Southeast	3,556	4,362	806
Southwest	2,943	5,070	2,127
West	2,559	4,726	2,167
<b>Subtotal</b>	<b>13,538</b>	<b>17,308</b>	<b>3,770</b>
<b>Inside 1604</b>			
North	2,149	1,876	273
Northeast	1,926	2,062	137
Northeast Kirby-Windcrest	3,773	5,216	1,443
Northwest	2,837	2,203	634
West	2,673	3,936	1,262
West Leon Valley <sup>1</sup>	1,753	1,506	247
<b>Subtotal</b>	<b>15,111</b>	<b>16,799</b>	<b>1,689</b>
<b>Outside 1604</b>			
North	11,873	16,723	4,850
Northeast	7,502	9,950	2,448
Northwest	7,791	18,721	10,930
West <sup>2</sup>	16,334	15,401	933
<b>Subtotal</b>	<b>43,499</b>	<b>60,794</b>	<b>17,295</b>
<b>South and East</b>			
Far East	4,976	32,690	27,715
Far South	9,943	52,354	42,411
Far Southwest	14,222	50,151	35,929
<b>Subtotal</b>	<b>29,141</b>	<b>135,196</b>	<b>106,055</b>
<b>Total</b>	<b>101,289</b>	<b>230,097</b>	<b>128,809</b>

<sup>1</sup> Land Capacity total does not include land within Leon Valley. The lack of land capacity is partially due to Leon Valley land not represented in total

<sup>2</sup> Land Capacity total does not include land within Non-Annexation Agreements in Unincorporated Bexar County. The lack land capacity is largely due to this land not being represented in the total.

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Summary Tables.xlsx\Summary 4



## *APPENDIX*



**Appendix Table 1**  
**Bexar County Employment by AAMPO Categories, 2000 to 2012**

Industry		2000	2012	Change 2000-2012		
				#	Ann. #	Ann. %
<b>Basic</b>						
11	Agriculture, forestry, fishing and hunting	1,305	1,089	-216	-18	-1.5%
21	Mining	1,486	2,318	832	69	3.8%
22	Utilities	4,896	5,585	689	57	1.1%
23	Construction	35,772	33,083	-2,689	-224	-0.6%
31-33	Manufacturing	43,576	35,659	-7,917	-660	-1.7%
42	Wholesale trade	24,129	24,491	362	30	0.1%
48-49	Transportation and warehousing	22,016	19,616	-2,400	-200	-1.0%
5111	Newspaper, book, and directory publishers	2,655	2,004	-651	-54	-2.3%
5112	Software publishers	723	491	-232	-19	-3.2%
512	Motion picture and sound recording industries	292	150	-142	-12	-5.4%
5151	Radio and television broadcasting	2,764	3,015	251	21	0.7%
5152	Cable and other subscription programming	0	0	0	0	0.0%
5173	Telecommunications resellers	2,366	479	-1,887	-157	-12.5%
5175	Cable and other program distribution	0	0	0	0	0.0%
<b>Basic Total</b>		<b>141,980</b>	<b>127,980</b>	<b>-14,000</b>	<b>-1,167</b>	<b>-0.9%</b>
<b>Retail</b>						
44-45	Retail trade	79,750	83,260	3,510	293	0.4%
51213	Motion Picture Theatres	861	1,181	320	27	2.7%
71	Arts, entertainment, and recreation	8,534	10,909	2,375	198	2.1%
722	Food services and drinking places	51,577	73,908	22,331	1,861	3.0%
491	Postal service	3,853	2,691	-1,162	-97	-2.9%
<b>Retail Total</b>		<b>144,575</b>	<b>171,949</b>	<b>27,374</b>	<b>2,281</b>	<b>1.5%</b>
<b>Service</b>						
516	Internet publishing and broadcasting	134	(D)	(D)	(D)	(D)
5171	Wired telecommunications carriers	9,383	3,655	-5,728	-477	-7.6%
5172	Wireless telecommunications carriers	886	658	-228	-19	-2.4%
518	ISPs, search portals, and data processing	3,646	6,416	2,770	231	4.8%
519	Other information services	2	999	997	83	67.8%
52	Finance and insurance	39,509	52,283	12,774	1,065	2.4%
53	Real estate and rental and leasing	11,924	12,780	856	71	0.6%
54	Professional and technical services	29,248	38,940	9,692	808	2.4%
55	Management of companies and enterprises	3,411	8,691	5,280	440	8.1%
56	Administrative and waste services	53,514	52,051	-1,463	-122	-0.2%
6114	Business, computer and management training	630	786	156	13	1.9%
6115	Technical and trade schools	1,012	1,549	537	45	3.6%
6116	Other schools and instruction	707	1,573	866	72	6.9%
6117	Educational support services	1,315	4,136	2,821	235	10.0%
62	Health care and social assistance	75,368	114,745	39,377	3,281	3.6%
721	Accommodation	11,221	12,815	1,594	133	1.1%
81	Other services, except public administration	21,502	23,894	2,392	199	0.9%
92	Public administration	30,120	36,770	6,650	554	1.7%
99	Unclassified	(D)	105	(D)	(D)	(D)
<b>Service Total</b>		<b>293,532</b>	<b>372,846</b>	<b>79,314</b>	<b>6,610</b>	<b>2.0%</b>
<b>Education</b>						
6111	Elementary and secondary schools	42,004	49,718	7,714	643	1.4%
6113	Colleges and universities	11,722	15,637	3,915	326	2.4%
<b>Education Total</b>		<b>53,726</b>	<b>65,355</b>	<b>11,629</b>	<b>969</b>	<b>1.6%</b>

(D) Data is suppressed

Source: BLS, AACOG, AAMPO, Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Data\133029-BLS.xlsx\Taz Split Performance

**Appendix Table 2**  
**Bexar County Average Annual Wages by Industry, 2012**

<b>Cluster</b>	<b>Total Employment</b>	<b>Total Wages</b>	<b>Average Annual Wage</b>
<b>Traditional Economic Drivers</b>			
Accommodation and Food Service	86,723	\$1,571,688,439	\$18,123
Educational services	73,399	\$1,101,907,307	\$46,531
Healthcare	113,034	\$4,895,424,190	\$43,309
<b>Subtotal</b>	<b>273,156</b>	<b>\$7,569,019,936</b>	<b>\$36,179</b>
<b>Industry Clusters and Other Drivers</b>			
Advanced Manufacturing	12,204	\$528,388,899	\$43,296
Aerospace	1,290	\$98,143,898	\$76,081
Agricultural and Food Technology	9,093	\$394,139,822	\$43,345
Agriculture - Non-Food	58	\$2,904,440	\$50,077
Biotechnology	1,069	\$71,415,343	\$66,806
Information	6,841	\$334,287,880	\$48,865
IT and Information Security	11,302	\$855,864,566	\$75,727
Mining, except oil and gas	221	\$11,718,984	\$52,979
Oil and Gas	2,205	\$204,405,261	\$92,709
Other Manufacturing	670	\$18,074,668	\$26,977
Telecommunications	4,792	\$372,076,277	\$77,645
Transportation Equipment Manufacturing	9,659	\$554,740,340	\$57,432
<b>Subtotal</b>	<b>59,404</b>	<b>\$3,446,160,378</b>	<b>\$58,012</b>
<b>Business Support Industries</b>			
Administrative, waste and support services	52,173	\$1,602,173,144	\$30,709
Construction	33,083	\$1,603,726,375	\$48,476
Finance and Insurance	52,283	\$3,448,720,850	\$65,963
Logistics	16,784	\$682,622,103	\$40,671
Management of companies and enterprises	8,691	\$957,031,367	\$110,118
Professional and technical services	38,940	\$2,578,696,999	\$66,222
Real Estate	12,780	\$539,874,584	\$42,244
Transportation Services	1,549	\$37,760,553	\$24,377
Utilities	5,585	\$329,834,838	\$59,057
Wholesale Trade	24,491	\$1,454,959,169	\$59,408
<b>Subtotal</b>	<b>246,359</b>	<b>\$13,235,399,982</b>	<b>\$53,724</b>
<b>Community Support Industries</b>			
Arts and Entertainment	10,909	\$328,431,628	\$30,106
Other Services	23,895	\$642,638,709	\$26,894
Public Administration (except ....)	18,794	\$1,091,531,848	\$58,078
Retail Trade	85,951	\$2,582,831,570	\$30,050
<b>Subtotal</b>	<b>139,549</b>	<b>\$4,645,433,755</b>	<b>\$33,289</b>

Source: San Antonio Economic Development Foundation; BLS; Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Forecast.xlsx\Cluster wages

**Appendix Table 3**  
**Bexar County Office Inventory, 2005 to 2013**

Subarea	2005	2013	Change 2005-2013			% Share of County	% Capture of New Dev.
			Total #	Ann. #	Ann. %		
<b>Inside 410</b>							
Inside 410 Central	9,937,068	10,131,461	194,393	24,299	0.2%	15.5%	1.7%
Inside 410 Central West	743,337	976,788	233,451	29,181	3.5%	1.5%	2.1%
Inside 410 Northeast	6,779,621	7,298,778	519,157	64,895	0.9%	11.2%	4.6%
Inside 410 Northwest	3,121,025	3,130,547	9,522	1,190	0.0%	4.8%	0.1%
Inside 410 Southeast	1,106,545	1,280,956	174,411	21,801	1.8%	2.0%	1.5%
Inside 410 Southwest	774,871	915,468	140,597	17,575	2.1%	1.4%	1.2%
Inside 410 West	650,593	699,973	49,380	6,173	0.9%	1.1%	0.4%
<b>Subtotal</b>	<b>23,113,060</b>	<b>24,433,971</b>	<b>1,320,911</b>	<b>165,114</b>	<b>0.7%</b>	<b>37.4%</b>	<b>11.7%</b>
<b>Inside 1604</b>							
Inside 1604 North	4,695,018	6,081,772	1,386,754	173,344	3.3%	9.3%	12.2%
Inside 1604 Northeast	5,397,681	5,827,534	429,853	53,732	1.0%	8.9%	3.8%
Inside 1604 Northeast Kirby-Windcrest	1,478,363	2,743,242	1,264,879	158,110	8.0%	4.2%	11.2%
Inside 1604 Northwest	12,985,923	14,882,113	1,896,190	237,024	1.7%	22.8%	16.7%
Inside 1604 West	1,669,043	3,646,686	1,977,643	247,205	10.3%	5.6%	17.5%
Inside 1604 West Leon Valley	969,442	1,049,081	79,639	9,955	1.0%	1.6%	0.7%
<b>Subtotal</b>	<b>27,195,470</b>	<b>34,230,428</b>	<b>7,034,958</b>	<b>879,370</b>	<b>2.9%</b>	<b>52.3%</b>	<b>62.1%</b>
<b>Outside 1604</b>							
Outside 1604 North	2,526,566	5,160,351	2,633,785	329,223	9.3%	7.9%	23.3%
Outside 1604 Northeast	701,639	902,682	201,043	25,130	3.2%	1.4%	1.8%
Outside 1604 Northwest	162,503	227,122	64,619	8,077	4.3%	0.3%	0.6%
Outside 1604 West	67,556	105,656	38,100	4,763	5.7%	0.2%	0.3%
<b>Subtotal</b>	<b>3,458,264</b>	<b>6,395,811</b>	<b>2,937,547</b>	<b>367,193</b>	<b>8.0%</b>	<b>9.8%</b>	<b>25.9%</b>
<b>South and East</b>							
Far East	33,508	43,367	9,859	1,232	3.3%	0.1%	0.1%
Far South	24,475	48,529	24,054	3,007	8.9%	0.1%	0.2%
Far Southwest	255,019	255,019	0	0	0.0%	0.4%	0.0%
<b>Subtotal</b>	<b>313,002</b>	<b>346,915</b>	<b>33,913</b>	<b>4,239</b>	<b>1.3%</b>	<b>0.5%</b>	<b>0.3%</b>
<b>Bexar County</b>	<b>54,079,796</b>	<b>65,407,125</b>	<b>11,327,329</b>	<b>1,415,916</b>	<b>2.4%</b>		

Source: CoStar, Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Data\CoStar\BySubarea\Office.xls\Total RBA

**Appendix Table 4**  
**Bexar County Retail Inventory, 2005 to 2013**

Subarea	2005	2013	Change 2005-2013			% Share of County	% Capture of New Dev.
			Total #	Ann. #	Ann. %		
<b>Inside 410</b>							
Inside 410 Central	7,571,320	7,671,373	100,053	12,507	0.2%	7.2%	0.6%
Inside 410 Central West	2,394,130	2,479,927	85,797	10,725	0.4%	2.3%	0.5%
Inside 410 Northeast	11,549,065	12,497,648	948,583	118,573	1.0%	11.8%	5.9%
Inside 410 Northwest	7,137,489	7,217,217	79,728	9,966	0.1%	6.8%	0.5%
Inside 410 Southeast	6,240,662	7,133,481	892,819	111,602	1.7%	6.7%	5.5%
Inside 410 Southwest	5,126,479	5,588,059	461,580	57,698	1.1%	5.3%	2.9%
Inside 410 West	<u>4,399,636</u>	<u>4,597,536</u>	<u>197,900</u>	<u>24,738</u>	<u>0.6%</u>	<u>4.3%</u>	<u>1.2%</u>
<b>Subtotal</b>	<b>44,418,781</b>	<b>47,185,241</b>	<b>2,766,460</b>	<b>345,808</b>	<b>0.8%</b>	<b>44.4%</b>	<b>17.1%</b>
<b>Inside 1604</b>							
Inside 1604 North	7,650,417	8,414,146	763,729	95,466	1.2%	7.9%	4.7%
Inside 1604 Northeast	6,505,491	6,740,061	234,570	29,321	0.4%	6.3%	1.5%
Inside 1604 Northeast Kirby-Windcrest	5,181,790	6,031,945	850,155	106,269	1.9%	5.7%	5.3%
Inside 1604 Northwest	4,297,177	5,020,686	723,509	90,439	2.0%	4.7%	4.5%
Inside 1604 West	3,111,689	4,332,355	1,220,666	152,583	4.2%	4.1%	7.6%
Inside 1604 West Leon Valley	<u>7,695,559</u>	<u>8,039,046</u>	<u>343,487</u>	<u>42,936</u>	<u>0.5%</u>	<u>7.6%</u>	<u>2.1%</u>
<b>Subtotal</b>	<b>34,442,123</b>	<b>38,578,239</b>	<b>4,136,116</b>	<b>517,015</b>	<b>1.4%</b>	<b>36.3%</b>	<b>25.6%</b>
<b>Outside 1604</b>							
Outside 1604 North	3,101,167	9,526,231	6,425,064	803,133	15.1%	9.0%	39.8%
Outside 1604 Northeast	5,152,200	5,784,972	632,772	79,097	1.5%	5.4%	3.9%
Outside 1604 Northwest	898,504	1,220,574	322,070	40,259	3.9%	1.1%	2.0%
Outside 1604 West	<u>525,860</u>	<u>1,940,068</u>	<u>1,414,208</u>	<u>176,776</u>	<u>17.7%</u>	<u>1.8%</u>	<u>8.8%</u>
<b>Subtotal</b>	<b>9,677,731</b>	<b>18,471,845</b>	<b>8,794,114</b>	<b>1,099,264</b>	<b>8.4%</b>	<b>17.4%</b>	<b>54.4%</b>
<b>South and East</b>							
Far East	825,057	864,184	39,127	4,891	0.6%	0.8%	0.2%
Far South	362,809	464,991	102,182	12,773	3.2%	0.4%	0.6%
Far Southwest	<u>292,524</u>	<u>614,397</u>	<u>321,873</u>	<u>40,234</u>	<u>9.7%</u>	<u>0.6%</u>	<u>2.0%</u>
<b>Subtotal</b>	<b>1,480,390</b>	<b>1,943,572</b>	<b>463,182</b>	<b>57,898</b>	<b>3.5%</b>	<b>1.8%</b>	<b>2.9%</b>
<b>Bexar County</b>	<b>90,019,025</b>	<b>106,178,897</b>	<b>16,159,872</b>	<b>2,019,984</b>	<b>2.1%</b>		

Source: CoStar, Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Data\CoStar\BySubarea\Retail.xls Total RBA

**Appendix Table 5**  
**Bexar County Industrial Inventory, 2005 to 2013**

Subarea	2005	2013	Change 2005-2013			% Share of County	% Capture of New Dev.
			Total #	Ann. #	Ann. %		
<b>Inside 410</b>							
Inside 410 Central	7,888,802	7,927,589	38,787	4,848	0.1%	8.6%	0.5%
Inside 410 Central West	4,667,449	4,667,449	0	0	0.0%	5.1%	0.0%
Inside 410 Northeast	16,632,771	17,044,714	411,943	51,493	0.3%	18.5%	5.0%
Inside 410 Northwest	2,137,211	2,147,211	10,000	1,250	0.1%	2.3%	0.1%
Inside 410 Southeast	2,232,290	2,316,045	83,755	10,469	0.5%	2.5%	1.0%
Inside 410 Southwest	2,114,987	2,850,843	735,856	91,982	3.8%	3.1%	9.0%
Inside 410 West	<u>5,704,407</u>	<u>7,327,764</u>	<u>1,623,357</u>	<u>202,920</u>	<u>3.2%</u>	<u>8.0%</u>	<u>19.8%</u>
<b>Subtotal</b>	<b>41,377,917</b>	<b>44,281,615</b>	<b>2,903,698</b>	<b>362,962</b>	<b>0.9%</b>	<b>48.2%</b>	<b>35.5%</b>
<b>Inside 1604</b>							
Inside 1604 North	4,050,190	4,176,001	125,811	15,726	0.4%	4.5%	1.5%
Inside 1604 Northeast	9,401,940	10,622,033	1,220,093	152,512	1.5%	11.6%	14.9%
Inside 1604 Northeast Kirby-Windcrest	17,151,586	18,381,054	1,229,468	153,684	0.9%	20.0%	15.0%
Inside 1604 Northwest	2,346,044	2,523,729	177,685	22,211	0.9%	2.7%	2.2%
Inside 1604 West	962,403	1,046,633	84,230	10,529	1.1%	1.1%	1.0%
Inside 1604 West Leon Valley	<u>1,800,980</u>	<u>1,901,893</u>	<u>100,913</u>	<u>12,614</u>	<u>0.7%</u>	<u>2.1%</u>	<u>1.2%</u>
<b>Subtotal</b>	<b>35,713,143</b>	<b>38,651,343</b>	<b>2,938,200</b>	<b>367,275</b>	<b>1.0%</b>	<b>42.0%</b>	<b>35.9%</b>
<b>Outside 1604</b>							
Outside 1604 North	566,525	577,725	11,200	1,400	0.2%	0.6%	0.1%
Outside 1604 Northeast	1,702,171	1,865,760	163,589	20,449	1.2%	2.0%	2.0%
Outside 1604 Northwest	291,019	344,395	53,376	6,672	2.1%	0.4%	0.7%
Outside 1604 West	<u>298,092</u>	<u>325,514</u>	<u>27,422</u>	<u>3,428</u>	<u>1.1%</u>	<u>0.4%</u>	<u>0.3%</u>
<b>Subtotal</b>	<b>2,857,807</b>	<b>3,113,394</b>	<b>255,587</b>	<b>31,948</b>	<b>1.1%</b>	<b>3.4%</b>	<b>3.1%</b>
<b>South and East</b>							
Far East	2,197,082	2,346,058	148,976	18,622	0.8%	2.6%	1.8%
Far South	1,095,047	2,776,115	1,681,068	210,134	12.3%	3.0%	20.5%
Far Southwest	<u>502,975</u>	<u>764,189</u>	<u>261,214</u>	<u>32,652</u>	<u>5.4%</u>	<u>0.8%</u>	<u>3.2%</u>
<b>Subtotal</b>	<b>3,795,104</b>	<b>5,886,362</b>	<b>2,091,258</b>	<b>261,407</b>	<b>5.6%</b>	<b>6.4%</b>	<b>25.5%</b>
<b>Bexar County</b>	<b>83,743,971</b>	<b>91,932,714</b>	<b>8,188,743</b>	<b>1,023,593</b>	<b>1.2%</b>		

Source: COStar, Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Data\CoStar\By Subarea\IndFlex.xls Total RBA

**Appendix Table 6**  
**Allocation of Jobs by Industry to Development Types**

Cluster	Industrial		Office			Service/Retail		Other		Total
	Conventional Industrial	Small Format Industrial	Low	Mid	High	Auto Oriented	Urban	Hospitality	Civic / Institutional	
Traditional Economic Drivers										
Accommodation and Food Service	0%	0%	0%	0%	0%	35%	35%	30%	0%	100%
Educational services	0%	0%	10%	0%	0%	0%	5%	0%	85%	100%
Healthcare	0%	0%	10%	20%	10%	5%	5%	0%	50%	100%
Industry Clusters and Other Drivers										
Advanced Manufacturing	55%	30%	5%	5%	5%	0%	0%	0%	0%	100%
Aerospace	50%	30%	0%	0%	0%	0%	0%	0%	20%	100%
Agricultural and Food Technology	35%	15%	5%	5%	5%	5%	0%	0%	0%	70%
Agriculture - Non-Food	20%	10%	10%	25%	5%	0%	0%	0%	0%	70%
Biotechnology	15%	45%	10%	10%	5%	0%	0%	0%	15%	100%
Information	0%	5%	10%	45%	30%	5%	5%	0%	0%	100%
IT and Information Security	0%	5%	10%	40%	25%	5%	5%	0%	10%	100%
Mining, except oil and gas	10%	5%	10%	25%	10%	0%	0%	0%	0%	60%
Oil and Gas	10%	5%	10%	25%	10%	0%	0%	0%	0%	60%
Other Manufacturing	65%	25%	0%	5%	5%	0%	0%	0%	0%	100%
Telecommunications	5%	5%	10%	30%	20%	15%	15%	0%	0%	100%
Transportation Equipment Manufacturing	70%	15%	0%	5%	5%	0%	0%	0%	5%	100%
Business Support Industries										
Administrative, waste and support services	10%	10%	15%	35%	20%	5%	5%	0%	0%	100%
Construction	10%	10%	20%	15%	5%	10%	0%	0%	0%	70%
Finance and Insurance	0%	0%	10%	35%	25%	15%	15%	0%	0%	100%
Logistics	70%	20%	0%	5%	5%	0%	0%	0%	0%	100%
Management of companies and enterprises	0%	0%	10%	50%	40%	0%	0%	0%	0%	100%
Professional and technical services	0%	10%	20%	40%	20%	5%	5%	0%	0%	100%
Real Estate	0%	0%	30%	40%	10%	10%	10%	0%	0%	100%
Transportation Services	30%	10%	10%	10%	10%	0%	0%	0%	0%	70%
Utilities	40%	20%	5%	3%	3%	0%	0%	0%	0%	70%
Wholesale Trade	50%	30%	5%	3%	3%	5%	5%	0%	0%	100%
Community Support Industries										
Arts and Entertainment	0%	5%	0%	0%	0%	20%	20%	5%	50%	100%
Other Services	0%	0%	10%	15%	5%	10%	10%	0%	0%	50%
Public Administration (except ....)	0%	10%	10%	20%	10%	5%	5%	0%	40%	100%
Retail Trade	10%	0%	0%	3%	3%	50%	30%	5%	0%	100%

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Development Demand.xlsx\Dist of Jobs to Space

**Appendix Table 7**  
**Estimated Jobs by Industry by Activity Center**

Employment Groups	Total Jobs	Current Jobs in Centers		Existing Employment Centers									Emerging Employment Centers			
		#	%	Greater Airport	Medical Center	CBD	Port SA / Lackland	Ft Sam Houston	Stone Oak	NE I-35 / I- 410	UTSA	Midtown	Hwy 151 / 1604	TAMU-SA	Brooks	Rolling Oaks
<b>Traditional Economic Drivers</b>																
Accommodation and Food Service	80,197	35,352	44%	6,351	2,908	12,313	235	1,961	3,103	1,563	3,042	1,210	772	0	645	1,249
Educational services	61,130	21,821	36%	1,033	8,050	805	755	143	1,383	951	3,550	2,467	1,605	350	366	363
Healthcare	96,874	55,597	57%	4,855	27,584	8,140	219	483	4,383	665	271	3,815	3,133	15	1,815	219
<b>Subtotal</b>	<b>238,201</b>	<b>112,770</b>	<b>47%</b>	<b>12,239</b>	<b>38,542</b>	<b>21,258</b>	<b>1,209</b>	<b>2,587</b>	<b>8,869</b>	<b>3,179</b>	<b>6,863</b>	<b>7,492</b>	<b>5,510</b>	<b>365</b>	<b>2,826</b>	<b>1,831</b>
<b>Industry Clusters and Other Drivers</b>																
Advanced Manufacturing	25,850	10,633	41%	1,906	289	243	421	5,700	104	779	152	519	0	232	132	156
Aerospace	335	285	85%	252	0	0	0	32	1	0	0	0	0	0	0	0
Agricultural and Food Technology	7,856	2,812	36%	483	8	59	40	2,132	78	2	0	1	6	0	0	3
Agriculture - Non-Food	464	55	12%	30	0	0	0	1	0	0	2	0	0	0	14	8
Biotechnology	740	348	47%	104	0	120	0	93	8	10	0	13	0	0	0	0
Information	6,339	4,067	64%	1,991	505	706	4	73	284	138	62	32	75	0	12	185
IT and Information Security	14,837	8,873	60%	2,623	152	731	2,881	373	79	1,244	109	114	500	0	21	46
Mining, except oil and gas	890	574	64%	360	20	0	5	72	15	18	34	50	0	0	0	0
Oil and Gas	3,315	2,702	82%	279	6	57	0	6	342	0	2,004	2	0	0	0	6
Other Manufacturing	1,951	741	38%	33	2	85	504	54	2	0	0	50	2	0	0	9
Telecommunications	5,833	2,451	42%	619	170	450	13	88	165	91	166	317	119	0	213	40
Transportation Equipment Manufacturing	4,516	4,005	89%	543	8	50	1,300	147	0	0	0	28	0	1,929	0	0
<b>Subtotal</b>	<b>72,926</b>	<b>37,546</b>	<b>51%</b>	<b>9,223</b>	<b>1,160</b>	<b>2,501</b>	<b>5,168</b>	<b>8,771</b>	<b>1,078</b>	<b>2,282</b>	<b>2,529</b>	<b>1,126</b>	<b>702</b>	<b>2,161</b>	<b>392</b>	<b>453</b>
<b>Business Support Industries</b>																
Administrative, waste and support services	22,894	9,127	40%	3,741	813	1,182	270	850	509	695	428	378	14	1	17	229
Construction	44,517	16,835	38%	6,763	439	428	527	1,092	1,251	1,853	1,579	1,632	458	20	468	325
Finance and Insurance	47,657	31,899	67%	5,466	16,456	1,165	62	188	3,071	941	1,360	316	2,577	45	95	157
Logistics	10,971	5,357	49%	1,954	82	246	730	1,330	41	599	10	11	0	0	24	330
Management of companies and enterprises	646	498	77%	454	0	5	0	0	7	0	32	0	0	0	0	0
Professional and technical services	39,554	17,606	45%	7,098	2,355	3,872	254	254	740	448	395	786	835	7	257	305
Real Estate	15,578	6,038	39%	2,158	679	556	27	426	1,339	341	133	152	39	0	90	98
Transportation Services	4,343	2,977	69%	652	4	148	0	69	0	65	2	1,961	0	0	76	0
Utilities	6,115	1,942	32%	25	0	1,112	15	417	150	98	6	0	0	22	0	97
Wholesale Trade	24,736	11,582	47%	3,318	289	372	480	3,637	319	676	257	1,278	7	44	260	645
<b>Subtotal</b>	<b>217,011</b>	<b>103,861</b>	<b>48%</b>	<b>31,629</b>	<b>21,117</b>	<b>9,086</b>	<b>2,365</b>	<b>8,263</b>	<b>7,427</b>	<b>5,716</b>	<b>4,202</b>	<b>6,514</b>	<b>3,930</b>	<b>139</b>	<b>1,287</b>	<b>2,186</b>
<b>Community Support Industries</b>																
Arts and Entertainment	10,886	4,208	39%	352	302	1,119	5	284	245	250	1,443	118	0	0	46	44
Other Services	31,710	8,415	27%	1,900	941	1,631	148	440	973	466	228	774	153	364	204	193
Public Administration (except ....)	25,368	9,060	36%	1,444	406	4,793	244	235	4	299	67	91	0	0	1,421	56
Retail Trade	98,269	34,416	35%	8,209	1,366	3,937	379	2,238	2,698	2,829	3,309	832	3,907	80	1,046	3,586
<b>Subtotal</b>	<b>166,233</b>	<b>56,099</b>	<b>34%</b>	<b>11,905</b>	<b>3,015</b>	<b>11,480</b>	<b>775</b>	<b>3,198</b>	<b>3,920</b>	<b>3,844</b>	<b>5,047</b>	<b>1,815</b>	<b>4,060</b>	<b>444</b>	<b>2,717</b>	<b>3,879</b>
<b>Military</b>	<b>84,848</b>	<b>80,237</b>	<b>95%</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>41,039</b>	<b>39,198</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>779,219</b>	<b>390,513</b>	<b>50%</b>	<b>64,996</b>	<b>63,834</b>	<b>44,325</b>	<b>50,556</b>	<b>62,017</b>	<b>21,294</b>	<b>15,021</b>	<b>18,641</b>	<b>16,947</b>	<b>14,202</b>	<b>3,109</b>	<b>7,222</b>	<b>8,349</b>

Source: Economic & Planning Systems  
H:\53029-San Antonio Comp Plan\Initial Studies\Model\53029-Employment Centers\_4-27 Revision at 80\Jobs\Jobs by Center

**Appendix Table 8**  
**Existing Percent Capture of Jobs by Industry by Activity Center**

Employment Groups	Existing Employment Centers									Emerging			
	Greater Airport	Medical Center	CBD	Port SA / Lackland	Ft Sam Houston	Stone Oak	NE I-35 / I- 410	UTSA	Midtown	Hwy 151 / 1604	TAMU-SA	Brooks	Rolling Oaks
<b>Traditional Economic Drivers</b>													
Accommodation and Food Service	18%	8%	35%	1%	6%	9%	4%	9%	3%	2%	0%	2%	4%
Educational services	5%	37%	4%	3%	1%	6%	4%	16%	11%	7%	2%	2%	2%
Healthcare	9%	50%	15%	0%	1%	8%	1%	0%	7%	6%	0%	3%	0%
<b>Subtotal</b>	11%	34%	19%	1%	2%	8%	3%	6%	7%	5%	0%	3%	2%
<b>Industry Clusters and Other Drivers</b>													
Advanced Manufacturing	18%	3%	2%	4%	54%	1%	7%	1%	5%	0%	2%	1%	1%
Aerospace	88%	0%	0%	0%	11%	0%	0%	0%	0%	0%	0%	0%	0%
Agricultural and Food Technology	17%	0%	2%	1%	76%	3%	0%	0%	0%	0%	0%	0%	0%
Agriculture - Non-Food	55%	0%	0%	0%	2%	0%	0%	4%	0%	0%	0%	25%	15%
Biotechnology	30%	0%	34%	0%	27%	2%	3%	0%	4%	0%	0%	0%	0%
Information	49%	12%	17%	0%	2%	7%	3%	2%	1%	2%	0%	0%	5%
IT and Information Security	30%	2%	8%	32%	4%	1%	14%	1%	1%	6%	0%	0%	1%
Mining, except oil and gas	63%	3%	0%	1%	13%	3%	3%	6%	9%	0%	0%	0%	0%
Oil and Gas	10%	0%	2%	0%	0%	13%	0%	74%	0%	0%	0%	0%	0%
Other Manufacturing	4%	0%	11%	68%	7%	0%	0%	0%	7%	0%	0%	0%	1%
Telecommunications	25%	7%	18%	1%	4%	7%	4%	7%	13%	5%	0%	9%	2%
Transportation Equipment Manufacturing	14%	0%	1%	32%	4%	0%	0%	0%	1%	0%	48%	0%	0%
<b>Subtotal</b>	25%	3%	7%	14%	23%	3%	6%	7%	3%	2%	6%	1%	1%
<b>Business Support Industries</b>													
Administrative, waste and support services	41%	9%	13%	3%	9%	6%	8%	5%	4%	0%	0%	0%	3%
Construction	40%	3%	3%	3%	6%	7%	11%	9%	10%	3%	0%	3%	2%
Finance and Insurance	17%	52%	4%	0%	1%	10%	3%	4%	1%	8%	0%	0%	0%
Logistics	36%	2%	5%	14%	25%	1%	11%	0%	0%	0%	0%	0%	6%
Management of companies and enterprises	91%	0%	1%	0%	0%	1%	0%	6%	0%	0%	0%	0%	0%
Professional and technical services	40%	13%	22%	1%	1%	4%	3%	2%	4%	5%	0%	1%	2%
Real Estate	36%	11%	9%	0%	7%	22%	6%	2%	3%	1%	0%	1%	2%
Transportation Services	22%	0%	5%	0%	2%	0%	2%	0%	66%	0%	0%	3%	0%
Utilities	1%	0%	57%	1%	21%	8%	5%	0%	0%	0%	1%	0%	5%
Wholesale Trade	29%	2%	3%	4%	31%	3%	6%	2%	11%	0%	0%	2%	6%
<b>Subtotal</b>	30%	20%	9%	2%	8%	7%	6%	4%	6%	4%	0%	1%	2%
<b>Community Support Industries</b>													
Arts and Entertainment	8%	7%	27%	0%	7%	6%	6%	34%	3%	0%	0%	1%	1%
Other Services	23%	11%	19%	2%	5%	12%	6%	3%	9%	2%	4%	2%	2%
Public Administration (except ....)	16%	4%	53%	3%	3%	0%	3%	1%	1%	0%	0%	16%	1%
Retail Trade	24%	4%	11%	1%	7%	8%	8%	10%	2%	11%	0%	3%	10%
<b>Subtotal</b>	21%	5%	20%	1%	6%	7%	7%	9%	3%	7%	1%	5%	7%

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan\Initial Studies\Models\133029-Employment Centers\_4-27 Revision at 90\Jobs by Center



**Appendix Table 9**  
**Forecast Percent Capture of Jobs by Industry by Activity Center**

Employment Groups	Existing Employment Centers									Emerging			Rolling Oaks
	Greater Airport	Medical Center	CBD	Port SA / Lackland	Ft Sam Houston	Stone Oak	NE I-35 / I-410	UTSA	Midtown	Hwy 151 / 1604	TAMU-SA	Brooks	
Traditional Economic Drivers													
Accommodation and Food Service	15%	5%	20%	8%	5%	10%	5%	10%	3%	5%	5%	5%	5%
Educational services	5%	10%	10%	5%	5%	5%	5%	20%	5%	5%	15%	5%	5%
Healthcare	5%	25%	10%	5%	10%	10%	3%	5%	5%	8%	3%	10%	3%
Industry Clusters and Other Drivers													
Advanced Manufacturing	15%	0%	0%	35%	20%	0%	10%	0%	0%	0%	10%	10%	0%
Aerospace	40%	0%	0%	50%	10%	0%	0%	0%	0%	0%	0%	0%	0%
Agricultural and Food Technology	10%	0%	5%	20%	40%	5%	10%	5%	0%	0%	3%	3%	0%
Agriculture - Non-Food	20%	0%	5%	20%	20%	0%	0%	5%	0%	0%	0%	20%	10%
Biotechnology	10%	15%	5%	5%	15%	15%	5%	10%	0%	5%	3%	10%	3%
Information	25%	0%	5%	5%	0%	15%	10%	20%	0%	10%	0%	5%	5%
IT and Information Security	10%	5%	10%	10%	5%	10%	15%	20%	0%	10%	0%	0%	5%
Mining, except oil and gas	30%	0%	5%	0%	15%	10%	5%	15%	0%	5%	5%	10%	0%
Oil and Gas	15%	0%	5%	5%	5%	15%	0%	25%	0%	0%	5%	20%	5%
Other Manufacturing	10%	0%	0%	30%	25%	0%	15%	0%	0%	5%	0%	10%	5%
Telecommunications	20%	5%	10%	0%	0%	15%	5%	20%	0%	10%	0%	5%	10%
Transportation Equipment Manufacturing	15%	0%	0%	35%	20%	0%	5%	0%	0%	0%	25%	0%	0%
Business Support Industries													
Administrative, waste and support services	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Construction	5%	5%	5%	10%	5%	15%	5%	10%	0%	10%	10%	10%	10%
Finance and Insurance	15%	20%	5%	5%	0%	10%	5%	15%	0%	10%	5%	0%	10%
Logistics	20%	0%	5%	20%	35%	0%	15%	0%	0%	0%	0%	0%	5%
Management of companies and enterprises	40%	0%	5%	5%	0%	15%	0%	20%	0%	10%	0%	0%	5%
Professional and technical services	25%	10%	15%	10%	0%	10%	0%	5%	5%	10%	0%	5%	5%
Real Estate	10%	5%	5%	10%	0%	20%	5%	15%	0%	10%	5%	5%	10%
Transportation Services	30%	0%	5%	15%	10%	5%	10%	5%	5%	0%	5%	10%	0%
Utilities	15%	0%	10%	15%	20%	15%	5%	5%	0%	0%	5%	5%	5%
Wholesale Trade	20%	0%	5%	20%	25%	0%	20%	0%	5%	0%	0%	0%	5%
Community Support Industries													
Arts and Entertainment	5%	5%	10%	5%	5%	15%	5%	20%	5%	5%	10%	5%	5%
Other Services	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Public Administration (except ....)	20%	3%	10%	5%	3%	10%	5%	10%	5%	10%	5%	10%	5%
Retail Trade	10%	5%	10%	5%	5%	10%	5%	15%	5%	10%	5%	5%	10%

Source: Economic & Planning Systems

H:\03029-San Antonio Comp Plan Initial Studies\Models\03029-Employment Centers\_4-27 Revision at 50\xlsx\Future %of Jobs BY Center

**Appendix Table 10**  
**Forecast Demand for Employment Sq. Ft. by Development Type**

Cluster	2012-2040									Total Square Feet Demand
	Industrial		Office			Retail		Other		
	Convention al Industrial	Small Format Industrial	Low	Mid	High	Auto Oriented	Urban	Hospitality	Civic / Institutional	
Traditional Economic Drivers										
Accommodation and Food Service	0	0	0	0	0	12,735,891	7,641,534	10,916,478	0	31,293,903
Educational services	0	0	2,599,647	0	0	0	1,417,989	0	32,141,085	36,158,721
Healthcare	0	0	3,812,608	7,625,216	3,119,406	3,466,007	2,079,604	0	27,728,058	47,830,899
Subtotal	0	0	6,412,255	7,625,216	3,119,406	16,201,898	11,139,128	10,916,478	59,869,143	115,283,523
Industry Clusters and Other Drivers										
Advanced Manufacturing	1,258,000	366,000	41,944	41,944	34,318	0	0	0	0	1,742,206
Aerospace	292,000	93,000	0	0	0	0	0	0	62,250	447,250
Agricultural and Food Technology	947,000	216,000	49,579	49,579	40,565	90,144	0	0	0	1,392,868
Agriculture - Non-Food	3,000	1,000	572	1,429	234	0	0	0	0	6,235
Biotechnology	34,000	55,000	8,383	8,383	3,429	0	0	0	18,289	127,484
Information	0	60,000	81,968	368,854	201,193	74,516	44,710	0	0	831,241
IT and Information Security	0	108,000	147,918	591,673	302,560	134,471	80,683	0	215,154	1,580,459
Mining, except oil and gas	12,000	3,000	4,508	11,269	3,688	0	0	0	0	34,465
Oil and Gas	466,000	124,000	170,796	426,990	139,742	0	0	0	0	1,327,527
Other Manufacturing	0	0	0	0	0	0	0	0	0	0
Telecommunications	58,000	31,000	42,340	127,019	69,283	115,472	69,283	0	0	512,397
Transportation Equipment Manufacturing	5,333,000	610,000	0	139,685	114,288	0	0	0	203,179	6,400,152
Subtotal	8,403,000	1,667,000	548,007	1,766,825	909,300	414,603	194,675	0	498,872	14,402,283
Business Support Industries										
Administrative, waste and support services	3,284,000	1,751,000	1,806,037	4,214,087	1,970,223	1,094,568	656,741	0	0	14,776,656
Construction	1,081,000	577,000	792,789	594,592	162,161	720,717	0	0	0	3,928,260
Finance and Insurance	0	0	867,265	3,035,427	1,773,951	2,365,268	1,419,161	0	0	9,461,072
Logistics	6,114,000	932,000	0	160,129	131,014	0	0	0	0	7,337,143
Management of companies and enterprises	0	0	307,818	1,539,090	1,007,404	0	0	0	0	2,854,312
Professional and technical services	0	1,307,000	1,797,279	3,594,559	1,470,501	816,945	490,167	0	0	9,476,452
Real Estate	0	0	635,980	847,973	173,449	385,442	231,265	0	0	2,274,110
Transportation Services	258,000	46,000	31,566	31,566	25,827	0	0	0	0	392,958
Utilities	601,000	160,000	27,524	13,762	11,260	0	0	0	0	813,546
Wholesale Trade	3,642,000	1,165,000	133,536	66,768	54,629	242,793	145,676	0	0	5,450,403
Subtotal	14,980,000	5,938,000	6,399,795	14,097,953	6,780,419	5,625,735	2,943,010	0	0	56,764,912
Community Support Industries										
Arts and Entertainment	0	172,000	0	0	0	861,216	516,730	215,304	1,722,433	3,487,683
Other Services	0	0	312,733	469,099	127,936	568,605	341,163	0	0	1,819,536
Public Administration (except ....)	0	242,000	166,058	332,115	135,865	150,961	90,577	0	966,153	2,083,729
Retail Trade	2,809,000	0	0	257,462	210,651	9,362,267	3,370,416	936,227	0	16,946,024
Subtotal	2,809,000	414,000	478,790	1,058,677	474,452	10,943,050	4,318,886	1,151,531	2,688,586	24,336,972
Total	26,192,000	8,019,000	13,838,846	24,548,671	11,283,578	33,185,286	18,595,700	12,068,009	63,056,600	210,787,690

Source: Economic & Planning Systems

H:\03029-San Antonio Comp Plan Initial Studies\03029-Employment Development Demand.xlsx\Demand for Space

**Appendix Table 11**  
**Activity Center Demand for Employment Sq. Ft. by Development Type**

	Industrial		Office			Service/Retail		Other	
	Conventional Industrial	Small Format Industrial	Low	Mid	High	Auto Oriented	Urban	Hospitality	Civic / Institutional
<b>Existing</b>									
Greater Airport	2,225,525	628,026	742,042	1,659,850	948,484	1,754,687	999,456	758,771	1,763,439
Medical Center	183,404	137,089	969,577	1,686,868	835,805	1,385,658	854,771	261,163	5,635,419
CBD	521,533	243,828	631,227	1,003,904	496,897	1,910,877	1,129,588	1,003,540	3,312,783
Port SA / Lackland	3,232,434	665,624	459,947	807,187	429,919	946,319	543,669	381,466	1,752,585
Ft Sam Houston	2,929,880	568,685	404,560	641,362	325,545	765,713	439,610	261,163	2,485,847
Stone Oak	378,592	209,662	663,864	1,248,137	639,151	1,478,271	818,222	526,487	2,543,406
NE I-35 / I-410	1,310,969	320,660	279,134	452,675	245,996	704,385	408,622	261,163	1,280,646
UTSA	427,052	185,851	748,371	1,178,465	649,448	1,612,139	973,722	547,043	4,204,042
Midtown	243,996	119,296	283,338	409,727	193,550	492,137	291,386	140,859	1,649,743
<b>Emerging</b>									
Hwy 151 / 1604	245,331	159,090	529,510	990,980	518,399	1,079,683	588,172	277,557	2,078,129
TAMU-SA	1,471,651	248,546	396,634	410,419	216,798	690,232	464,305	265,324	2,937,513
Brooks	357,863	165,013	470,846	729,426	328,067	769,501	440,966	261,163	2,463,833
Rolling Oaks	509,993	176,956	368,434	654,054	349,859	972,239	520,445	278,933	1,258,555
<b>Total</b>	<b>14,038,223</b>	<b>3,828,326</b>	<b>6,947,485</b>	<b>11,873,053</b>	<b>6,177,920</b>	<b>14,561,844</b>	<b>8,472,935</b>	<b>5,224,631</b>	<b>33,365,939</b>

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Employment Centers\_4-27 Revision at 50%\xls\Dev Demand

**Appendix Table 12**  
**Non-Activity Center Employment Sq. Ft. Demand by Development Type**

		Retail/Office/ Other	Industrial
Capture			
<b>Non-Center Development</b>		<b>95,170,853</b>	<b>16,358,343</b>
<b>Inside 410</b>			
Central	5%	4,473,030	768,842
Central West	3%	2,528,314	434,577
Northeast	3%	2,617,198	449,854
Northwest	1%	898,107	154,370
Southeast	5%	4,359,812	749,382
Southwest	4%	3,494,521	600,652
West	3%	<u>2,566,605</u>	<u>441,158</u>
<b>Subtotal</b>	<b>22%</b>	<b>20,937,588</b>	<b>3,598,835</b>
<b>Inside 1604</b>			
North	5%	5,111,721	878,623
Northeast	2%	2,370,518	407,454
Northeast Kirby-Windcrest	4%	3,886,695	668,060
Northwest	4%	3,613,214	621,054
West	5%	4,999,994	859,419
West Leon Valley	2%	<u>2,229,090</u>	<u>383,145</u>
<b>Subtotal</b>	<b>23%</b>	<b>22,211,231</b>	<b>3,817,754</b>
<b>Outside 1604</b>			
North	10%	9,125,239	1,568,482
Northeast	7%	6,426,065	1,104,537
Northwest	4%	3,547,310	609,726
West	14%	<u>12,922,099</u>	<u>2,221,101</u>
<b>Subtotal</b>	<b>34%</b>	<b>32,020,713</b>	<b>5,503,847</b>
<b>South and East</b>			
Far East	4%	3,371,763	579,552
Far South	8%	7,321,542	1,258,456
Far Southwest	10%	<u>9,308,016</u>	<u>1,599,899</u>
<b>Subtotal</b>	<b>21%</b>	<b>20,001,321</b>	<b>3,437,906</b>

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\[133029-Employment Development Demand.xlsx]Non-Center Dev Demand

**Appendix Table 13**  
**Estimated Single Family Units by Development Type by Subarea**

Subarea	SF Units 2010-2040	Rural		Large Lot		Small Lot		Attached	
		% Capture	Units	% Capture	Units	% Capture	Units	% Capture	Units
<b>Inside 410</b>									
Central	1,838	0%	0	0%	0	10%	184	90%	1,654
Central West	1,838	0%	0	0%	0	60%	1,103	40%	730
Northeast	3,677	0%	0	0%	0	61%	2,243	39%	1,434
Northwest	1,838	0%	0	0%	0	60%	1,103	40%	735
Southeast	18,383	0%	0	37%	6,875	50%	9,201	13%	2,298
Southwest	16,544	0%	0	37%	6,188	50%	8,289	13%	2,068
West	11,030	0%	0	48%	5,239	45%	4,963	8%	827
<b>Subtotal</b>	<b>55,148</b>	<b>0%</b>	<b>0</b>	<b>11%</b>	<b>18,302</b>	<b>19%</b>	<b>27,085</b>	<b>34%</b>	<b>9,747</b>
<b>Inside 1604</b>									
North	6,499	0%	0	40%	2,599	47%	3,080	13%	819
Northeast	5,515	0%	0	40%	2,206	47%	2,614	13%	695
Northeast Kirby-Windcrest	18,149	0%	0	40%	7,260	47%	8,603	13%	2,287
Northwest	9,191	0%	0	40%	3,677	47%	4,357	13%	1,158
West	11,159	0%	0	45%	5,022	50%	5,568	5%	558
West Leon Valley	9,554	0%	0	45%	4,299	50%	4,767	5%	478
<b>Subtotal</b>	<b>60,067</b>	<b>0%</b>	<b>0</b>	<b>15%</b>	<b>25,062</b>	<b>21%</b>	<b>28,990</b>	<b>21%</b>	<b>5,994</b>
<b>Outside 1604</b>									
North	41,684	10%	4,168	50%	20,842	35%	14,590	5%	2,084
Northeast	25,115	10%	2,511	50%	12,557	35%	8,790	5%	1,256
Northwest	17,916	30%	5,303	45%	8,062	20%	3,583	5%	896
West	72,184	5%	3,609	55%	39,701	35%	25,265	5%	3,609
<b>Subtotal</b>	<b>156,899</b>	<b>55%</b>	<b>15,592</b>	<b>48%</b>	<b>81,163</b>	<b>37%</b>	<b>52,227</b>	<b>28%</b>	<b>7,845</b>
<b>South and East</b>									
Far East	16,415	14%	2,296	48%	7,879	33%	5,368	5%	739
Far South	31,846	12%	3,822	46%	14,586	38%	12,038	5%	1,592
Far Southwest	47,278	14%	6,572	48%	22,693	33%	15,696	5%	2,364
<b>Subtotal</b>	<b>95,539</b>	<b>45%</b>	<b>12,690</b>	<b>27%</b>	<b>45,158</b>	<b>23%</b>	<b>33,102</b>	<b>17%</b>	<b>4,695</b>
<b>Total</b>	<b>367,654</b>	<b>100%</b>	<b>28,281</b>	<b>100%</b>	<b>169,686</b>	<b>100%</b>	<b>141,405</b>	<b>100%</b>	<b>28,281</b>

Source: Economic & Planning Systems

H:\133029-San Antonio Comp. Plan Initial Studies\Models\133029-Housing Forecast.xlsx\5-Single Family Land Demand

**Appendix Table 14**  
**Estimated Multifamily Units by Development Type by Subarea**

Subarea	MF Units 2010-2040	Low-Rise		Mid-Rise		High-Rise	
		% Capture	Units	% Capture	Units	% Capture	Units
<b>Inside 410</b>							
Central	24,746	0%	0	60%	14,848	40%	9,898
Central West	13,189	15%	1,978	55%	7,254	30%	3,957
Northeast	11,878	20%	2,376	48%	5,684	32%	3,819
Northwest	3,499	20%	700	50%	1,750	30%	1,050
Southeast	7,528	50%	3,764	40%	3,041	10%	723
Southwest	4,224	50%	2,112	45%	1,918	5%	194
West	4,224	50%	2,112	45%	1,918	5%	194
<b>Subtotal</b>	<b>69,289</b>	<b>15%</b>	<b>13,042</b>	<b>43%</b>	<b>36,412</b>	<b>70%</b>	<b>19,835</b>
<b>Inside 1604</b>							
North	23,882	25%	5,970	60%	14,425	15%	3,487
Northeast	8,574	25%	2,144	60%	5,179	15%	1,252
Northeast Kirby-Windcrest	4,949	45%	2,227	50%	2,494	5%	228
Northwest	12,282	40%	4,913	45%	5,576	15%	1,793
West	18,556	45%	8,350	50%	9,352	5%	854
West Leon Valley	3,694	50%	1,847	40%	1,493	10%	355
<b>Subtotal</b>	<b>71,937</b>	<b>30%</b>	<b>25,451</b>	<b>45%</b>	<b>38,518</b>	<b>28%</b>	<b>7,968</b>
<b>Outside 1604</b>							
North	12,547	65%	8,193	31%	3,940	3%	414
Northeast	13,077	80%	10,514	20%	2,563	0%	0
Northwest	3,165	65%	2,070	31%	991	3%	104
West	4,615	80%	3,710	20%	904	0%	0
<b>Subtotal</b>	<b>33,403</b>	<b>29%</b>	<b>24,487</b>	<b>10%</b>	<b>8,398</b>	<b>2%</b>	<b>518</b>
<b>South and East</b>							
Far East	3,625	95%	3,458	5%	167	0%	0
Far South	11,669	95%	11,132	5%	537	0%	0
Far Southwest	8,044	90%	7,272	10%	772	0%	0
<b>Subtotal</b>	<b>23,338</b>	<b>26%</b>	<b>21,863</b>	<b>2%</b>	<b>1,476</b>	<b>0%</b>	<b>0</b>
<b>Total</b>	<b>197,967</b>	<b>100%</b>	<b>84,843</b>	<b>100%</b>	<b>84,843</b>	<b>100%</b>	<b>28,281</b>

Source: Economic & Planning Systems

H:\133029-San Antonio Comp Plan Initial Studies\Models\133029-Housing Forecast.xlsx\6-Multifamily Land Demand