



COURTESY: CITY OF DENTON

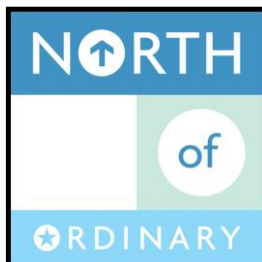
## **Economic and Demographic Projections for the City of Denton: An Update**

*Prepared by:*

Terry L. Clower, Ph.D.

Paul Hendershot, M.S.

Center for Economic Development and Research  
University of North Texas

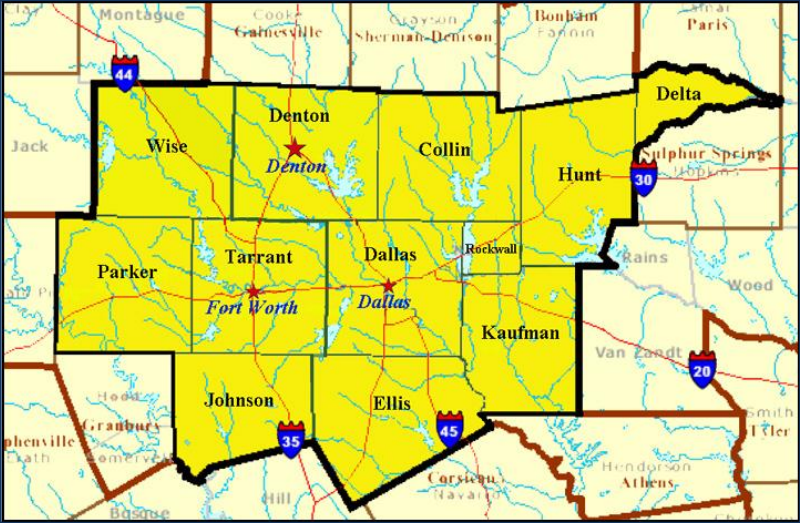


April 2011



# Introduction

The city of Denton, located about 40 miles northwest of Dallas and 38 miles northeast of Fort Worth, occupies the apex of the north central Texas’ “Golden Triangle.” (See Figure 1.)



**Figure 1. Dallas-Fort Worth MSA.** Source: U.S. Census Bureau

The city was established in 1857 as the county seat for Denton County with 361 residents living on 100-acres of land. Today, almost 113,000 people reside in the city that covers almost 56,000 acres and is home to two public universities, Texas Woman’s University and The University of North Texas – the third largest university in Texas. Denton has also attracted state-of-the-art hospitals, manufacturing companies, and new retail locations serving a rapidly growing north Denton County population.

The following report updates our 2008 examination of key demographic and economic characteristics of the city of Denton including current and future population growth trends and employment outlook. The Great Recession and the impacts of the sub-prime lending crisis on financial markets dramatically slowed the pace of development in Denton over the past two years. However, commercial property development has re-emerged in the retail trade sector, and there is hope that residential real estate markets will recover in the next 12 to 18 months. We have updated our population forecasts and offer current assessments of trends in selected key sectors of the Denton economy including retail trade, medical services, aerospace/aviation, manufacturing, and research and development.

## The State of the Economy

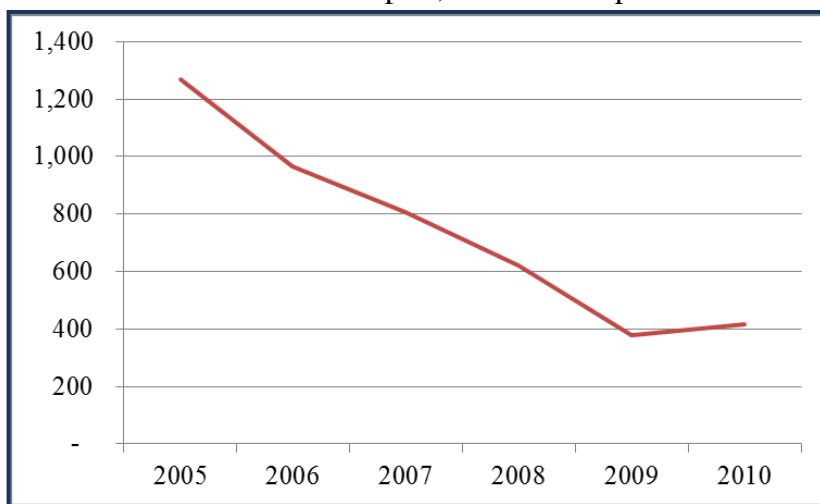
The U.S. Economy slipped into a recession in late 2007. Though economic recovery officially began in the summer of 2009, growth in the US has remained somewhat weak and labor markets, while stabilized, have not returned to sustainable levels of growth. As shown in Table 1, Denton experienced some job losses, and the unemployment rate rose substantially; however, local unemployment remains well below the rate for the entire Metroplex, and year-over-year job gains indicate that Denton is in recovery.

	<b>Total Employment (Unemployment Rate)</b>				<b>Change 07-10 (% Change)</b>
	<b>Dec-07</b>	<b>Dec-08</b>	<b>Dec-09</b>	<b>Dec-10</b>	
City of Denton	60,144 (3.4)	59,625 (4.4)	59,689 (6.1)	60,636 (6.1)	+492 (0.8)
Denton County	326,745 (3.8)	325,342 (5.3)	325,695 (7.3)	330,862 (7.2)	+4,117 (1.3)
Dallas-Irving-Plano Metropolitan Division	1,986,726 (4.3)	1,957,213 (6.1)	1,959,338 (8.0)	1,990,420 (8.0)	+3,694 (0.2)
Dallas-Fort Worth	2,969,367 (4.2)	2,935,370 (6.0)	2,938,956 (8.0)	2,984,295 (7.9)	+14,928 (0.5)
Texas	11,007,835 (4.3)	11,075,262 (5.7)	11,069,879 (8.0)	11,223,782 (8.0)	+215,947 (2.0)

*Source: Texas Workforce Commission*

The most prominent feature of the Great Recession has been the impact resulting from the bursting of the US housing bubble that has, depending on the source, been blamed on sub-prime borrowers and lenders, federal regulations and regulators, and Wall Street investment firms. While Denton, and Texas as a whole, did not see a true bubble in housing prices, local home sales and prices were negatively impacted, just not as severely as in many regions of the country. To be sure, the DFW region had its share of sub-prime lending that resulted in a sharp spike in home foreclosures, which has since spread to the broader housing market because of the relatively weak labor market. Moreover, changes in financial sector regulations have meant that already gun-shy lenders have had to tighten lending standards with consequential impacts on housing demand and prices. With homeowners struggling to sell the rising inventory of existing homes, building permits for new single family and multi-family residential units fell off the virtual cliff (see Figure 2). As will be discussed later in this report, some developers found their

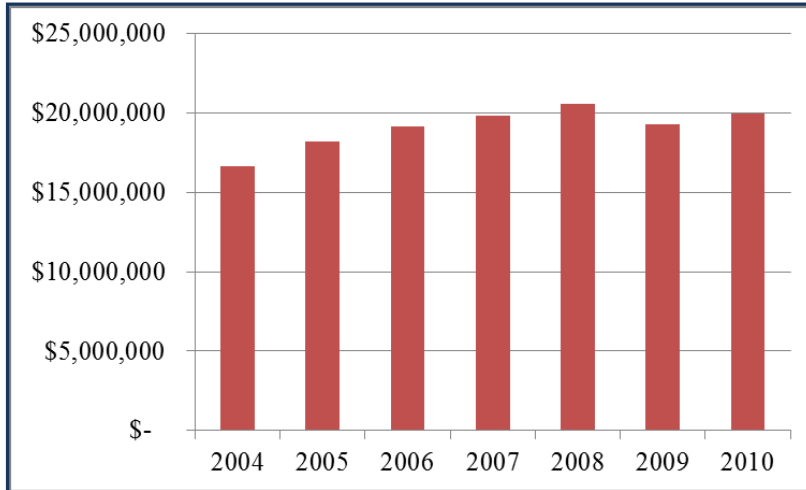
residential projects cut-off from funding during the height of the recession with few prospects for new funding for that sector through 2011. Recovery in the single-family housing sector will likely be delayed until 2012 with strong growth not resuming until 2014. This slowing in housing stock growth is the single largest factor influencing our revised projections of population growth that will be presented later in this report. There has been an uptick in the



**Figure 2. Residential Building Permits, City of Denton**

construction of multi-family properties in the DFW region over the past several months due in part to residents moving from owner-occupied to rental housing units.

It is important to note that although the housing sector has slowed dramatically, it is still active. During the height of the national recession, about 90,000 new residents moved to the Metroplex, some of whom now live in Denton. These new residents increase household spending and enhance the local labor pool, positioning Denton to take advantage of a recovering economy.



**Figure 3. Sales and Use Tax Allocations to the City of Denton.**

*Source: Texas Comptroller of Public Accounts*

It is not surprising that overall business activity in Denton was impacted by the national recession. As shown in Figure 3, total sales tax allocations declined by about 6.3% from 2008 to 2009. These allocations represent sales tax revenues received from the Texas Comptroller’s Office and reflect business activities subject to local sales and use taxes (including retail sales) occurring two to three months prior to the allocation.

Importantly, though taxable sales have not yet recovered to 2008 levels, the sales tax allocation trend signals growth.<sup>1</sup>

Businesses continue to see Denton as a desirable location. Most notable of recent events are the opening of a new WalMart and Sam’s Wholesale Club on University Drive, the recent relocation of a Schlumberger operation to the city of Denton. More information will be presented on these and other business developments in subsequent sections of this report. In sum, Denton was certainly impacted by the national recession and financial sector melt-down, yet the city continues to attract new businesses and residents and will see continued growth for the foreseeable future.

<sup>1</sup> The 2010 holiday shopping season sales will be reflected in early 2011 allocation data that is not a part of this report. However, the early months of 2011 do support the growth trend.

## Denton Demographics and Education

Pending the release of data from the 2010 Census, we provide several estimates of local and regional characteristics of the population. These estimates, unless otherwise stated, are based on the American Community Survey conducted on an annual basis by the US Bureau of the Census. The American Community Survey replaces the traditional census “long-form” and is based on statistical sampling. Because of the relative size of the sample used for the city of Denton, estimates are offered based on three year averages, in this case 2007-2009. By combining survey periods, the estimates are more accurate, but are “averaged” over the three-year period. We estimate the current population, January 2011, at 113,000.

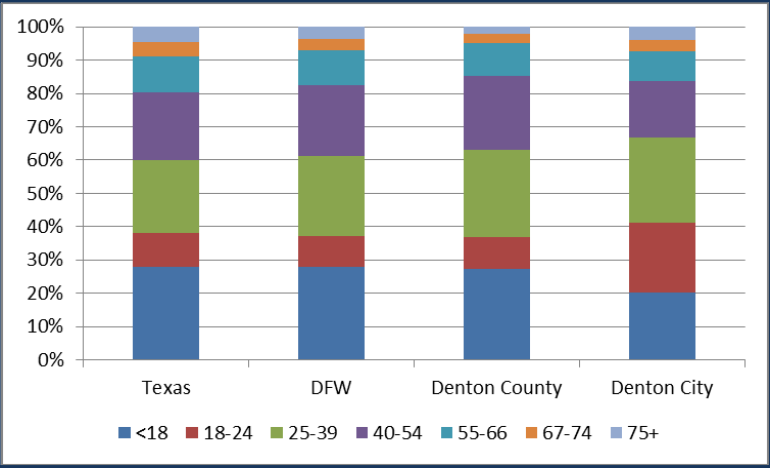
Table 2 provides estimates of the racial and ethnic make up of the state, regional, and local populations. The “other” category includes Native Americans, Native Hawaiians, Pacific Islanders, and others who self-identify as “other race.” Keep in mind that Hispanic is an ethnicity, and, therefore, the totals do not add to 100%.

	Texas	DFW Metro Area	Denton County	City of Denton
White alone	72.6%	69.1%	78.5%	75.7%
Black or African American alone	11.5%	14.0%	7.6%	10.0%
Hispanic or Latino*	36.4%	27.4%	17.1%	20.2%
Asian alone	3.5%	4.8%	5.7%	2.9%
Some other race alone	10.4%	9.8%	4.0%	5.4%
Two or more races	2.0%	2.2%	4.2%	5.9%

*Source: US Census Bureau*

The Census Bureau estimates that there are 37,314 households in the city of Denton. Just over half of the total households in Denton are family households, and the remainder (43.5%) are classified as non-family households. The proportion of non-family households in the city is much higher than at the state, metropolitan area, or county level, where non-family households account for about 30 percent of those totals. This difference can be explained by the presence of two universities in Denton – Texas Woman’s University (TWU) and the University of North Texas (UNT). In fact, when compared to the state and metro area, three times as many residents

of Denton over the age of 15 report being enrolled in college or graduate school.



**Figure 4. Population Distribution by Age.**  
*Source: US Census Bureau*

Proportionately, Denton has a higher number of residents under the age of 25 compared to the state and region. Given that this differential is most pronounced in the 18 to 24 age cohort, this is another demographic characteristic that is greatly influenced by the presence of TWU and UNT (see Figure 4.)

Education attainment is both a challenge and opportunity for Denton. As can be expected, the proportion of the population with advanced degrees is higher than state and regional averages. Unfortunately, the proportion of the population with less than a high school education is almost double the county level and only slightly lower than the state and DFW metro area (see Table 3).

**Table 3. Education Attainment for Persons 25 Years and Older**

New data	Texas	DFW Metro Area	Denton County	City of Denton
Less than High school	20.4%	18.1%	9.8%	16.0%
High school graduate or equivalent	25.9%	23.4%	20.5%	21.0%
Some college, no degree	22.0%	22.1%	25.1%	24.4%
Associate's degree	6.2%	6.2%	7.0%	5.4%
Bachelor's degree	17.1%	20.5%	26.4%	21.2%
Graduate degree	8.4%	9.6%	11.3%	12.0%

Source: US Census Bureau

**Table 4. Percentage of Students at/above TEA Criterion on SAT/ACT**

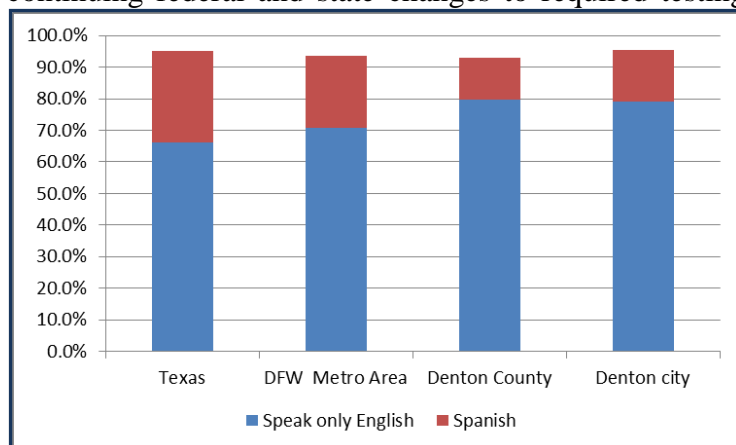
District	Class of				
	2005	2006	2007	2008	2009
Plano ISD	59.6%	58.3%	56.9%	59.5%	61.6%
Lewisville ISD	42.8%	44.5%	43.4%	46.5%	46.7%
Carrollton-FB ISD	40.0%	40.0%	34.9%	33.7%	33.3%
Frisco ISD	36.1%	38.2%	36.7%	37.0%	41.5%
<b>Denton ISD</b>	<b>30.3%</b>	<b>32.3%</b>	<b>29.0%</b>	<b>31.3%</b>	<b>31.4%</b>
Garland ISD	29.4%	30.0%	27.3%	28.7%	26.1%
Texas	27.4%	27.1%	27.0%	27.2%	27.4%
Dallas ISD	10.8%	11.5%	12.0%	10.6%	10.8%

Source: Texas Education Agency

According to the Texas Education Agency, the Denton Independent School District is rated by the Texas Education Agency as being “recognized.” As shown in Table 4, Denton ISD students fall in the middle of the pack of area districts in their performance on the SAT/ACT college admissions exams. From an economic development perspective, these data challenge Denton parents,

residents, and the business community, as well as school administrators to work towards improving academic achievement for DISD students. The challenge of improving education outcomes is exacerbated by rapid growth – over the last ten years DISD enrollments have grown by 68 percent (9,147 students) – and continuing federal and state changes to required testing schemes.

At present, English is the only language spoken in almost 80 percent of Denton households. As shown in Figure 5, this is substantially higher than state and metro area averages. However, the number of Spanish speakers is rising and will continue to do so as immigrants continue to arrive in north Texas.



**Figure 5. Language Spoken at Home.**

Source: US Census Bureau

## LaGrone Advanced Technology Complex

**Table 5. Programs of Study at LaGrone Advanced Technology Complex**

<b>Program of Study</b> <i>Potential Certifications/Licenses</i>
Arts, Audio/Visual Technology and Communication: <i>Adobe Photoshop CS4 Certification</i>
Health Science: <i>Pharmacy Technician</i> <i>Certified Nursing Assistant</i>
Human Services: <i>Cosmetology License</i>
Information Technology: <i>CISCO CCENT and CCNA Certification</i> <i>Comtia A+ and Server+ Certification</i> <i>GIS SPACESTARS</i>
Law, Public Safety, Corrections and Security: <i>CERT Certification</i>
Manufacturing: <i>Entry-level American Welding Society Certification</i> <i>MasterCam Certification</i>
Transportation, Distribution and Logistics: <i>Automotive Service Excellence Certification</i>
<i>Source: Denton ISD</i>

Denton ISD's LaGrone Advanced Technology Complex (ATC) offers high school students a variety of courses to supplement or substitute for basic graduation requirements. These courses are part of an overall program designed to better prepare students for careers in a wide range of fields. In addition to receiving hands on experience, students may earn college credit and obtain certification and professional licenses through the programs at LaGrone (see Table 5).

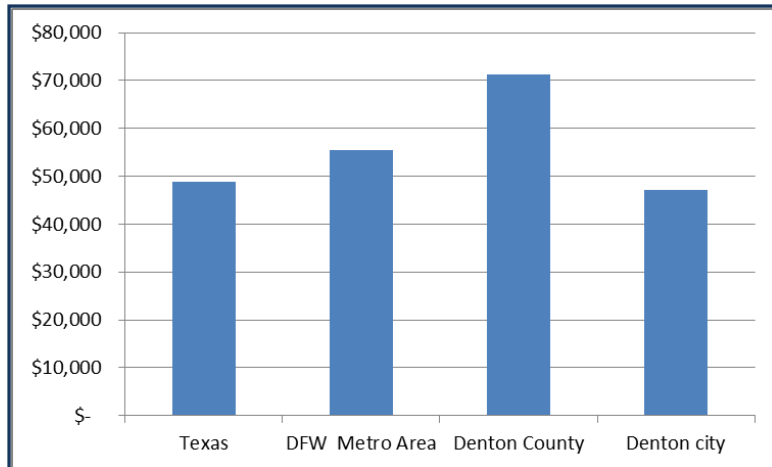
Other benefits of LaGrone's curriculum include the incorporation of cutting edge software programs and design techniques. In the Department of Arts, Audio/Visual Technology and Communication, students are familiarized with Apple Final Cut Pro Studio, Adobe Flash, NewTek, and 3D Lightwave v. 9.6 among other packages, while the Department of Architecture and Construction offers students training in e-green architecture and design. Students at LaGrone are also given the opportunity to

complete internships within their chosen fields of study. Programs such as Law, Public Safety, Corrections and Security, Information Technology, and Manufacturing offer students firsthand experience. The Advanced Technology Complex provides a steady stream young, skilled professionals for employers in the Denton labor market.

LaGrone anticipates that 602 students will graduate from its programs in the 2010-2011 school year. Table 6 illustrates the anticipated number of graduates from all of the programs offered at LaGrone.

**Table 6. 2011 Graduation at LaGrone Advanced Technology Complex**

<b>Program</b>	<b>Expected 2010-2011 Graduation</b>
Architecture and Construction	15
Arts, Audio/Visual Technology and Communication	84
Education and Training	46
Health Science	196
Hospitality and Tourism	30
Human Services	41
Information Technology	31
Law, Public Safety, Corrections and Security	52
Manufacturing	21
Science, Technology, Engineering and Math	35
Transportation, Distribution and Logistics	51
<b>Total</b>	<b>602</b>
<i>Source: Denton ISD</i>	



**Figure 6. Median Household Income (\$ 2009)**

Source: US Census Bureau

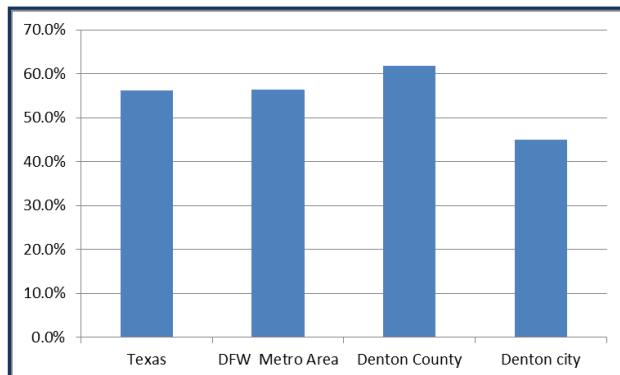
## Household Income

Median household income in Denton is estimated at \$47,412 in 2009 dollars. This is slightly below the state median level and substantially lower than the median income for Denton County, which is \$71,237 (see Figure 6). Again, this is due in part to the number of students living in Denton off-campus housing. Purchasing power supported by household income is still strong for the city of Denton, with about 6,600 local households

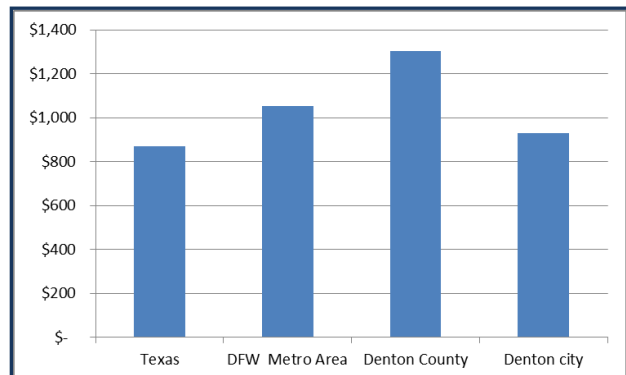
earning more than \$100,000 per year. The Gini coefficient, which measures how income is distributed across the population, is statistically not different than the income distribution for the metro area, state, and nation.

## Housing

The Census Bureau estimates that there were about 41,000 housing units in the City of Denton in 2009. Of these housing units, 30 percent were built since 2000, and 43 percent were built since 1990. As expected for a city with two universities, the percentage of owner-occupied housing in Denton (about 45% Denton) is lower than state and regional levels (see Figure 7). Housing costs remain affordable in Denton with median monthly housing costs – rent or mortgage payment – at \$928. As shown in Figure 8, this is very competitive in the region.



**Figure 7. Owner-Occupied Housing as a Percent of Total.** Source: US Census Bureau



**Figure 8. Median Monthly Housing Costs (rent or mortgage).** Source: US Census Bureau

**Population Projections**

In 2008, we estimated that the City of Denton would reach 230,000 total population by 2030. In this forecast, we revise and lower those population projections to account for two factors: (1) artifacts of data provided by the US Census Bureau, and (2) the impacts of the financial crisis and subsequent recession on economic growth and housing demand.

In mid-2010, the Census Bureau released 2009 population estimates for the city of Denton, estimating the population at just over 119,000 total residents. This estimate is based on the recurring American Community Survey (ACS) conducted annually by the Census Bureau. We utilized ACS estimates in our previous forecasts. The ACS samples a portion of the population providing detailed data estimates for several demographic, housing, and economic characteristics in between decennial censuses. However, there is a key difference in the way the ACS asks respondents about their city of residence that can substantially influence population estimates, especially in smaller communities that are home to large universities. The ACS question asks respondents to identify where they have been or will live within a two month period. The decennial census of the population asks respondents their place of “usual residence.” It is easy to see how college students living off-campus may respond differently to these two questions. (Students living in on-campus housing are captured in a different category in the decennial census and the ACS.) A student responding to an ACS survey in February 2009 would probably say they expected to be living in Denton in the next two months, but when responding to the decennial census in May 2010 reported their “usual residence” as their parent’s home outside of Denton. This difference in survey questions is, in our opinion, the primary reason that the recently released population count for the city of Denton for 2010 is 113,000, over five percent less than the 2009 ACS population estimate. Therefore, we have adjusted our population projections to “rebase” for the census population count. This is done so that our baseline is consistent with data that would be reviewed by businesses and site location specialists when evaluating Denton as a location for new or relocating industries.

In addition, our previous population projections were driven in part by development planning for Rayzor Ranch and several other residential and mixed-use developments. The economic downturn and related distress in housing markets (coupled with a virtual stop to the flow of funds supporting residential real estate development) has slowed population growth in Denton. This effect will last for at least two more years as the housing market slowly regains equilibrium and the glut of distressed residential properties are cleared through the market. The North Central Texas Council of Governments (NCTCOG) is forecasting the city of Denton’s population to be 190,719 in 2030. Even though it is expected that the NCTCOG is planning to lower growth estimates in many suburban communities in the region in the next forecast release, we still believe that Denton’s growth will exceed NCTCOG projections. Recent market conditions have, in some respects, just hit the “pause” button on Denton’s growth. With a growing economy, we see the 2030 population in Denton rising to 207,334 (see Table 7).

<b>Table 7. Population and Projections</b>		
<b>City of Denton</b>		
<i>Census</i>	<b>2000</b>	80,537
	<b>2010</b>	113,383
<i>Estimates</i>	<b>2015</b>	122,302
	<b>2020</b>	147,825
	<b>2030</b>	207,334
<i>Sources: US Census Bureau, and Center for Economic Development and Research</i>		

# Industry Employment Profiles

## Overview

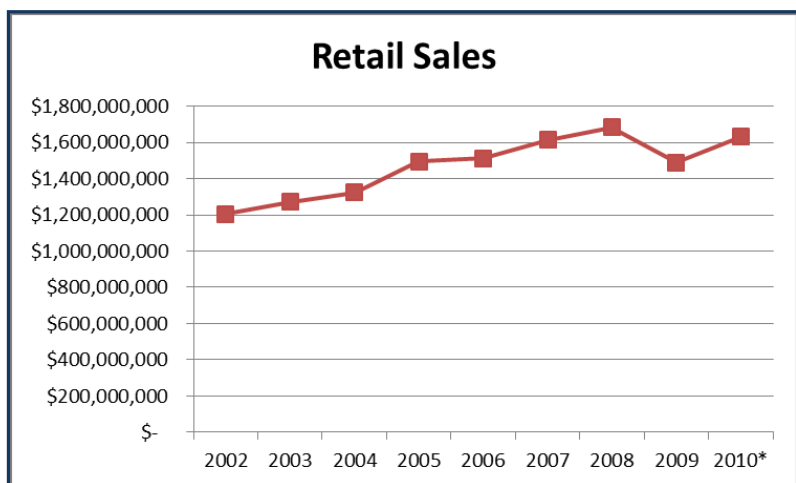
Over the past 20 years, the city of Denton has enjoyed impressive growth and business development. This includes growth and development within “traditional” Denton companies (such as Peterbilt Motors, United Copper Industries, and Sally Beauty Company International), and the more recent additions of Texas Health Presbyterian Hospital Denton, Anderson Merchandisers, Schlumberger. Several new shopping venues, such as Denton Crossing, Denton Station, Unicorn Lake, and Rayzor Ranch (commercial section) are also impacting overall business growth and development. Moreover, the expansion and upgrading of services at Denton Airport is creating potential new avenues of growth and development for the city.

The Texas Workforce Commission projects that between now and 2018 the fastest-growing industries in the north Texas region will include healthcare services, education, financial services, retail trade, and hospitality industries. Denton is certainly well positioned to capture a significant share of this growth.

The Denton Economic Development Partnership has identified five industries for special attention as the city prepares for the second decade of the 21<sup>st</sup> century, including aerospace/aviation, medical/allied health services, motor vehicle manufacturing, retail trade, and research and development services. The Texas Workforce Commission sees each of these industries as sources of on-going economic growth and development with particular opportunities in health care services, aerospace/aviation, and research and development services.

## Industry Profile – Retail Trade

Retail is a key employment sector in the city of Denton. Not only is Denton the international headquarters for Sally Beauty Supply (which employs about 500 workers), but several retailers are major employers in the city, including Wal-Mart, Sam’s Wholesale Club, Super Target, and James Wood Auto Park. In all, retail trade accounts for more than 2,000 jobs in the city of Denton. As with other measures of the local economy, retail sales in Denton showed impressive growth throughout most of the 2000s; however, as the regional economy felt the impacts of the national recession and the Golden Triangle Mall struggled with ownership issues, total retail sales in 2009 declined by 11.4 percent on a year-over-year basis. With the stabilization of the regional economy and



**Figure 9. Retail Sales in the City of Denton.**

*\*Estimated. Source: Texas Comptroller’s Office, authors’ estimates.*

With the stabilization of the regional economy and

the important addition of new retailers, including the Sam’s Club and Wal-Mart in north Denton, improving conditions for Golden Triangle Mall stores, and other retail development in the Razor Ranch town center project and elsewhere in the city, we see significant recovery in the city’s retail trade sector for 2011 and beyond (see Figure 9).

### **Industry Profile Aerospace / Aviation**

The Texas Workforce Commission expects that key occupations in the air transportation service industry will continue to see growth through 2018. Our previous forecast projected the greatest demand in the aircraft mechanics and service technicians occupation by 2014. We still project growth in that occupation, but it is no longer the area of greatest demand. Table 8 identifies the occupations main occupations associated with this industry. In addition to the occupations listed in Table 8, other related industry segments such as aircraft interior fittings and furnishings will likely also see growth, though data for these activities are typically combined with related non-aviation uses. Overall, the aviation sector is seen as an important driver of the regional economy extending beyond the area’s major airports.

<b>Occupation</b>	<b>Regional Employment</b>	<b>Projected Employment</b>	<b>Absolute Change</b>	<b>% Change</b>
Aerospace Engineers	570	720	150	26%
Aerospace Engineering & Operations Technicians	30	40	10	19%
Avionics Technicians	190	230	40	20%
Aircraft Mechanics & Service Technicians	700	830	130	18%
Air Traffic Controllers	50	60	10	25%
Airline Pilots, Copilots, and Flight Engineers	20	23	3	17%

*Source: Texas Workforce Commission*

For Denton County and the city of Denton, aerospace/aviation sector growth is expected to center on Denton Airport (DTO). Although primarily a general aviation super-reliever airport for DFW International and Dallas Love Field, Denton Airport still serves almost 30,000 customers

annually and is estimated to have a \$58.4 million dollar economic impact on the region. The airport focuses on the needs of area businesses and specializes in corporate and general aviation uses. Some area businesses that rely on the airport for corporate travel include Peterbilt, Sally Beauty, Tetra Pak, Victor Equipment, Wal-Mart, Jostens, and Hulcher Services. The airport’s success is demonstrated by its recent recognition as an “enterprise fund” for the city of Denton, which means that even though it is a municipally-owned facility, it generates sufficient revenue to be self sustaining.

### **Companies**

Along with scheduled flights and the housing of airplanes, some of Denton Airport’s economic impact is due to aviation companies utilizing the airport as a base for their operations. Due to the volume of flights conducted out of the airport, several companies now provide services such as maintenance, fueling, flight instruction, and sales. Denton Airport hosts two fixed-base operators (FBOs), Business Air and U.S. Aviation Group indicating the level of services offered at this growing air facility. Other air-focused operations at the airport include Owens Aviation, Inc., Aircraft Precision Maintenance, Longhorn Helicopters, Avionics International, and Jet Works Air Center all benefit from their location at DTO. Importantly, Schlumberger recently relocated

to Denton and were reportedly attracted to the city in part by the airport’s facilities and capabilities.

**Labor Force**

The air transportation industry employs workers with varying levels of education. Depending on the position, training may include one to four years at a vocational school, college, or specialized FAA-approved facility. In some cases, a combination thereof may be required. The University of North Texas has recently inaugurated an aviation logistics program soon to be providing area employers with workers trained in the rapidly developing field of air freight management.

**Outlook**

As the north Texas region continues to grow in population and economic activity, so too will the demand for corporate and general aviation-related services. Utilizing revenue from natural gas wells located on airport controlled property, Denton Airport has established a growing capital expansion fund that will support facility growth over the next 20 years. The fastest growing segment of the air transportation industry is not the major players in the game, but smaller entities offering specialized services. Denton Airport is perfectly positioned to benefit from this growth as both a point of access for charter and corporate passengers, as well as a provider of maintenance services. With current plans to expand development near the airport, we see DTO as becoming a major employment center for Denton over the next several years.

**Industry Profile: Health Care Services**

Denton County has experienced several years of rapid growth in the health care industry. From 2005 to 2008, Denton County’s employment in the health services industry rose by just over 25 percent to a total of about 14,600 employees at 1,033 individual firms. The North Central Texas Council of Governments lists three of City of Denton’s health care employers – Denton State School, Denton Regional Medical Center and Texas Health Presbyterian of Denton – in the top ten employers in the city with approximately 4,000 combined employees. While the passage of President Obama’s healthcare reform legislation is introducing uncertainty for healthcare providers, population growth and the aging of the population will drive industry for the foreseeable future. The Texas Workforce Commission expects substantial on-going growth in this employment sector (see Table 9).

<b>Table 9. Projected Growth in Medical Industry Employment for North Central Texas 2008 – 2018</b>				
<b>Industry</b>	<b>Regional Employment</b>	<b>Projected Employment</b>	<b>Absolute Change</b>	<b>% Change</b>
Medical & Diagnostic Labs	590	830	240	39%
Ambulatory Health Care Services	32,340	43,980	11,640	36%
Hospitals, Public & Private	15,440	19,540	4,100	26%
Nursing & Residential Care Facilities	13,380	17,760	4,290	32%
<i>Source: Texas Workforce Commission</i>				

The health services industry is supported locally by the presence of outstanding academic and research programs at Texas Woman’s University and the University of North Texas. U.S. News and World Report recently ranked TWU programs in occupational therapy, physical therapy, and health

librarianship among the nation's best. TWU has the largest doctoral nursing program and the fifth largest nursing program in the US. The University of North Texas has become one of the leading centers for autism research in the nation. These programs not only provide trained staff for Denton's health care providers, but also make the area attractive to the best health care professionals as a place to practice their trade.

## **Hospitals**

The City of Denton has become a regional medical center providing in-patient and out-patient services to residents across Denton County and portions of Cooke, Wise, Montague, and Collin counties, and beyond. The addition of Texas Health Presbyterian of Denton and the renovation and relocation of Denton Regional Medical Center has proven to be a catalyst for new health industry services in the region and is contributing greatly to the growth and diversity of the Denton economy.

Denton Regional Medical Center (DRMC) employs about 850 employees and has 300 physicians on staff making it the sixth largest employer in the City of Denton. The 208-bed center offers a full-spectrum of healthcare that includes advanced open-heart surgery and many neurosurgery programs. In recent years the hospital added the only image-guided radiation therapy in the county to the cancer center, which is designed to deliver precise forms of radiation to a tumor, sparing the surrounding normal tissue. Denton Regional also boasts the city's first accredited chest pain center.

Texas Health Presbyterian of Denton services not only the north Texas area but residents of southern Oklahoma as well. The hospital staffs about 1,000 employees and more than 300 physicians certified to practice at the hospital. The 255 all-private rooms include a 28-bed all-private emergency department, nine surgical suites, three cardiac catheterization labs, and three endoscopy suites. The hospital's campus also includes an education facility and community meeting space as well as two medical office buildings.

Hospitals are perhaps the best community and economic development targets for offering employment opportunities to the broadest cross section of area residents. Not only are there a wide range of skills and skill levels needed, most hospitals offer excellent on-going training and career advancement opportunities for administrative, professional and support staff workers.

## **Residential Care Facilities**

Denton State Supported Living Center (DSSLC), formerly Denton State School, is the fifth largest employer in the city serving as a residential home for about 600 people with some form of mental retardation or developmental disabilities. These residents require round the clock medical attention by a team of over 1,600 doctors, nurses, and staff employed at the school. Demographic data suggest that the need for state school services will continue to grow. However, current state budget difficulties are placing the funding for all state supported living centers in jeopardy. Demand for DSSLC services is rising, but, at the time this report is being written, it is uncertain if the center will be able to meet this rising demand.

Denton is also home to an increasing variety of senior and assisted-living housing complexes adding to the availability of local care options for Denton’s elder population. These include The Vintage (near Texas Health Presbyterian) and Dogwood Estates (located close to DRMC near the Unicorn Lake development).

### Specialty and Other Health Services

Each of the area’s hospitals has seen ancillary development of doctors’ offices and specialty health care services such as back treatment and plastic surgery clinics, including the 2008 addition of an acute care rehabilitation hospital in the city – Select Medical Rehab. Denton is also home to Mayhill Hospital, recently acquired by United Behavioral Health, that provides emergency

Industry	Regional Employment	Projected Employment	Absolute Change	% Change
Scientific Research & Development Services	550	720	170	30%
Other Professional, Scientific, Technical Services	4,360	5,430	1,070	24%

*Source: Texas Workforce Commission*

intervention and mental health treatment services. The city of Denton has reached the critical mass of health services activities that will attract further organic development in this industry to the city of Denton.

### Industry Profile: Research and Development Services

The impact of research and development services is not best expressed in terms of employment in companies primarily engaged in that activity. Overall, research and development services represent less about three-tenths of one percent of total state employment. Yet, research and development underpins much of the economic development strategy pursued by the state and many cities. One reason for this contradiction is a data issue. Many companies engage in research and development activities, but it is not their primary product and therefore their employment data appear in other industrial categories. More importantly, research and development is a catalyst activity that, when conducted in an economically nurturing environment, sparks innovation and created technological spillovers to a wide range of industries and activities.

The Bureau of Labor Statistics classifies research and development into three categories:

- 1) **Basic research** involves a high level of theory and is very economically risky. Many of these projects fail to produce finite results, much less result in a marketable product. Therefore, most of this research is conducted by government, universities, or nonprofit organizations.
- 2) **Applied research** is described as being the bridge between science and business. This research is gathered and directly applied to solving a problem, usually producing several options. These endeavors can range from pharmaceuticals to conducting materials to process improvements.

- 3) **Development** activities refine technologies from applied research and convert it into an immediately usable product. This component of R&D is usually conducted by private industry. According to the National Science Board, development accounts for more than half of research and development spending.

## **Research Facilities**

Perhaps the most exciting opportunity for promoting research and development activities in Denton is the growing list of investments and activities at Discovery Park at the University of North Texas. Discovery Park occupies a 550,000 square foot former Texas Instruments facility and is home to the UNT College of Engineering, College of Information, the PACCAR Technology Institute, and will soon host a technology-focused business incubator. Laboratory equipment at Discovery Park is already setting new standards for research capacity. Currently, the College of Engineering owns a focused ion beam microscope, a transmission electron microscope, and a local electrode atom probe. No other industry or academic lab in the world is using all three of these devices together for research. The atom probe is one of only two probes in the nation owned by a university. UNT also boasts the Talon Research High-Performance Computing System as a part of its research infrastructure since 2009. This supercomputer allows research across many disciplines access to supercomputer-level computational capacity that is supporting research in engineering, materials science, aeronautics, carbon sequestration, and experimental music. A clean room for specialized component materials is also under development.

Since 1901, Texas Women's University has specialized in teaching students while being a research institution. Through its several health services research centers, TWU faculty and staff researchers are addressing cutting edge questions of healthcare delivery and basic medicine.

## ***Industry Profile: Manufacturing***

While the Denton Economic Development Partnership is targeting the automotive manufacturing sector, the following briefly reviews a wider range of manufacturing activities to illustrate the diversity of activities in this sector of Denton's economy. Across the nation and Texas, manufacturing has been witness to a prolonged trend of workforce reduction. Despite employment losses, this trend does not reflect the overall state of the industry sector. Advances in technology and shifts in business practices have allowed for continued profitability for many manufacturing companies. This seeming paradox can be analyzed in Texas between the years 1997 and 2002, wherein the U.S. Census Bureau's Economic Census documented a 10.5 percent decline in manufacturing employment while "sales, receipts, or shipments" by manufacturing entities increased by 5.2 percent.

The greater north central Texas area has an abundance of manufacturing companies with Denton being home to some of the largest in the area. The Texas Workforce Commission predicts that many sub-sectors of the manufacturing industry in north central Texas will also have strong employment growth in the future. This growth will further bolster the region as a viable location for manufacturing relocation as well as fertile ground for new manufacturing ventures.

## **Companies**

Denton's economic landscape is populated with manufacturing companies large and small with several of national prominence. What follows is a sampling of this landscape:

### *Peterbilt*

One of America's leading heavy-duty truck manufacturers, Peterbilt was founded in 1939 and was for many years based in California. Due to increasing demand, Peterbilt opened a Denton, Texas manufacturing facility in 1980. The company subsequently moved its corporate headquarters and engineering department from California to Denton in 1993 and now employs 2,000.

### *United Copper*

United Copper Industries is a manufacturer of copper building wire used in both residential and commercial construction. United's 500,000-square-foot plant opened in 1998 and is a state-of-the-art production and distribution facility with 264 employees.

### *Acme Brick*

Acme Brick Company is a manufacturer and distributor of brick and masonry related construction products and materials. Now employing over 200 people, Acme's Denton plant was originally Denton Pressed Brick Company until acquired by the company in 1912.

### *Jostens*

Since 1970, Denton has served as production plant location for Minnesota-based Jostens, the national leader in class ring manufacturing. With 280 employees, the plant is capable of manufacturing 35,000 rings a week during peak times.

## **Labor Force**

As manufacturing becomes more technical, the educational requirements to produce skilled workers have increased. Most production workers need to have some type of technical training beyond high school and will be expected to continue their education while employed. A two-year technical degree from a community college is becoming a standard preference. Manufacturing plants are increasingly more efficient and responsive to technological changes in production requiring workers to be flexible in skill sets. Employers will continue to value mathematical and technical skill sets in production employees while looking for advanced business and engineer training in potential middle and upper level management positions. Overall, the number of employees needed in the manufacturing sector will continue to decline; however, there will still be employment potential as senior employees continue to retire at an accelerated pace (see Table 11).

**Table 11. Projected Growth in Manufacturing Employment for North Central Texas 2008 – 2018**

Industry	Regional Employment	Projected Employment	Absolute Change	% Change
Manufacturing	73,240	75,930	2,690	30%
Cement & Concrete Product Manufacturing	3,620	4,500	880	24%
Nonferrous Metal (Ex. Aluminum) Production & Processing	1,140	1,240	100	8%
Fabricated Metal Product Manufacturing	7,790	7,420	-370	-4%
Machinery Manufacturing	4,690	4,660	-30	-0.6%
Other General Purpose Machinery Manufacturing	2,060	1,880	-180	-8%
Motor Vehicle Body & Trailer Manufacturing	1,060	980	-80	-7%
Motor Vehicle Parts Manufacturing	2,320	1,890	-430	-18%
Other Misc. Manufacturing	1,640	1,810	170	10%

*Source: Texas Workforce Commission*

## Review of Major Developments

### ***Unicorn Lake***

Despite the Great Recession, the Unicorn Lake mixed-use commercial development in southern Denton opened and has attracted new retailer and services providers to local and area residents and visitors. The 200,000 square foot retail, restaurant, hotel, and office space development is projected to be completed in 2020. The development is designed around a 33-acre lake and park area near Denton Regional Medical Center off of Interstate 35E south of the Golden Triangle Mall.

Unicorn Lake includes The Villas of Tuscan Hills – an upscale, gated residential community of single-family homes with 106 lots priced from \$400,000-\$700,000. The development also includes a Homewood Suites hotel, medical facilities, banking center, and several restaurants. Building A, the first multi-tenant building in the project is 100% leased at the time of this report.

### ***Rayzor Ranch***

Rayzor Ranch is a 410-acre project on either side of University Drive (Highway 380), east of Interstate 35 in north Denton. After completing a sizable portion of the dirt work, much of the activity in Rayzor Ranch was delayed due to the recession and changes in the developer group. At completion, the project was expected to have over 400,000 square feet of retail space north of University Drive and about 600,000 square feet of retail space south of University Drive. As noted earlier, the recent opening of Wal-Mart, Sam’s Club, and several smaller stores at the Rayzor Ranch Towne Center has been welcomed by local residents and community leaders as the best indicators of a recovering regional economy. The Denton City Council has also given developers of this project increased flexibility in responding to current and future market demand that should speed the pace of development. This includes allowing multifamily residential units to represent a larger share of all residential properties in the development.

## ***Other Major Residential Developments***

Other projects covered in the 2008 report, including the Hills of Denton, Westview, Cole Ranch, and Hunter Ranch, have seen little or no development activity due to the economic recession. In some cases, alternative land uses may make future development problematic. For example, owners of Hunter Ranch have used much of their property for gas drilling activities during the peak development period for the Barnett Shale formation. It may be many years before the wells play out and market conditions will support the removal of gas drilling infrastructure to facilitate residential or commercial property development. However, there is plenty of developable property in Denton to support projected business and population growth.

## **Review of Major Projects**

### ***Schlumberger***

Schlumberger, a major international oil field services firm, purchased 152,000 square feet at Granite Point near Denton Airport for a regional service center. The facility, which represents a \$28 million capital investment, will perform truck-tractor and equipment maintenance and repair operations. Schlumberger expects the service center to support 70 to 100 jobs. City officials have estimated that the average wage for these jobs will be \$54,000 per year. Denton's ability to successfully compete for this facility and attract a globally-recognized company points to the city's potential for economic growth and providing quality employment opportunities for its citizens.

### ***Target***

Target Corporation is opening a new 400,000 square foot perishable and frozen foods distribution center in Denton. Located near Peterbilt, Fastenal, and TetraPak in Denton's hottest industrial development area, this prototype facility will have a more vertical design compared to other distribution centers. Scheduled to open in the 4<sup>th</sup> quarter of 2012, this \$100 million distribution center will utilize cutting edge automation technologies, but is still expected to support 115 new jobs in the community. Because of its location outside of the heavily congested urban core, easy access to north-south and east-west highways, excellent rail access, availability of specialized labor force skills through UNT's logistics management program, and proximity to major intermodal facilities, Denton is an increasingly attractive location for logistics operations.