



## **ECONOMIC IMPACT OF DOWNTOWN SAN ANTONIO: 2011**

**Study Conducted by:**

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## **Executive Summary**

This report provides an estimate of the economic impact of downtown San Antonio. As of 2011, employers in the downtown area employed approximately 64,692 people who received total wages of \$2,537,723,438. This activity resulted in an economic impact of \$10,646,349,246. Additionally, the downtown property and activities also generated a net fiscal impact to the City of San Antonio in 2011 of \$18,375,211 with revenues generated of \$98,097,995 and expenses of \$79,722,784 for basic services provided in the downtown study area.

Because of the small number of people who live in the downtown area relative to the larger population that works downtown, there is possible a substantial leakage of spending out of the downtown area as those who work downtown but live elsewhere spend their incomes in other parts of town. The magnitude of this leakage is important to know because if it is substantial, reducing the leakage could have a significant impact on the development of the area. In fact, the leakage as of 2011 was quite substantial with an estimated annual value of \$1,000,559,722. Furthermore, because of the amount of vehicle travel in which this transient population engages, there are additional costs that accrue. To provide just one example, we estimated the health costs resulting from the air pollution from the automobile travel of the workers traveling to and from downtown at \$2,728,242. Thus, reducing this leakage would not only likely have a significant impact on the development of downtown but it could reduce some substantial social costs to the community.

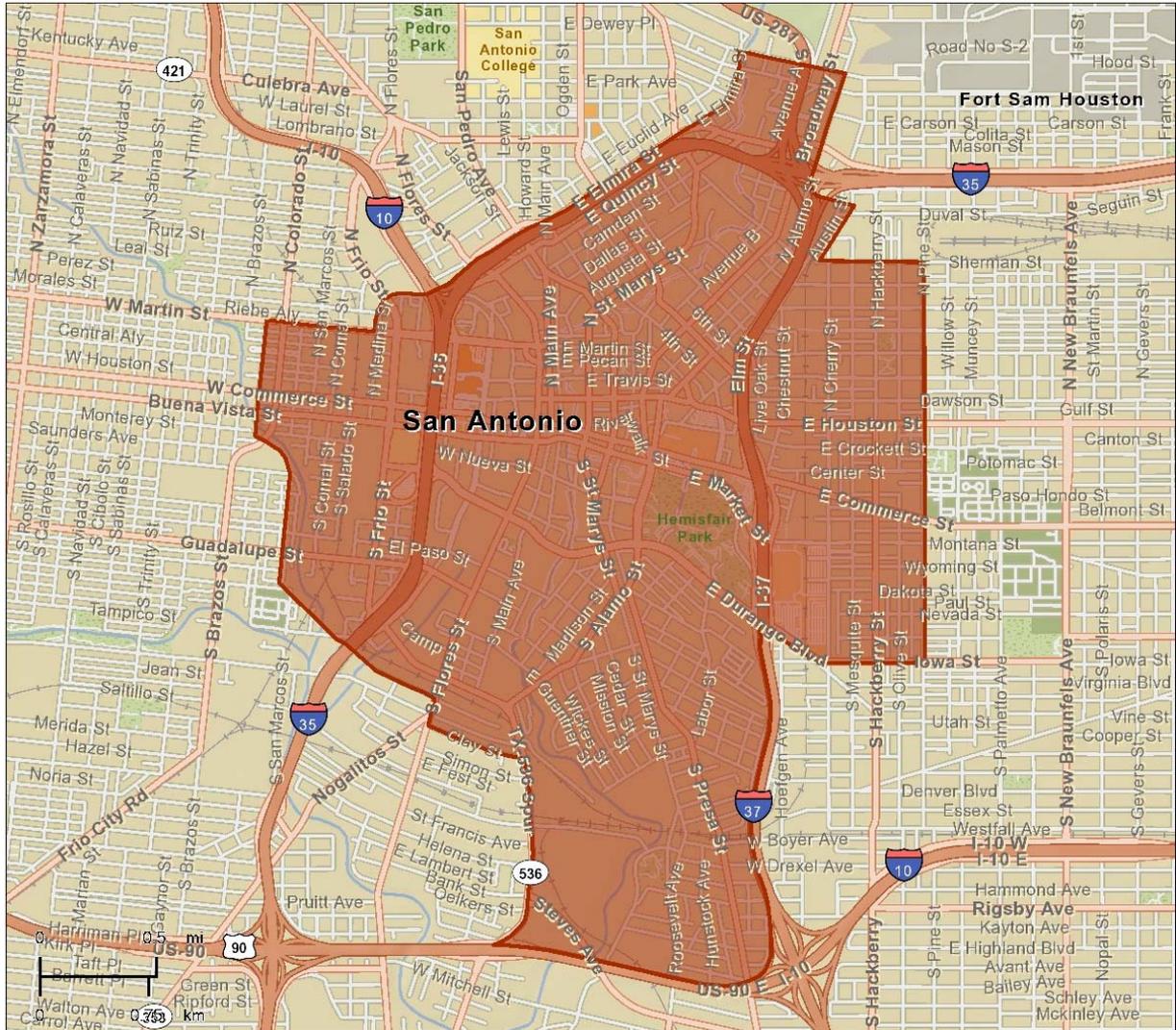
Putting all of this together, while the activities of downtown San Antonio register sizable economic and net fiscal impacts, there is a rather substantial leakage of spending out of downtown. If this leakage was at least partially contained, development would most likely be catalyzed in the area.

## **Downtown Defined**

The geographic area of analysis for this study is the downtown area as shown in the following map, mirroring the study area of the Downtown Strategic Framework Plan,. The area contains the central business district plus additional areas in all four directions. Most of the data

used for these components of the study were pulled from ESRI, which allows the user to exactly define these geographic areas.

**Map 1: Downtown Area**



### **Economic Impact**

This section describes the methodology used to calculate the economic impact of the downtown area of San Antonio in 2011. The first part of this section will briefly describe the

methodology used to calculate the economic impact. The following sections will describe the impacts from the entire downtown area and within the sub-areas of the downtown as shown previously.

### *Methodology*

Total wages paid in each industry was estimated by multiplying the total employment in the industry in downtown by the average wage paid in the industry for the San Antonio metropolitan area in 2011.<sup>1</sup> The total wages by industry was summed to provide an estimate of the total wages paid to workers in the downtown area.

Economic impact was estimated using the same methodology to calculate the economic impact of various industries within San Antonio. In order to translate the employment and wages into economic impact, a conversion factor was calculated. This conversion factor is the ratio of sales to wages by industry in the San Antonio metropolitan area as provided in the 2007 Economic Census.<sup>2</sup> These conversion factors ranged from a low of 1.89 for Administrative and Support and Waste Management and Remediation Services to 16.11 for Wholesale Trade.

Because of lack of data for some industries due mainly to disclosure issues, data from larger geographies had to be used. For instance, data for Legal Services; Mining, Quarrying, and Oil and Gas Extraction; and Construction industries were not available at the MSA level, so data for Texas was used to calculate the conversion factors in these industries. Data for the Utilities; Finance and Insurance; Information; and Real Estate are not available at either the MSA or state level geographies, so data at the U.S. level was used. No data are reported at all for Government (Public Administration), Agriculture, and Unclassified (i.e., Other – NAICS 99). For the Government and Other industries, a conversion factor of 1.00 was used, assuming that the wages equates to economic impact. For the Agriculture industry, the conversion factor for Mining, Quarrying, and Oil and Gas Extraction was used.

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<sup>1</sup> The average wage data were pulled from EMSI covered employment.

<sup>2</sup> The Economic Census is completed every five years. The 2007 Economic Census is the most recent.

Once the conversion factors were calculated, the economic impact was calculated by multiplying the wages paid for each industry for 2011 by the conversion factor for the respective industry. It is certainly reasonable to account for the multiplier effect derived from these industries, but we could not obtain reasonable estimates of the export sales in the other industries. Thus, no multiplier effects were included in these impact calculations resulting in a conservative estimate of economic impact.

#### *Economic Impact of the Entire Downtown Area*

Businesses within downtown employed 64,692 people<sup>3</sup> and paid total wages of \$2,537,723,438. The economic activity resulted in an economic impact of \$10,646,349,246 in 2011. The breakdown of these totals by industry is shown in Table 1.

**Table 1: Economic Impact by Industry in Downtown San Antonio - 2011**

<b>Industry</b>	<b>Employment</b>	<b>Total Wages</b>	<b>Economic Impact</b>
Agriculture, Forestry, Fishing and Hunting	44	\$1,259,676	\$11,017,492
Mining, Quarrying, and Oil and Gas Extraction	69	\$5,910,678	\$51,696,506
Utilities	29	\$1,857,972	\$21,013,312
Construction	728	\$32,641,336	\$180,391,233
Manufacturing	2,708	\$123,243,788	\$1,050,978,749
Wholesale Trade	1,350	\$71,764,650	\$1,155,827,154
Retail Trade	7,246	\$199,982,354	\$2,432,423,450
Transportation and Warehousing	759	\$35,811,897	\$123,470,242
Information	2,931	\$193,651,170	\$907,461,746
Finance and Insurance	1,245	\$81,582,360	\$595,820,941
Real Estate and Rental and Leasing	626	\$24,623,710	\$129,150,090
Professional, Scientific, and Technical Services	5,500	\$346,098,500	\$886,674,199
Management of Companies and Enterprises	1,235	\$129,915,825	\$129,915,825
Administrative and Support Services	1,083	\$33,328,242	\$61,928,052
Educational Services	2,056	\$76,232,368	\$225,169,000
Health Care and Social Assistance	8,852	\$350,831,316	\$959,416,910
Arts, Entertainment, and Recreation	1,256	\$33,543,992	\$105,512,307
Accommodation and Food Services	14,587	\$252,048,773	\$901,386,146
Other Services (except Public Administration)	2,804	\$72,432,928	\$246,133,990
Public Administration	9,267	\$461,496,600	\$461,496,600
Unclassified Establishments	317	\$9,465,303	\$9,465,303
<i>Total</i>	<i>64,692</i>	<i>\$2,537,723,438</i>	<i>\$10,646,349,246</i>

<sup>3</sup> Source: ESRI

The industry registering the largest impact downtown was retail trade at \$2.43 billion followed by wholesale trade (\$1.16 billion), manufacturing (\$1.05 billion), and health care and social assistance (\$959 million). The largest amount of wages paid to workers in the downtown area was in public administration (\$461 million) followed by health care and social assistance (\$350 million); professional, scientific, and technical services (\$346 million); and accommodation and food services (\$252 million). The Accommodation and Food Services industry employs the most people in the downtown area (14,587) followed by public administration (9,267) and health care and social assistance (8,852). It is worth noting that this does not mean this income was spent downtown, as many of these workers lived elsewhere in the region, so they spent most of their income outside of the downtown area. This is discussed in more detail in the section on leakage.

### **Fiscal Impact**

This section provides an estimate of the net fiscal impact of the downtown area. Additionally, the study isolated the City's General Fund net fiscal impact.

For 2011, it is estimated that the City of San Antonio received \$98,097,995 in HOT revenues, sales tax revenues, ad valorem tax revenues, revenues from CPS Energy, and revenues from contracts and facility operations. In return, the City spent \$79,722,784 for basic services to the downtown area. This resulted in a net fiscal impact to the City of \$18,375,211 in 2011.

**Table 2a: Revenues Generated to City of San Antonio by Area**

<u>Revenue Source</u>	<u>Revenues(\$)</u>
Hotel Occupancy Tax	24,686,992
Sales and Use Tax	17,171,076
Ad Valorem Tax	12,786,050
CPS Energy	6,870,240
Contracts and Facilities	9,341,798
Downtown Operations Parking Division	9,234,405
<u>Convention, Sports, and Entertainment Facilities</u>	<u>18,007,434</u>
Total	\$98,097,995

<u>Department</u>	<u>Expenses(\$)</u>
Downtown and Riverwalk Operations Division	5,114,636
Downtown Operations	1,754,085
Downtown Operations Parking Division	6,224,610
Parks Dept River Patrol Park Police	3,531,159
Public Works Street Cleaning	438,577
Police Services	19,582,832
Fire	13,253,301
<u>Convention, Sports, and Entertainment Facilities</u>	<u>29,823,584</u>
Total	\$79,722,784

**NET FISCAL IMPACT TO CITY** **\$18,375,211**

For purposes of calculating the net fiscal impact to the City's General Fund, these amounts have been adjusted to isolate those funds which directly impact the General Fund based on the organization's accounting practices. In 2011, the City of San Antonio received \$85,908,754 in revenues from the same sources and spent \$79,094,546 for the same basic downtown services. This resulted in a net fiscal impact to the City's General Fund of \$6,814,208.

**Table 2b: Revenues Generated to City of San Antonio General Fund by Area**

<u>Revenue Source</u>	<u>Revenues(\$)</u>
Hotel Occupancy Tax	20,916,488
Sales and Use Tax	17,171,076
Ad Valorem Tax	8,005,346
CPS Energy	6,870,240
Contracts and Facilities	9,341,798
Downtown Operations Parking Division	5,596,372
<u>Convention, Sports, and Entertainment Facilities</u>	<u>18,007,434</u>
Total	\$85,908,754

<u>Department</u>	<u>Expenses(\$)</u>
Downtown and Riverwalk Operations Division	5,114,636
Downtown Operations	1,754,085
Downtown Operations Parking Division	5,596,372
Parks Dept River Patrol Park Police	3,531,159
Public Works Street Cleaning	438,577
Police Services	19,582,832
Fire	13,253,301
<u>Convention, Sports, and Entertainment Facilities</u>	<u>29,823,584</u>
Total	\$79,094,546

**NET FISCAL IMPACT TO  
CITY GENERAL FUND** **\$6,814,208**

The following describes the methodologies used to calculate these revenue estimates.

*Revenues*

Hotel Occupancy Tax Revenues

In 2011, there was \$24,686,992 of hotel occupancy tax revenues that resulted from the hotel rooms within the study area.

The amount in Table 2b used to assess the impact to the General Fund only includes those hotel occupancy tax revenues used to support facilities and operations in the study area (\$20,916,488).

### Sales Tax Revenues (\$17,171,076)

Using data<sup>4</sup> for retail sales by downtown establishments in 2011, sales tax revenues generated by activities in the downtown area and from sales of downtown businesses were estimated. The data show that total retail sales in downtown in 2011 was \$952,624,916. This data is broken down by establishment category: motor vehicle and parts dealers; furniture and home furnishings stores; electronic and appliance stores; building materials, garden equipment and supply stores; food and beverage stores; health and personal care stores; gasoline stations; clothing and clothing accessories stores; sporting goods, hobby, book, and music stores; general merchandise stores; miscellaneous store retailers; nonstore retailers; and food service and drinking places. The sales tax rate of 1.875% was applied to the sales in each category with a few exceptions. All sales from the food and beverage stores were assumed to be nontaxable. For sales in health and personal care stores, the proportion of sales in health care and social assistance in San Antonio for 2011<sup>5</sup> was calculated, and this proportion was multiplied by the total amount of sales to estimate the amount of sales that were taxable. This is most likely an underestimate of the amount of taxable sales since the proportion involves all health care spending. Lastly, it was assumed that 60% of the spending in drinking places – alcoholic beverages (a subcategory of food services and drinking places) was spent on mixed beverages, so the mixed beverage tax of 1.5% was applied. These calculations yield an estimate of sales tax revenues generated from sales in the downtown area of \$17,171,076 in 2011.

### Ad Valorem Tax Revenues

For 2011, the total assessed value of private property, excluding exemptions, within the study area was \$2,790,739,428.<sup>6</sup> This resulted in ad valorem tax revenues to the City of San Antonio in 2011 of \$12,786,050<sup>7</sup>. For the General Fund impact, only the Maintenance and

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<sup>4</sup> Source: ESRI

<sup>5</sup> Source: Texas State Comptroller

<sup>6</sup> Source: Planning and Community Development Department (GIS)

<sup>7</sup> Source: Bexar County Tax Assessor

Operations component of the tax rate (0.0035419 per \$100 valuation) was applied to the total value, resulting in an impact to the General Fund of \$8,005,346.

#### CPS Energy Revenues (\$6,870,240)

The City of San Antonio receives 14% of CPS Energy revenues resulting in revenues to COSA from downtown activities of \$6,870,240.

#### Contracts and Facilities Revenues (\$9,341,798)

The City of San Antonio received \$9,341,798 from contracts and operations of the Spanish Governor's Palace, Tower of the Americas, La Villita, Market Square, other similar properties, and the river barges in 2011.<sup>8</sup>

#### Downtown Operations Parking Division

The Department of Downtown Operations Parking Division was established as a self supporting Enterprise Fund. The purpose of the Division is to operate, maintain and enforce all on-street parking meters and off-street parking spaces under the City's control in downtown San Antonio. Revenues from these operations amounted to \$9,234,405 in 2011.

For calculating the net impact to the General Fund, and because of its nature as an Enterprise Fund, the revenue data was adjusted to include only the revenues sufficient to cover operational costs, represented as \$5,596,372, and resulting in a zero net fiscal impact to the General Fund.

#### Convention, Sports and Entertainment Facilities (\$18,007,434)

Revenues from the convention, sports, and entertainment facilities are derived from the operations of the Convention Center, Municipal Auditorium, and the Alamodome and amounted to \$18,007,434.

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<sup>8</sup> Source: CVB

## *Expenses*

The expenses for the aforementioned departments are shown in the bottom half of Tables 2a and 2b for the calendar year 2011. Obviously, some of these departments operate beyond the boundaries of the downtown area, but these expenses account for only their operations in the downtown area. Total expenses amounted to \$79,722,784 in the 2011 calendar year.

## **Leakage**

Given that there are only 19,856 people residing in the downtown area<sup>9</sup> as of 2011 and the relative paucity of retail stores and other services available to people living and working downtown, it is suspected that there is a substantial amount of leakage of spending out of the downtown area. Reducing the flow of this leakage could play a big part in facilitating the development of downtown San Antonio. Thus, we have made an attempt to estimate this leakage.

The main source of data for the leakage estimates are taken from ESRI. The results are given in the following Table 3. Data estimating the average amount spent on various goods and services for the residents of the San Antonio were collected. A leakage factor was then calculated as follows:

Leakage Factor =  $1 - (\text{Industry Employment in the CBD}) / (\text{Industry Employment in San Antonio})$

The industry used in each of these calculations was chosen based on where the employment in the industry in which the business providing the good or service would have been captured under the NAICS categorization.<sup>10</sup> For example, purchases of men's apparel would have been captured under the retail services industry. Data was only available at the 2-digit NAICS level, so we were not able to get as specific to use the employment for men's apparel retail (or something

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<sup>9</sup> Source: ESRI

<sup>10</sup> Data on industry employment within the downtown area and for the city of San Antonio were pulled from ESRI.

similar), for example. Thus, the leakage factor for spending on men's apparel is the same as that for computers and hardware because these are both purchased at retail operations. Some of the categories of spending were given a leakage factor of 0 or 1. The categories of spending under travel were all given a leakage factor of 0 because all of that spending is most likely going to be spent outside of San Antonio, not just downtown. Other categories of spending, such as food at home, were assigned a leakage factor of 1 because there are no grocery stores (continuing with the food example) in the downtown area that would cause people to come downtown to buy groceries once leaving downtown.

The average amount spent per person was then multiplied by the leakage factor to derive the leakage per person. The leakage per person was then summed to get a total leakage per person annually (in this case, 2011).

We then calculated the difference between the total downtown employment<sup>11</sup> and the resident downtown population<sup>12</sup> to get an estimate of the number of people that come to work in the downtown area but leave downtown each day – the transient population, if you will. This equates to 46,389 people. This estimate of the transient population was then multiplied by the total leakage per person to get an estimate of the total annual leakage out of downtown for 2011. According to these calculations the annual leakage out of the downtown area for 2011 was estimated to be \$1,000,559,722.

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<sup>11</sup> Source: ESRI

<sup>12</sup> Source: ESRI

**Table 3: Spending Leakage from Downtown**

Category of Spending	Average Amount Spent	Leakage Factor	Leakage Per Person
<b>Apparel and Services</b>			
Men's	\$147.61	0.955747437	\$141.08
Women's	\$252.77	0.955747437	\$241.58
Children's	\$147.72	0.955747437	\$141.18
Footwear	\$105.25	0.955747437	\$100.59
Watches & Jewelry	\$87.77	0.955747437	\$83.89
Apparel Products and Services	\$93.43	0.955747437	\$89.30
<b>Computer</b>			
Computers and Hardware for Home Use	\$92.32	0.917257164	\$84.68
Software and Accessories for Home Use	\$13.27	0.917257164	\$12.17
<b>Entertainment &amp; Recreation</b>			
<b>Fees and Admissions</b>			
Membership Fees for Clubs	\$69.86	0.937820782	\$65.52
Fees for Participant Sports, excl. Trips	\$46.31	0.937820782	\$43.43
Admission to Movie/Theatre/Opera/Ballet	\$71.38	0.937820782	\$66.94
Admission to Sporting Events, excl. Trips	\$25.19	0.937820782	\$23.62
Fees for Recreational Lessons	\$50.80	0.937820782	\$47.64
Dating Services	\$0.44	0.937820782	\$0.41
<b>TV/Video/Audio</b>			
Community Antenna or Cable TV	\$382.70	0	\$0.00
Televisions	\$91.65	0.917257164	\$84.07
VCRs, Video Cameras, and DVD Players	\$10.21	0.917257164	\$9.37
Video Cassettes and DVDs	\$27.03	0.917257164	\$24.79
Video and Computer Game Hardware and Software	\$27.26	0.917257164	\$25.00
Satellite Dishes	\$0.52	0.917257164	\$0.48
Rental of Video Cassettes and DVDs	\$20.57	0.917257164	\$18.87
Streaming/Downloaded Video	\$0.69	0.917257164	\$0.63
Audio	\$66.45	0.917257164	\$60.95
Rental and Repair of TV/Radio/Audio	\$3.68	0.917257164	\$3.38
Pets	\$237.71	0.917257164	\$218.04
Toys and Games	\$68.67	0.917257164	\$62.99
Recreational Vehicles and Fees	\$109.01	1	\$109.01
Sports/Recreation/Exercise Equipment	\$60.65	0.917257164	\$55.63
Photo Equipment and Supplies	\$45.71	0.917257164	\$41.93
Reading	\$73.47	0.917257164	\$67.39
Catered Affairs	\$12.01	0.898395064	\$10.79
<b>Food</b>			
<b>Food at Home</b>			
Bakery and Cereal Products	\$306.32	1	\$306.32
Meat, Poultry, Fish, and Eggs	\$548.94	1	\$548.94
Dairy Products	\$254.32	1	\$254.32
Fruit and Vegetables	\$409.66	1	\$409.66
Snacks and Other Food at Home	\$803.05	1	\$803.05
<b>Food Away from Home</b>			
Alcoholic Beverages	\$1,606.07	0.898395064	\$1,442.89
	\$291.26	0.894280864	\$260.47

Nonalcoholic Beverages at Home	\$229.91	0.894280864	\$205.60
<b>Financial</b>			
Investments	\$682.85	0.954166667	\$651.55
Vehicle Loans	\$2,317.01	0.817910718	\$1,895.11
<b>Health</b>			
Nonprescription Drugs	\$52.80	0.892057355	\$47.10
Prescription Drugs	\$260.01	0.892057355	\$231.94
Eyeglasses and Contact Lenses	\$35.87	0.892057355	\$32.00
<b>Home</b>			
Mortgage Payment and Basics	\$3,583.97	0.817910718	\$2,931.37
Maintenance and Remodeling Services	\$748.54	0.97913037	\$732.92
Maintenance and Remodeling Materials	\$133.90	0.974601921	\$130.50
Utilities, Fuel, and Public Services	\$2,331.96	0.816271186	\$1,903.51
<b>Household Furnishings and Equipment</b>			
Household Textiles	\$61.62	0.988662791	\$60.92
Furniture	\$275.16	0.988662791	\$272.04
Floor Coverings	\$32.69	0.988662791	\$32.32
Major Appliances	\$132.07	0.988662791	\$130.57
Housewares	\$36.88	0.988662791	\$36.46
Small Appliances	\$16.31	0.988662791	\$16.13
Luggage	\$3.95	0.917257164	\$3.62
Telephones and Accessories	\$14.85	0.917257164	\$13.62
<b>Household Operations</b>			
Child Care	\$203.03	1	\$203.03
Lawn and Garden	\$170.16	1	\$170.16
Moving/Storage/Freight Express	\$29.86	1	\$29.86
Housekeeping Supplies	\$352.82	1	\$352.82
<b>Insurance</b>			
Owners and Renters Insurance	\$197.80	0.973082536	\$192.48
Vehicle Insurance	\$575.23	0.973082536	\$559.75
Life/Other Insurance	\$179.61	0.973082536	\$174.78
Health Insurance	\$976.11	0.973082536	\$949.84
Personal Care Products	\$203.13	1	\$203.13
School Books and Supplies	\$58.17	1	\$58.17
Smoking Products	\$246.61	0.894280864	\$220.54
<b>Transportation</b>			
Vehicle Purchases (Net Outlay)	\$2,048.20	1	\$2,048.20
Gasoline and Motor Oil	\$1,433.94	1	\$1,433.94
Vehicle Maintenance and Repairs	\$457.02	0.943117903	\$431.02
<b>Travel</b>			
Airline Fares	\$199.12	0	\$0.00
Lodging on Trips	\$178.08	0	\$0.00
Auto/Truck/Van Rental on Trips	\$15.54	0	\$0.00
Food and Drink on Trips	\$185.87	0	\$0.00
Total Leakage Per Person			\$22,316
Total Downtown Resident Population (2011)			19,856
Total Downtown Employment (2011)			64,692
Downtown Employment minus Downtown Resident Population			44,836
Total Downtown Leakage			\$1,000,559,722

Granted, not all of this leakage can be stopped or even reduced with the development of the downtown into an area where people live, work and play, instead of just work and occasionally play, but given the size of this annual leakage, even if a small portion of it is retained in the downtown area, it should have a considerable impact on improving the vibrancy of downtown San Antonio.

Furthermore, reducing the flow of travel, particularly by automobile, of people going to and from work could yield a sizable savings to the community. For example, a study done by Small and Kazimi<sup>13</sup> showed that the health costs of air pollution from automobiles in the Los Angeles basin is \$0.03 per vehicle mile traveled. The average travel time to work in San Antonio is 23.4 minutes and 78.8% of these commuters drive alone.<sup>14</sup> Assuming each person drove the minimal speed limit of 30 miles per hour, this would result in the average miles driven to work of 11.7 miles or a roundtrip of 23.4 miles. Assuming the average person works 110 days per year (22 weeks at 5 days per week), this would result in the average person driving 2,574 miles per year to and from work. As discussed above, there are 44,836 people driving in and out of downtown for work. Using only the percentage of those people that drive alone (78.8%), there will be 90,941,397 miles driven each year by people working in the downtown area. Based on Small and Kazimi's estimates, this would result in a health cost from this automobile travel of \$2,728,242 per year in San Antonio.<sup>15</sup>

Of course, this assumes the cost \$0.03 per vehicle mile traveled is applicable to the San Antonio area. Given the different geography of San Antonio, it might be reasonable to reduce this cost. Either way, the point is that making the downtown a place where people will want to work and live could have substantial savings on the community in reduction of health costs.

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<sup>13</sup> Kenneth Small and Camilla Kazimi, "On the Costs of Air Pollution From Motor Vehicles," *Journal of Transport Economics and Policy* 29(1) 1995, 7-32.

<sup>14</sup> The source of this data is the U.S. Census 2006-2010 American Community Survey: [http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS\\_10\\_5YR\\_DP03&prodType=table](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_5YR_DP03&prodType=table)

<sup>15</sup> To provide some frame of reference, "health costs and lost productivity related to air pollution in Houston exceed \$3 billion annually." (Todd Mitchell, "Review of Non-Oil and Gas Energy Research in the Houston-Galveston-Gulf Coast Area," Field Hearing, Committee on Science, U.S. House of Representatives, Dec. 4, 2003. It should be noted that this estimate is for all of Houston and includes many other forms and sources of air pollution than our estimate which only provides an estimate of the health costs of automobile driving of people working downtown as they drive to and from work.

This does not include the value of travel time savings and other cost reductions or benefits that could result from reducing the leakage from downtown.

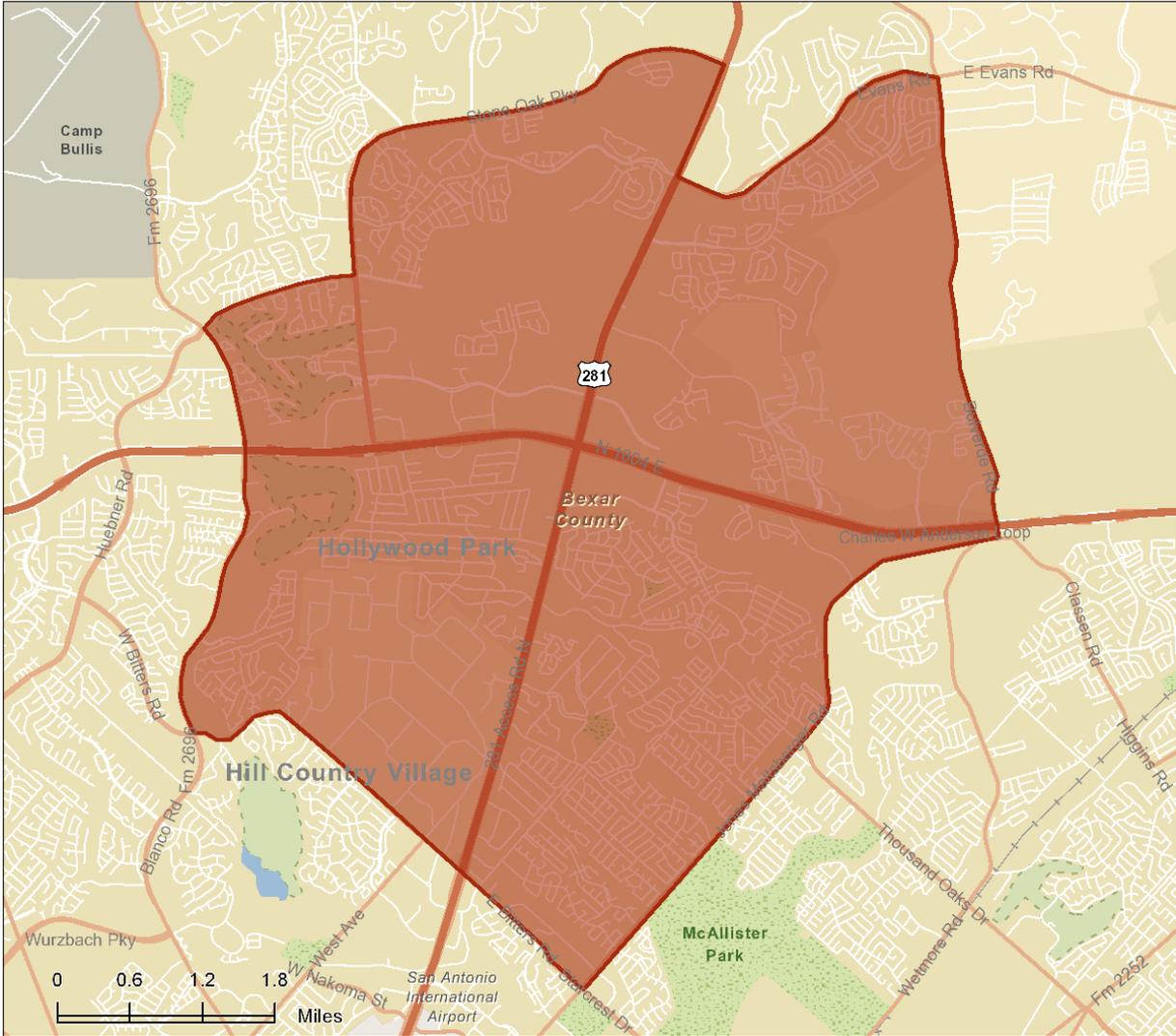
### **Comparison to Other Areas**

To provide some perspective on how the downtown area compares to other areas in the city and to the overall city, Figures 1-5 provide some comparative data across some basic socioeconomic indicators for 2010 and 2015 where such projections are available.<sup>16</sup> Specifically, the downtown area is compared to the Medical Center area, a portion of North Central San Antonio, as well as the city of San Antonio. The North Central and Medical Center areas are shown in the following graphics.

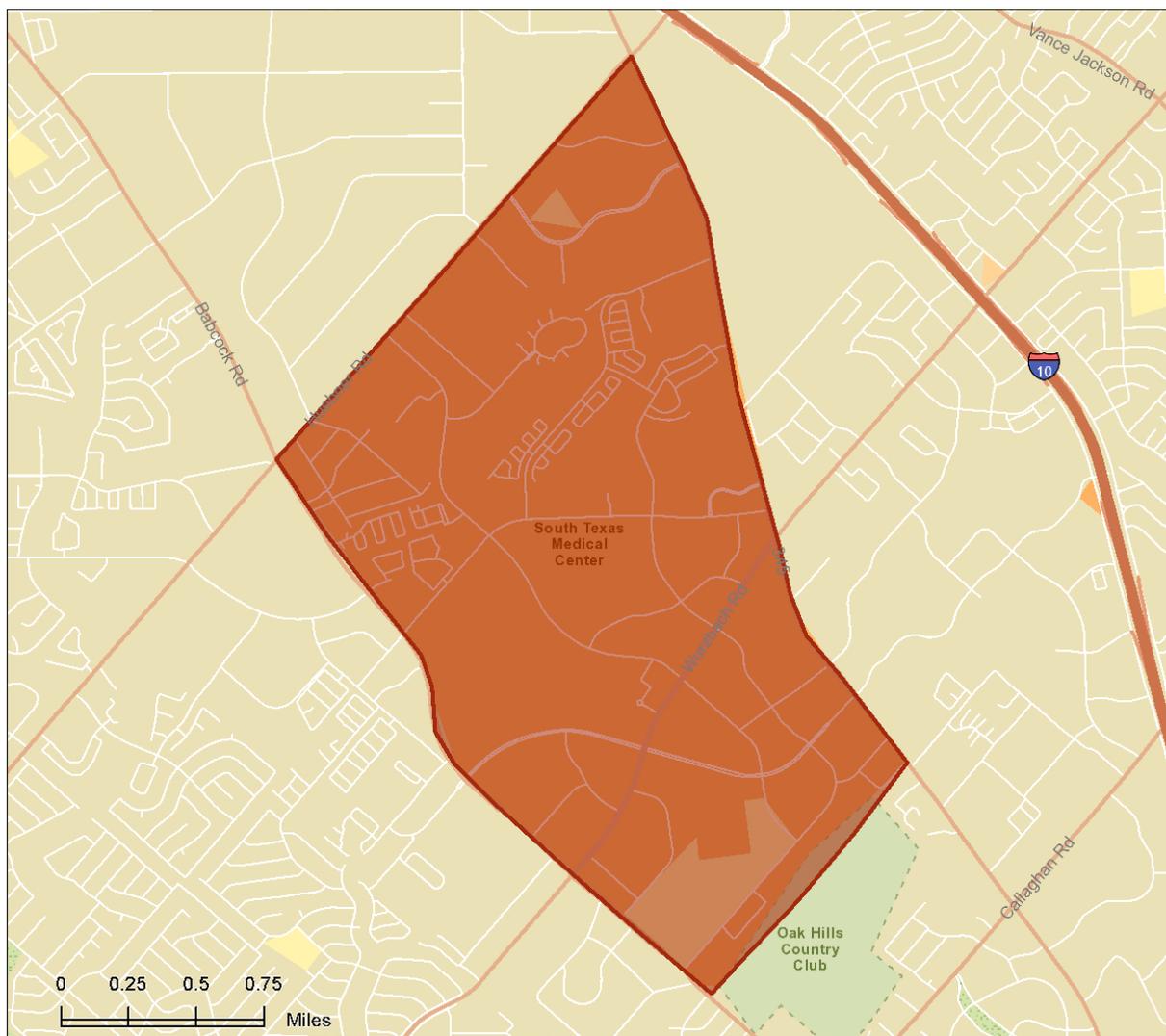
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<sup>16</sup> The source of all data in these graphs is ESRI.

**Map 2: North Central Area**



**Map 3: Medical Center Area**

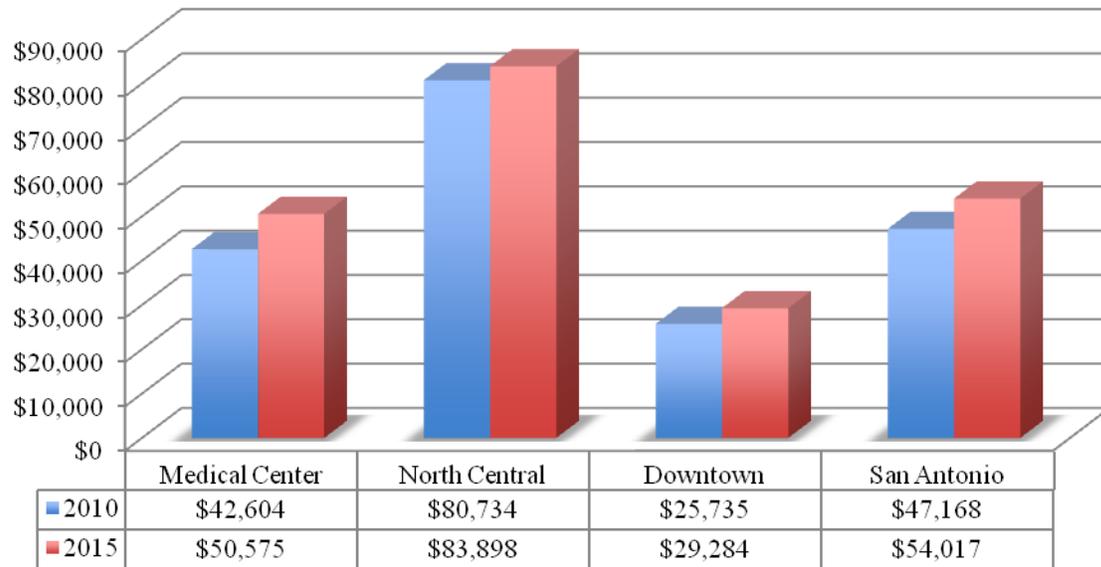


The North Central has the highest median household income at \$80,734 with the Downtown area showing the lowest income levels in 2010 at \$25,735. This compares to an income level across the city of \$47,168. This is not too surprising once one looks at the numbers across these areas for educational attainment, unemployment rate, and occupations. The Medical Center and North Central areas have by far the highest proportion of the population working in white collar positions (e.g., professional and business services, management, sales) at 80.2% and 78.0%, respectively. The highest proportion of workers in the services occupations is in the Downtown area at 31.1%. This same area has the highest proportion of workers in blue collar

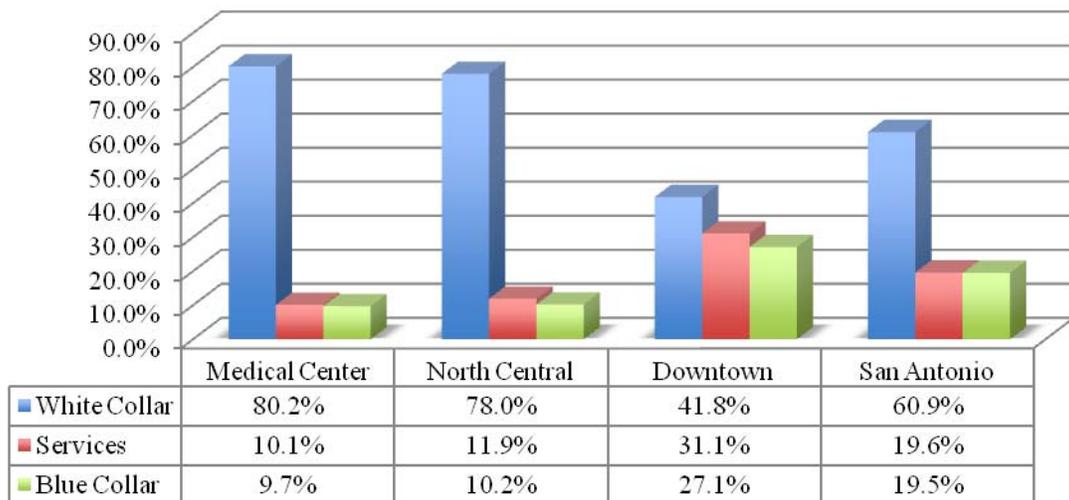
occupations (27.1%). Of course, this is driven by educational attainment, so it is not surprising that the highest percentage of the population with bachelor's or master's/professional/doctorate degrees is in the Medical Center and North Central areas by far. Of the population over 25 years of age living downtown, 40.7% do not have a high school diploma, twice the rate for the entire city and seven to eight times the rate in the Medical Center and North Central areas. Research has clearly shown that those with higher educational attainment levels have more job prospects and are not as adversely affected by economic downturns, especially as it relates to unemployment. This is supported in these comparisons as the North Central had the lowest unemployment rate in 2010 at 5.3% with the 15.4% rate in the Downtown area being the highest – six percentage points higher than the rate for the city.

Looking briefly at the housing statistics, the numbers are pretty much what should be expected given the other socioeconomic characteristics of these areas. One indicator that might seem out of sorts is the very high percentage of renter-occupied housing units in the Medical Center area, but upon further reflection, most of the housing in this area are apartments and condominiums, which are most likely occupied by many of the students attending UTHSCSA or working through their residencies or internships. The highest percentage of owner-occupied housing is in the North Central area (64.4%) by far. The Downtown area has an owner-occupied rate of 25.5%, and the area also has the highest rate of vacant housing units at 16.1%.

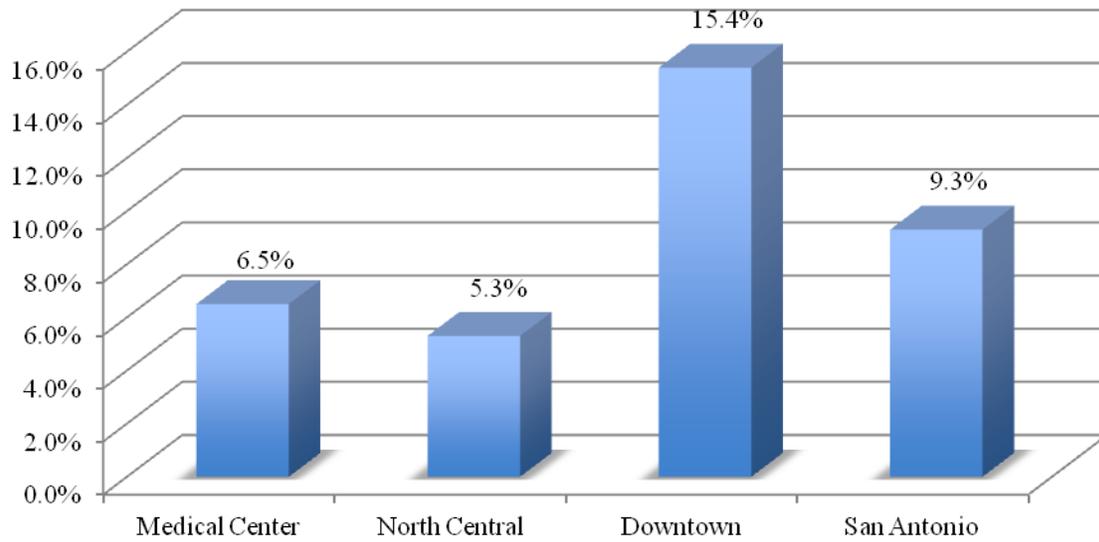
**Figure 1: Median Household Income**



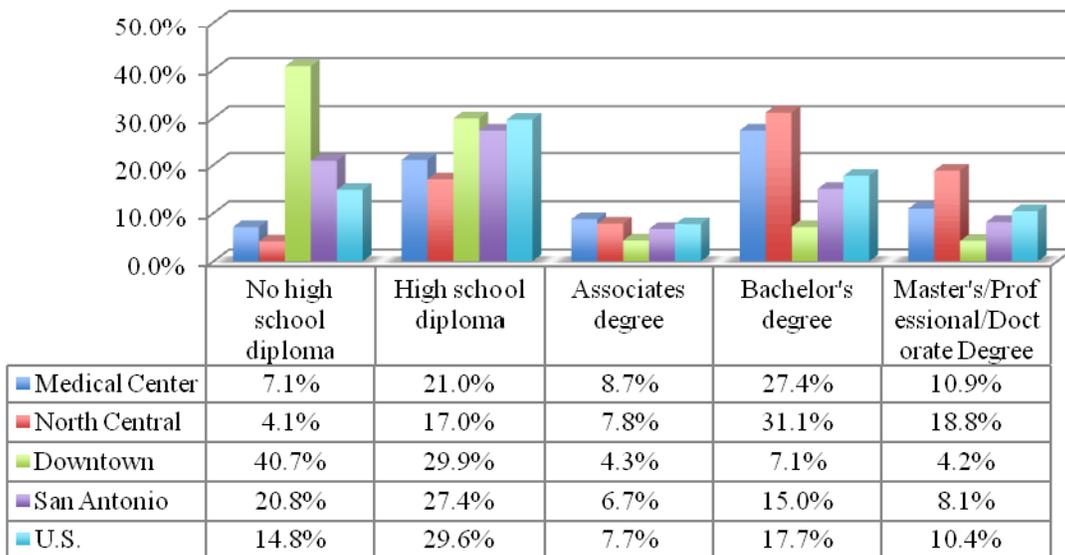
**Figure 2: Employed Population by Occupation (2010)**



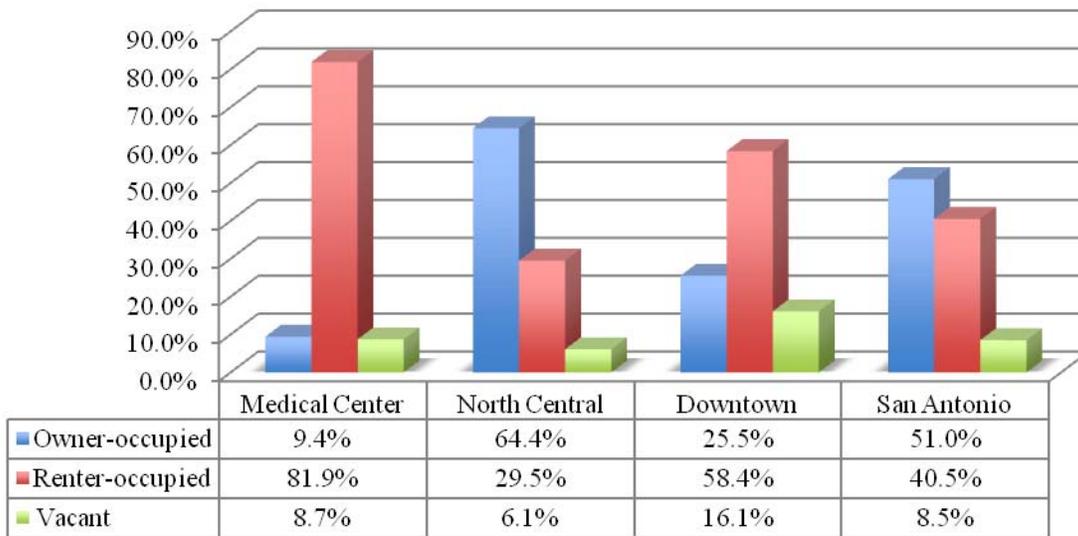
**Figure 3: Unemployment Rate - 2010**



**Figure 4: Educational Attainment  
% Population Aged 25+ (2010)**



**Figure 5: Housing Status  
% Total Housing Units (2010)**



**Conclusion**

The conclusion to be derived from all of these pieces of data is that although the downtown area exerts a sizable economic impact on San Antonio, it appears to be an area in need of development that could potentially reduce some of the leakage out of the area and lead to a more vibrant inner-city core and a more healthy overall San Antonio.

Arguably, the most important factor in the development of downtown is the rather large leakage in spending out of the area. If some of this leakage could be captured, it would most likely catalyze development in downtown San Antonio. This begs the question of what will happen in the other areas where this spending occurs today if some of the downtown leakage is stopped. It is possible that these areas could see some decline, but it is not necessarily the case that this is a zero-sum game. As the overall San Antonio economy continues to grow, it is certainly possible, maybe even likely, that the areas from where the leakage is shifted back to downtown could also continue to grow while the downtown simultaneously develops.

## **APPENDIX A: INDUSTRY DEFINITIONS BY NAICS CODE<sup>17</sup>**

This appendix provides definitions of each of the industries used in this study as provided by the U.S. Census Bureau. The number before each industry title is the NAICS code.

### **72 Accommodation and Food Services**

The Accommodation and Food Services sector comprises establishments providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption. The sector includes both accommodation and food services establishments because the two activities are often combined at the same establishment.

Excluded from this sector are civic and social organizations; amusement and recreation parks; theaters; and other recreation or entertainment facilities providing food and beverage services.

### **56 Administrative and Support and Waste Management and Remediation Services**

The Administrative and Support and Waste Management and Remediation Services sector comprises establishments performing routine support activities for the day-to-day operations of other organizations. These essential activities are often undertaken in-house by establishments in many sectors of the economy. The establishments in this sector specialize in one or more of these support activities and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include: office administration, hiring and placing of personnel, document preparation and similar clerical services, solicitation, collection, security and surveillance services, cleaning, and waste disposal services.

The administrative and management activities performed by establishments in this sector are typically on a contract or fee basis. These activities may also be performed by establishments

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<sup>17</sup> Source: U.S. Census Bureau

that are part of the company or enterprise. However, establishments involved in administering, overseeing, and managing other establishments of the company or enterprise, are classified in Sector 55, Management of Companies and Enterprises. These establishments normally undertake the strategic and organizational planning and decision making role of the company or enterprise. Government establishments engaged in administering, overseeing, and managing governmental programs are classified in Sector 92, Public Administration.

## **11 Agriculture, Forestry, Fishing and Hunting**

The Agriculture, Forestry, Fishing and Hunting sector comprises establishments primarily engaged in growing crops, raising animals, harvesting timber, and harvesting fish and other animals from a farm, ranch, or their natural habitats.

The establishments in this sector are often described as farms, ranches, dairies, greenhouses, nurseries, orchards, or hatcheries. A farm may consist of a single tract of land or a number of separate tracts which may be held under different tenures. For example, one tract may be owned by the farm operator and another rented. It may be operated by the operator alone or with the assistance of members of the household or hired employees, or it may be operated by a partnership, corporation, or other type of organization. When a landowner has one or more tenants, renters, croppers, or managers, the land operated by each is considered a farm.

The sector distinguishes two basic activities: agricultural production and agricultural support activities. Agricultural production includes establishments performing the complete farm or ranch operation, such as farm owner-operators, tenant farm operators, and sharecroppers. Agricultural support activities include establishments that perform one or more activities associated with farm operation, such as soil preparation, planting, harvesting, and management, on a contract or fee basis.

Excluded from the Agriculture, Forestry, Hunting and Fishing sector are establishments primarily engaged in agricultural research and establishments primarily engaged in administering programs for regulating and conserving land, mineral, wildlife, and forest use. These establishments are classified in Industry 54171 - Research and Development in the Physical,

Engineering, and Life Sciences; and Industry 92412 - Administration of Conservation Programs, respectively.

## **71 Arts, Entertainment, and Recreation**

The Arts, Entertainment, and Recreation sector includes a wide range of establishments that operate facilities or provide services to meet varied cultural, entertainment, and recreational interests of their patrons. This sector comprises (1) establishments that are involved in producing, promoting, or participating in live performances, events, or exhibits intended for public viewing; (2) establishments that preserve and exhibit objects and sites of historical, cultural, or educational interest; and (3) establishments that operate facilities or provide services that enable patrons to participate in recreational activities or pursue amusement, hobby, and leisure-time interests.

Some establishments that provide cultural, entertainment, or recreational facilities and services are classified in other sectors. Excluded from this sector are: (1) establishments that provide both accommodations and recreational facilities, such as hunting and fishing camps and resort and casino hotels are classified in Subsector 721, Accommodation; (2) restaurants and night clubs that provide live entertainment in addition to the sale of food and beverages are classified in Subsector 722, Food Services and Drinking Places; (3) motion picture theaters, libraries and archives, and publishers of newspapers, magazines, books, periodicals, and computer software are classified in Sector 51, Information; and (4) establishments using transportation equipment to provide recreational and entertainment services, such as those operating sightseeing buses, dinner cruises, or helicopter rides are classified in Subsector 487, Scenic and Sightseeing Transportation.

## **23 Construction**

The construction sector comprises establishments primarily engaged in the construction of buildings or engineering projects (e.g., highways and utility systems). Establishments primarily engaged in the preparation of sites for new construction and establishments primarily engaged in subdividing land for sale as building sites also are included in this sector.

Construction work done may include new work, additions, alterations, or maintenance and repairs. Activities of these establishments generally are managed at a fixed place of business, but they usually perform construction activities at multiple project sites. Production responsibilities for establishments in this sector are usually specified in (1) contracts with the owners of construction projects (prime contracts) or (2) contracts with other construction establishments (subcontracts).

Establishments primarily engaged in contracts that include responsibility for all aspects of individual construction projects are commonly known as general contractors, but also may be known as design-builders, construction managers, turnkey contractors, or (in cases where two or more establishments jointly secure a general contract) joint-venture contractors. Construction managers that provide oversight and scheduling only (i.e., agency) as well as construction managers that are responsible for the entire project (i.e., at risk) are included as general contractor type establishments. Establishments of the "general contractor type" frequently arrange construction of separate parts of their projects through subcontracts with other construction establishments.

Establishments primarily engaged in activities to produce a specific component (e.g., masonry, painting, and electrical work) of a construction project are commonly known as specialty trade contractors. Activities of specialty trade contractors are usually subcontracted from other construction establishments but, especially in remodeling and repair construction, the work may be done directly for the owner of the property.

Establishments primarily engaged in activities to construct buildings to be sold on sites that they own are known as operative builders, but also may be known as speculative builders or merchant builders. Operative builders produce buildings in a manner similar to general contractors, but their production processes also include site acquisition and securing of financial backing. Operative builders are most often associated with the construction of residential buildings. Like general contractors, they may subcontract all or part of the actual construction work on their buildings.

There are substantial differences in the types of equipment, work force skills, and other inputs required by establishments in this sector. To highlight these differences and variations in the underlying production functions, this sector is divided into three subsectors.

Subsector 236, Construction of Buildings, comprises establishments of the general contractor type and operative builders involved in the construction of buildings. Subsector 237, Heavy and Civil Engineering Construction, comprises establishments involved in the construction of engineering projects. Subsector 238, Specialty Trade Contractors, comprises establishments engaged in specialty trade activities generally needed in the construction of all types of buildings.

Force account construction is construction work performed by an enterprise primarily engaged in some business other than construction for its own account and use, using employees of the enterprise. This activity is not included in the construction sector unless the construction work performed is the primary activity of a separate establishment of the enterprise. The installation and the ongoing repair and maintenance of telecommunications and utility networks is excluded from construction when the establishments performing the work are not independent contractors. Although a growing proportion of this work is subcontracted to independent contractors in the Construction Sector, the operating units of telecommunications and utility companies performing this work are included with the telecommunications or utility activities.

## **61 Educational Services**

The Educational Services sector comprises establishments that provide instruction and training in a wide variety of subjects. This instruction and training is provided by specialized establishments, such as schools, colleges, universities, and training centers. These establishments may be privately owned and operated for profit or not for profit, or they may be publicly owned and operated. They may also offer food and accommodation services to their students.

Educational services are usually delivered by teachers or instructors that explain, tell, demonstrate, supervise, and direct learning. Instruction is imparted in diverse settings, such as educational institutions, the workplace, or the home through correspondence, television, or other means. It can be adapted to the particular needs of the students, for example sign language can

replace verbal language for teaching students with hearing impairments. All industries in the sector share this commonality of process, namely, labor inputs of instructors with the requisite subject matter expertise and teaching ability.

## **52 Finance and Insurance**

The Finance and Insurance sector comprises establishments primarily engaged in financial transactions (transactions involving the creation, liquidation, or change in ownership of financial assets) and/or in facilitating financial transactions. Three principal types of activities are identified:

1. Raising funds by taking deposits and/or issuing securities and, in the process, incurring liabilities. Establishments engaged in this activity use raised funds to acquire financial assets by making loans and/or purchasing securities. Putting themselves at risk, they channel funds from lenders to borrowers and transform or repackage the funds with respect to maturity, scale, and risk. This activity is known as financial intermediation.
2. Pooling of risk by underwriting insurance and annuities. Establishments engaged in this activity collect fees, insurance premiums, or annuity considerations; build up reserves; invest those reserves; and make contractual payments. Fees are based on the expected incidence of the insured risk and the expected return on investment.
3. Providing specialized services facilitating or supporting financial intermediation, insurance, and employee benefit programs.

In addition, monetary authorities charged with monetary control are included in this sector.

The subsectors, industry groups, and industries within the NAICS Finance and Insurance sector are defined on the basis of their unique production processes. As with all industries, the production processes are distinguished by their use of specialized human resources and specialized physical capital. In addition, the way in which these establishments acquire and allocate financial capital, their source of funds, and the use of those funds provides a third basis for distinguishing characteristics of the production process. For instance, the production process

in raising funds through deposit-taking is different from the process of raising funds in bond or money markets. The process of making loans to individuals also requires different production processes than does the creation of investment pools or the underwriting of securities.

Most of the Finance and Insurance subsectors contain one or more industry groups of (1) intermediaries with similar patterns of raising and using funds and (2) establishments engaged in activities that facilitate, or are otherwise related to, that type of financial or insurance intermediation. Industries within this sector are defined in terms of activities for which a production process can be specified, and many of these activities are not exclusive to a particular type of financial institution. To deal with the varied activities taking place within existing financial institutions, the approach is to split these institutions into components performing specialized services. This requires defining the units engaged in providing those services and developing procedures that allow for their delineation. These units are the equivalents for finance and insurance of the establishments defined for other industries.

The output of many financial services, as well as the inputs and the processes by which they are combined, cannot be observed at a single location and can only be defined at a higher level of the organizational structure of the enterprise. Additionally, a number of independent activities that represent separate and distinct production processes may take place at a single location belonging to a multilocation financial firm. Activities are more likely to be homogeneous with respect to production characteristics than are locations, at least in financial services. The classification defines activities broadly enough that it can be used both by those classifying by location and by those employing a more top-down approach to the delineation of the establishment.

Establishments engaged in activities that facilitate, or are otherwise related to, the various types of intermediation have been included in individual subsectors, rather than in a separate subsector dedicated to services alone because these services are performed by intermediaries, as well as by specialist establishments, the extent to which the activity of the intermediaries can be separately identified is not clear.

The Finance and Insurance sector has been defined to encompass establishments primarily engaged in financial transactions; that is, transactions involving the creation, liquidation, change in ownership of financial assets; or in facilitating financial transactions. Financial industries are extensive users of electronic means for facilitating the verification of financial balances, authorizing transactions, transferring funds to and from transactors' accounts, notifying banks (or credit card issuers) of the individual transactions, and providing daily summaries. Since these transaction processing activities are integral to the production of finance and insurance services, establishments that principally provide a financial transaction processing service are classified to this sector, rather than to the data processing industry in the Information sector.

Legal entities that hold portfolios of assets on behalf of others are significant and data on them are required for a variety of purposes. Thus for NAICS, these funds, trusts, and other financial vehicles are the fifth subsector of the Finance and Insurance sector. These entities earn interest, dividends, and other property income, but have little or no employment and no revenue from the sale of services. Separate establishments and employees devoted to the management of funds are classified in Industry Group 5239, Other Financial Investment Activities.

## **62 Health Care and Social Assistance**

The Health Care and Social Assistance sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. The industries in this sector are arranged on a continuum starting with those establishments providing medical care exclusively, continuing with those providing health care and social assistance, and finally finishing with those providing only social assistance. The services provided by establishments in this sector are delivered by trained professionals. All industries in the sector share this commonality of process, namely, labor inputs of health practitioners or social workers with the requisite expertise. Many of the industries in the sector are defined based on the educational degree held by the practitioners included in the industry.

Excluded from this sector are aerobic classes in Subsector 713, Amusement, Gambling and Recreation Industries and nonmedical diet and weight reducing centers in Subsector 812, Personal and Laundry Services. Although these can be viewed as health services, these services are not typically delivered by health practitioners.

## **51 Information**

The Information sector comprises establishments engaged in the following processes: (a) producing and distributing information and cultural products, (b) providing the means to transmit or distribute these products as well as data or communications, and (c) processing data.

The main components of this sector are the publishing industries, including software publishing, and both traditional publishing and publishing exclusively on the Internet; the motion picture and sound recording industries; the broadcasting industries, including traditional broadcasting and those broadcasting exclusively over the Internet; the telecommunications industries; the industries known as Internet service providers and web search portals, data processing industries, and the information services industries.

The expressions "information age" and "global information economy" are used with considerable frequency today. The general idea of an "information economy" includes both the notion of industries primarily producing, processing, and distributing information, as well as the idea that every industry is using available information and information technology to reorganize and make themselves more productive.

For the purpose of developing NAICS, it is the transformation of information into a commodity that is produced and distributed by a number of growing industries that is at issue. The Information sector groups three types of establishments: (1) those engaged in producing and distributing information and cultural products; (2) those that provide the means to transmit or distribute these products as well as data or communications; and (3) those that process data. Cultural products are those that directly express attitudes, opinions, ideas, values, and artistic creativity; provide entertainment; or offer information and analysis concerning the past and

present. Included in this definition are popular, mass-produced, products as well as cultural products that normally have a more limited audience, such as poetry books, literary magazines, or classical records.

The unique characteristics of information and cultural products, and of the processes involved in their production and distribution, distinguish the Information sector from the goods-producing and service-producing sectors. Some of these characteristics are:

1. Unlike traditional goods, an "information or cultural product," such as a newspaper on-line or television program, does not necessarily have tangible qualities, nor is it necessarily associated with a particular form. A movie can be shown at a movie theater, on a television broadcast, through video-on-demand or rented at a local video store. A sound recording can be aired on radio, embedded in multimedia products, or sold at a record store.
2. Unlike traditional services, the delivery of these products does not require direct contact between the supplier and the consumer.
3. The value of these products to the consumer lies in their informational, educational, cultural, or entertainment content, not in the format in which they are distributed. Most of these products are protected from unlawful reproduction by copyright laws.
4. The intangible property aspect of information and cultural products makes the processes involved in their production and distribution very different from goods and services. Only those possessing the rights to these works are authorized to reproduce, alter, improve, and distribute them. Acquiring and using these rights often involves significant costs. In addition, technology is revolutionizing the distribution of these products. It is possible to distribute them in a physical form, via broadcast, or on-line.
5. Distributors of information and cultural products can easily add value to the products they distribute. For instance, broadcasters add advertising not contained in the original product. This capacity means that unlike traditional distributors, they derive revenue not from sale of the distributed product to the final consumer, but from those who pay for the privilege of adding information to the original product. Similarly, a directory and mailing list publisher can acquire

the rights to thousands of previously published newspaper and periodical articles and add new value by providing search and software and organizing the information in a way that facilitates research and retrieval. These products often command a much higher price than the original information.

The distribution modes for information commodities may either eliminate the necessity for traditional manufacture, or reverse the conventional order of manufacture-distribute: A newspaper distributed on-line, for example, can be printed locally or by the final consumer. Similarly, it is anticipated that packaged software, which today is mainly bought through the traditional retail channels, will soon be available mainly on-line. The NAICS Information sector is designed to make such economic changes transparent as they occur, or to facilitate designing surveys that will monitor the new phenomena and provide data to analyze the changes.

Many of the industries in the NAICS Information sector are engaged in producing products protected by copyright law, or in distributing them (other than distribution by traditional wholesale and retail methods). Examples are traditional publishing industries, software and directory and mailing list publishing industries, and film and sound industries. Broadcasting and telecommunications industries and information providers and processors are also included in the Information sector, because their technologies are so closely linked to other industries in the Information sector.

## **55 Management of Companies and Enterprises**

The Management of Companies and Enterprises sector comprises (1) establishments that hold the securities of (or other equity interests in) companies and enterprises for the purpose of owning a controlling interest or influencing management decisions or (2) establishments (except government establishments) that administer, oversee, and manage establishments of the company or enterprise and that normally undertake the strategic or organizational planning and decisionmaking role of the company or enterprise. Establishments that administer, oversee, and manage may hold the securities of the company or enterprise.

Establishments in this sector perform essential activities that are often undertaken, in-house, by establishments in many sectors of the economy. By consolidating the performance of these activities of the enterprise at one establishment, economies of scale are achieved.

Government establishments primarily engaged in administering, overseeing, and managing governmental programs are classified in Sector 92, Public Administration. Establishments primarily engaged in providing a range of day-to-day office administrative services, such as financial planning, billing and recordkeeping, personnel, and physical distribution and logistics are classified in Industry 56111 - Office Administrative Services.

### **31-33 Manufacturing**

The Manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing, except in cases where the activity is appropriately classified in Sector 23, Construction.

Establishments in the Manufacturing sector are often described as plants, factories, or mills and characteristically use power-driven machines and materials-handling equipment. However, establishments that transform materials or substances into new products by hand or in the worker's home and those engaged in selling to the general public products made on the same premises from which they are sold, such as bakeries, candy stores, and custom tailors, may also be included in this sector. Manufacturing establishments may process materials or may contract with other establishments to process their materials for them. Both types of establishments are included in manufacturing.

The materials, substances, or components transformed by manufacturing establishments are raw materials that are products of agriculture, forestry, fishing, mining, or quarrying as well as products of other manufacturing establishments. The materials used may be purchased directly from producers, obtained through customary trade channels, or secured without recourse to the market by transferring the product from one establishment to another, under the same ownership. The new product of a manufacturing establishment may be finished in the sense that it is ready for utilization or consumption, or it may be semifinished to become an input for an establishment

engaged in further manufacturing. For example, the product of the alumina refinery is the input used in the primary production of aluminum; primary aluminum is the input to an aluminum wire drawing plant; and aluminum wire is the input for a fabricated wire product manufacturing establishment.

The subsectors in the Manufacturing sector generally reflect distinct production processes related to material inputs, production equipment, and employee skills. In the machinery area, where assembling is a key activity, parts and accessories for manufactured products are classified in the industry of the finished manufactured item when they are made for separate sale. For example, a replacement refrigerator door would be classified with refrigerators and an attachment for a piece of metal working machinery would be classified with metal working machinery. However, components, input from other manufacturing establishments, are classified based on the production function of the component manufacturer. For example, electronic components are classified in Subsector 334, Computer and Electronic Product Manufacturing and stampings are classified in Subsector 332, Fabricated Metal Product Manufacturing.

Manufacturing establishments often perform one or more activities that are classified outside the Manufacturing sector of NAICS. For instance, almost all manufacturing has some captive research and development or administrative operations, such as accounting, payroll, or management. These captive services are treated the same as captive manufacturing activities. When the services are provided by separate establishments, they are classified to the NAICS sector where such services are primary, not in manufacturing.

The boundaries of manufacturing and the other sectors of the classification system can be somewhat blurry. The establishments in the manufacturing sector are engaged in the transformation of materials into new products. Their output is a new product. However, the definition of what constitutes a new product can be somewhat subjective. As clarification, the following activities are considered manufacturing in NAICS: Milk bottling and pasteurizing; Water bottling and processing; Fresh fish packaging (oyster shucking, fish filleting); Apparel jobbing (assigning of materials to contract factories or shops for fabrication or other contract operations) as well as contracting on materials owned by others; Printing and related activities; Ready-mixed concrete production; Leather converting; Grinding of lenses to prescription; Wood

preserving; Electroplating, plating, metal heat treating, and polishing for the trade; Lapidary work for the trade; Fabricating signs and advertising displays; Rebuilding or remanufacturing machinery (i.e., automotive parts) Ship repair and renovation; Machine shops; and Tire retreading. Conversely, there are activities that are sometimes considered manufacturing, but which for NAICS are classified in another sector (i.e., not classified as manufacturing). They include: 1.

Logging, classified in Sector 11, Agriculture, Forestry, Fishing and Hunting is considered a harvesting operation; 2. The beneficiating of ores and other minerals, classified in Sector 21, Mining, is considered part of the activity of mining; 3. The construction of structures and fabricating operations performed at the site of construction by contractors, is classified in Sector 23, Construction; 4. Establishments engaged in breaking of bulk and redistribution in smaller lots, including packaging, repackaging, or bottling products, such as liquors or chemicals; the customized assembly of computers; sorting of scrap; mixing paints to customer order; and cutting metals to customer order, classified in Sector 42, Wholesale Trade or Sector 44-45, Retail Trade, produce a modified version of the same product, not a new product; and 5.

Publishing and the combined activity of publishing and printing, classified in Sector 51, Information, perform the transformation of information into a product where as the value of the product to the consumer lies in the information content, not in the format in which it is distributed (i.e., the book or software diskette).

## **21 Mining**

The Mining sector comprises establishments that extract naturally occurring mineral solids, such as coal and ores; liquid minerals, such as crude petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and flotation), and other preparation customarily performed at the mine site, or as a part of mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include

establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis (except mine site preparation and construction of oil/gas pipelines).

Establishments in the Mining sector are grouped and classified according to the natural resource mined or to be mined. Industries include establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. Beneficiation is the process whereby the extracted material is reduced to particles that can be separated into mineral and waste, the former suitable for further processing or direct use. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. In contrast, manufacturing operations primarily use chemical and electrochemical processes, such as electrolysis and distillation. However, some treatments, such as heat treatments, take place in both the beneficiation and the manufacturing (i.e., smelting/refining) stages. The range of preparation activities varies by mineral and the purity of any given ore deposit. While some minerals, such as petroleum and natural gas, require little or no preparation, others are washed and screened, while yet others, such as gold and silver, can be transformed into bullion before leaving the mine site.

Mining, beneficiating, and manufacturing activities often occur in a single location. Separate receipts will be collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals, beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment. A mine that manufactures a small amount of finished products will be classified in Sector 21, Mining. An establishment that mines whose primary output is a more finished manufactured product will be classified in Sector 31-33, Manufacturing.

## **81 Other Services (except Public Administration)**

The Other Services (except Public Administration) sector comprises establishments engaged in providing services not specifically provided for elsewhere in the classification system. Establishments in this sector are primarily engaged in activities, such as equipment and

machinery repairing, promoting or administering religious activities, grantmaking, advocacy, and providing drycleaning and laundry services, personal care services, death care services, pet care services, photofinishing services, temporary parking services, and dating services.

Private households that engage in employing workers on or about the premises in activities primarily concerned with the operation of the household are included in this sector.

Excluded from this sector are establishments primarily engaged in retailing new equipment and also performing repairs and general maintenance on equipment. These establishments are classified in Sector 44-45, Retail Trade.

## **54 Professional, Scientific, and Technical Services**

The Professional, Scientific, and Technical Services sector comprises establishments that specialize in performing professional, scientific, and technical activities for others. These activities require a high degree of expertise and training. The establishments in this sector specialize according to expertise and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include: legal advice and representation; accounting, bookkeeping, and payroll services; architectural, engineering, and specialized design services; computer services; consulting services; research services; advertising services; photographic services; translation and interpretation services; veterinary services; and other professional, scientific, and technical services.

This sector excludes establishments primarily engaged in providing a range of day-to-day office administrative services, such as financial planning, billing and recordkeeping, personnel, and physical distribution and logistics. These establishments are classified in Sector 56, Administrative and Support and Waste Management and Remediation Services.

## **92 Public Administration**

The Public Administration sector consists of establishments of federal, state, and local government agencies that administer, oversee, and manage public programs and have executive, legislative, or judicial authority over other institutions within a given area. These agencies also

set policy, create laws, adjudicate civil and criminal legal cases, provide for public safety and for national defense. In general, government establishments in the Public Administration sector oversee governmental programs and activities that are not performed by private establishments. Establishments in this sector typically are engaged in the organization and financing of the production of public goods and services, most of which are provided for free or at prices that are not economically significant.

Government establishments also engage in a wide range of productive activities covering not only public goods and services but also individual goods and services similar to those produced in sectors typically identified with private-sector establishments. In general, ownership is not a criterion for classification in NAICS. Therefore, government establishments engaged in the production of private-sector-like goods and services should be classified in the same industry as private-sector establishments engaged in similar activities.

As a practical matter, it is difficult to identify separate establishment detail for many government agencies. To the extent that separate establishment records are available, the administration of governmental programs is classified in Sector 92, Public Administration, while the operation of that same governmental program is classified elsewhere in NAICS based on the activities performed. For example, the governmental administrative authority for an airport is classified in Industry 92612 - Regulation and Administration of Transportation Programs, while operating the airport is classified in Industry 48811 - Airport Operations. When separate records are not available to distinguish between the administration of a governmental program and the operation of it, the establishment is classified in Sector 92, Public Administration.

Examples of government-provided goods and services that are classified in sectors other than Public Administration include: schools, classified in Sector 61, Educational Services; hospitals, classified in Subsector 622, Hospitals; establishments operating transportation facilities, classified in Sector 48-49, Transportation and Warehousing; the operation of utilities, classified in Sector 22, Utilities; and the Government Printing Office, classified in Subsector 323, Printing and Related Support Activities.

## **53 Real Estate and Rental and Leasing**

The Real Estate and Rental and Leasing sector comprises establishments primarily engaged in renting, leasing, or otherwise allowing the use of tangible or intangible assets, and establishments providing related services. The major portion of this sector comprises establishments that rent, lease, or otherwise allow the use of their own assets by others. The assets may be tangible, as is the case of real estate and equipment, or intangible, as is the case with patents and trademarks.

This sector also includes establishments primarily engaged in managing real estate for others, selling, renting and/or buying real estate for others, and appraising real estate. These activities are closely related to this sector's main activity, and it was felt that from a production basis they would best be included here. In addition, a substantial proportion of property management is self-performed by lessors.

The main components of this sector are the real estate lessors industries; equipment lessors industries (including motor vehicles, computers, and consumer goods); and lessors of nonfinancial intangible assets (except copyrighted works).

Excluded from this sector are real estate investment trusts (REITS) and establishments primarily engaged in renting or leasing equipment with operators. REITS are classified in Subsector 525, Funds, Trusts, and Other Financial Vehicles, because they are considered investment vehicles. Establishments renting or leasing equipment with operators are classified in various subsectors of NAICS depending on the nature of the services provided (e.g., transportation, construction, agriculture). These activities are excluded from this sector because the client is paying for the expertise and knowledge of the equipment operator, in addition to the rental of the equipment. In many cases, such as the rental of heavy construction equipment, the operator is essential to operate the equipment.

#### **44-45 Retail Trade**

The Retail Trade sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise.

The retailing process is the final step in the distribution of merchandise; retailers are, therefore, organized to sell merchandise in small quantities to the general public. This sector comprises two main types of retailers: store and nonstore retailers.

1. Store retailers operate fixed point-of-sale locations, located and designed to attract a high volume of walk-in customers. In general, retail stores have extensive displays of merchandise and use mass-media advertising to attract customers. They typically sell merchandise to the general public for personal or household consumption, but some also serve business and institutional clients. These include establishments, such as office supply stores, computer and software stores, building materials dealers, plumbing supply stores, and electrical supply stores. Catalog showrooms, gasoline services stations, automotive dealers, and mobile home dealers are treated as store retailers.

In addition to retailing merchandise, some types of store retailers are also engaged in the provision of after-sales services, such as repair and installation. For example, new automobile dealers, electronic and appliance stores, and musical instrument and supply stores often provide repair services. As a general rule, establishments engaged in retailing merchandise and providing after-sales services are classified in this sector.

The first eleven subsectors of retail trade are store retailers. The establishments are grouped into industries and industry groups typically based on one or more of the following criteria:

(a) The merchandise line or lines carried by the store; for example, specialty stores are distinguished from general-line stores.

(b) The usual trade designation of the establishments. This criterion applies in cases where a store type is well recognized by the industry and the public, but difficult to define strictly in terms of commodity lines carried; for example, pharmacies, hardware stores, and department stores.

(c) Capital requirements in terms of display equipment; for example, food stores have equipment requirements not found in other retail industries.

(d) Human resource requirements in terms of expertise; for example, the staff of an automobile dealer requires knowledge in financing, registering, and licensing issues that are not necessary in other retail industries.

2. Nonstore retailers, like store retailers, are organized to serve the general public, but their retailing methods differ. The establishments of this subsector reach customers and market merchandise with methods, such as the broadcasting of "infomercials," the broadcasting and publishing of direct-response advertising, the publishing of paper and electronic catalogs, door-to-door solicitation, in-home demonstration, selling from portable stalls (street vendors, except food), and distribution through vending machines. Establishments engaged in the direct sale (nonstore) of products, such as home heating oil dealers and home delivery newspaper routes are included here.

The buying of goods for resale is a characteristic of retail trade establishments that particularly distinguishes them from establishments in the agriculture, manufacturing, and construction industries. For example, farms that sell their products at or from the point of production are not classified in retail, but rather in agriculture. Similarly, establishments that both manufacture and sell their products to the general public are not classified in retail, but rather in manufacturing. However, establishments that engage in processing activities incidental to retailing are classified in retail. This includes establishments, such as optical goods stores that do in-store grinding of lenses, and meat and seafood markets.

Wholesalers also engage in the buying of goods for resale, but they are not usually organized to serve the general public. They typically operate from a warehouse or office and neither the design nor the location of these premises is intended to solicit a high volume of walk-in traffic. Wholesalers supply institutional, industrial, wholesale, and retail clients; their operations are, therefore, generally organized to purchase, sell, and deliver merchandise in larger quantities. However, dealers of durable nonconsumer goods, such as farm machinery and heavy duty trucks, are included in wholesale trade even if they often sell these products in single units.

## **48-49 Transportation and Warehousing**

The Transportation and Warehousing sector includes industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation. Establishments in these industries use transportation equipment or transportation related facilities as a productive asset. The type of equipment depends on the mode of transportation. The modes of transportation are air, rail, water, road, and pipeline.

The Transportation and Warehousing sector distinguishes three basic types of activities: subsectors for each mode of transportation, a subsector for warehousing and storage, and a subsector for establishments providing support activities for transportation. In addition, there are subsectors for establishments that provide passenger transportation for scenic and sightseeing purposes, postal services, and courier services.

A separate subsector for support activities is established in the sector because, first, support activities for transportation are inherently multimodal, such as freight transportation arrangement, or have multimodal aspects. Secondly, there are production process similarities among the support activity industries.

One of the support activities identified in the support activity subsector is the routine repair and maintenance of transportation equipment (e.g., aircraft at an airport, railroad rolling stock at a railroad terminal, or ships at a harbor or port facility). Such establishments do not perform complete overhauling or rebuilding of transportation equipment (i.e., periodic restoration of transportation equipment to original design specifications) or transportation equipment conversion (i.e., major modification to systems). An establishment that primarily performs factory (or shipyard) overhauls, rebuilding, or conversions of aircraft, railroad rolling stock, or a ship is classified in Subsector 336, Transportation Equipment Manufacturing according to the type of equipment.

Many of the establishments in this sector often operate on networks, with physical facilities, labor forces, and equipment spread over an extensive geographic area.

Warehousing establishments in this sector are distinguished from merchant wholesaling in that the warehouse establishments do not sell the goods.

Excluded from this sector are establishments primarily engaged in providing travel agent services that support transportation and other establishments, such as hotels, businesses, and government agencies. These establishments are classified in Sector 56, Administrative and Support and Waste Management and Remediation Services. Also, establishments primarily engaged in providing rental and leasing of transportation equipment without operator are classified in Subsector 532, Rental and Leasing Services.

## **22 Utilities**

The Utilities sector comprises establishments engaged in the provision of the following utility services: electric power, natural gas, steam supply, water supply, and sewage removal. Within this sector, the specific activities associated with the utility services provided vary by utility: electric power includes generation, transmission, and distribution; natural gas includes distribution; steam supply includes provision and/or distribution; water supply includes treatment and distribution; and sewage removal includes collection, treatment, and disposal of waste through sewer systems and sewage treatment facilities.

Excluded from this sector are establishments primarily engaged in waste management services classified in Subsector 562, Waste Management and Remediation Services. These establishments also collect, treat, and dispose of waste materials; however, they do not use sewer systems or sewage treatment facilities.

## **42 Wholesale Trade**

The Wholesale Trade sector comprises establishments engaged in wholesaling merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The merchandise described in this sector includes the outputs of agriculture, mining, manufacturing, and certain information industries, such as publishing.

The wholesaling process is an intermediate step in the distribution of merchandise. Wholesalers are organized to sell or arrange the purchase or sale of (a) goods for resale (i.e.,

goods sold to other wholesalers or retailers), (b) capital or durable nonconsumer goods, and (c) raw and intermediate materials and supplies used in production.

Wholesalers sell merchandise to other businesses and normally operate from a warehouse or office. These warehouses and offices are characterized by having little or no display of merchandise. In addition, neither the design nor the location of the premises is intended to solicit walk-in traffic. Wholesalers do not normally use advertising directed to the general public. Customers are generally reached initially via telephone, in-person marketing, or by specialized advertising that may include Internet and other electronic means. Follow-up orders are either vendor-initiated or client-initiated, generally based on previous sales, and typically exhibit strong ties between sellers and buyers. In fact, transactions are often conducted between wholesalers and clients that have long-standing business relationships.

This sector comprises two main types of wholesalers: merchant wholesalers that sell goods on their own account and business to business electronic markets, agents, and brokers that arrange sales and purchases for others generally for a commission or fee.

(1) Establishments that sell goods on their own account are known as wholesale merchants, distributors, jobbers, drop shippers, and import/export merchants. Also included as wholesale merchants are sales offices and sales branches (but not retail stores) maintained by manufacturing, refining, or mining enterprises apart from their plants or mines for the purpose of marketing their products. Merchant wholesale establishments typically maintain their own warehouse, where they receive and handle goods for their customers. Goods are generally sold without transformation, but may include integral functions, such as sorting, packaging, labeling, and other marketing services.

(2) Establishments arranging for the purchase or sale of goods owned by others or purchasing goods, generally on a commission basis are known as business to business electronic markets, agents and brokers, commission merchants, import/export agents and brokers, auction companies, and manufacturers' representatives. These establishments operate from offices and generally do not own or handle the goods they sell.

Some wholesale establishments may be connected with a single manufacturer and promote and sell the particular manufacturers' products to a wide range of other wholesalers or retailers. Other wholesalers may be connected to a retail chain, or limited number of retail chains, and only provide a variety of products needed by that particular retail operation(s). These wholesalers may obtain the products from a wide range of manufacturers. Still other wholesalers may not take title to the goods, but act as agents and brokers for a commission.

Although, in general, wholesaling normally denotes sales in large volumes, durable nonconsumer goods may be sold in single units. Sales of capital or durable nonconsumer goods used in the production of goods and services, such as farm machinery, medium and heavy duty trucks, and industrial machinery, are always included in wholesale trade.