



Tarrant Appraisal District

2011-2012 Reappraisal Plan

Approved By TAD Board of Directors
September 17, 2010

TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
INTRODUCTION	3
CONDITIONAL STATEMENT	7
OVERVIEW OF DISTRICT OPERATIONS	8
OVERVIEW OF REAPPRAISAL ACTIVITIES	13
RESIDENTIAL VALUATION PROCESS	16
COMMERCIAL VALUATION PROCESS	26
BUSINESS PERSONAL PROPERTY VALUATION PROCESS	49
LIMITING CONDITIONS	55
CERTIFICATION	55
 <u>APPENDICIES</u>	
Appendix A – CALENDAR OF EVENTS	56
Appendix B – KEY PERSONNEL	60
Appendix C – REAPPRAISAL PLAN-THIRD PARTY VENDOR	61

Tarrant Appraisal District 2011-2012 Reappraisal Plan

INTRODUCTION

General Overview of Tax Code Requirement

Passage of Senate Bill 1652 in 2005 amended the Property Tax Code to require each Appraisal District to prepare a biennial reappraisal plan. The following details the Tax Code requirements:

The Written Plan

Section 6.05, Property Tax Code, is amended by adding Subsection (i) to read as follows:

- (i) To ensure adherence with generally accepted appraisal practices, the board of directors of an appraisal district shall develop biennially a written plan for the periodic reappraisal of all property within the boundaries of the district according to the requirements of Section 25.18 and shall hold a public hearing to consider the proposed plan. Not later than the 10th day before the date of the hearing, the secretary of the board shall deliver to the presiding officer of the governing body of each taxing unit participating in the district a written notice of the date, time and place of the hearing. Not later than September 15 of each even numbered year, the board shall complete its hearing, make any amendments, and by resolution finally approve the plan. Copies of the approved plan shall be distributed to the presiding officer of the governing body of each taxing unit participating in the district and to the comptroller within 60 days of the approval date.

Plan for Periodic Reappraisal

Subsections (a) and (b), Section 25.18, Property Tax Code, are amended to read as follows:

- (a) Each appraisal office shall implement the plan for periodic reappraisal of property approved by the board of directors under Section 6.05(i).
- (b) The plan shall provide for the following reappraisal activities for all real and personal property in the district at least once every three years:
 - (1) Identifying properties to be appraised through physical inspection or by other reliable means of identification, including deeds or other legal documentation, aerial photographs, land-based photographs, surveys, maps, and property sketches;

- (2) Identifying and updating relevant characteristics of each property in the appraisal records;
- (3) Defining market areas in the district;
- (4) Identifying property characteristics that affect property value in each market area, including:
 - (a) The location and market area of the property;
 - (b) Physical attributes of the property, such as size, age, and condition;
 - (c) Legal and economic attributes; and
 - (d) Easements, covenants, leases, reservations, contracts, declarations, special assessments; ordinances, or legal restrictions;
- (5) Developing an appraisal model that reflects the relationship among the property characteristics affecting value in each market area and determines the contribution of individual property characteristics;
- (6) Applying the conclusions reflected in the model to the characteristics of the properties being appraised; and
- (7) Reviewing the appraisal results to determine value.

Scope of Responsibilities

Tarrant Appraisal District has prepared and published this reappraisal plan to provide the Board of Directors, taxing units, citizens and taxpayers with a better understanding of the District's responsibilities and reappraisal activities. This report contains a general introduction to TAD's role in the property tax system and several sections describing the proposed 2011-2012 reappraisal effort by the appraisal departments within Tarrant Appraisal District.

Tarrant Appraisal District (TAD) is a political subdivision of the State of Texas created effective January 1, 1980. The provisions of the Texas Property Tax Code govern the legal, statutory, and administrative requirements of the appraisal district. A five member Board of Directors, appointed by the taxing units within the boundaries of Tarrant County, constitutes the District's governing body. The Tarrant County assessor-collector also serves on the board but is a non-voting member. The Chief Appraiser, appointed by the Board of Directors, is the chief administrator and chief executive officer of the appraisal district. The chief appraiser is allowed by law to delegate authority and appraisal responsibilities to his employees.

Tarrant Appraisal District (TAD) is responsible for local property tax appraisal and exemption administration for seventy-three jurisdictions or taxing units in the county. Each taxing unit, such as the county, a city, school district, municipal utility district, etc., sets its own tax rate to generate revenue to pay for such things as police and fire protection, public schools, road and street maintenance, courts, water and sewer systems, and other public services. Property appraisals are determined by the appraisal district and used by the taxing units to calculate and

allocate the annual tax burden. TAD also administers and determines eligibility for various types of property tax exemptions that are authorized by state and local governments, such as those for homeowners, the elderly, disabled persons, disabled veterans, and charitable or religious organizations.

The Texas Property Tax Code contains statutes that guide the administration of property taxes in Texas and provides appraisal district with a comprehensive set of instructions and requirements for the appraisal of real and personal property with its jurisdiction. Chapter 1, Section 1 includes general provisions and key definitions relative to the appraisal process. Section 1.04(7) states ***“Market value” means the price at which a property would transfer for cash or its equivalent under prevailing market conditions if:***

(A) exposed for sale in the open market with a reasonable time for the seller to find a purchaser;

(B) both the seller and the buyer know of all the uses and purposes to which the property is adapted and for which it is capable of being used and of the enforceable restrictions on its use, and;

(C) both the seller and buyer seek to maximize their gains and neither is in a position to take advantage of the exigencies of the other.

Per Section 21.01, real property values are determined as of January 1st, unless special appraisal provisions are otherwise provided. Chapter 23, Subchapter A. is entitled *“Appraisals Generally”* and further defines the scope of work required for local property tax appraisals. Section 23.01(a) states that ***“Except as otherwise provided by Chapter 23, all taxable property shall be appraised based on each property’s worth or market value.”*** Section (b) further mandates, ***“The market value is determined by the application of generally accepted appraisal methods and techniques. If the appraisal district determines the appraised value of a property using mass appraisal standards, the mass appraisal standards must comply with the Uniform Standards of Professional Appraisal Practice. The same or similar appraisal methods and techniques shall be used in appraising the same or similar kinds of property. However, each property shall be appraised based upon the individual characteristics that affect the property’s market value, and all available evidence that is specific to the value of the property shall be taken into account in determining the property’s market value”.*** The chief appraiser and his staff are further instructed to consider the cost, income and sales comparison methods of appraisal and to use the most appropriate valuation method to determine the market value for each property.

Section 23.01, subsection(c) was added in 2009 to address the valuation of properties that had been lowered in the previous year under the Remedies (Subtitle F) section of the tax code. Section 23.01(c) prohibits a chief appraiser from raising the value of these properties, in the following year unless the increase is supported by substantial evidence. The subsection also

places conditions on the valuation of properties that were lowered in the previous year, related to remedies for unequal appraisal. Additional instructions were also provided relative to the appraisal of a residential homestead property. The new provisions in subsection(c) became effective on 01/01/2010.

The remainder of Chapter 23 of the tax code provides for a host of special appraisal provisions to be used in the valuation of specific types of properties. For example, there are instructions for the appraisal of residential real property inventory (§ 23.12), dealer's inventory (§ 23.121, 23.124, 23.1241 and 23.127), taxable leaseholds (§ 23.13), oil or gas interests (§ 23.175), homeowner' organization property (§ 23.18), low income, tax credit housing (§ 23.215), residential homestead property (§ 23.23), agricultural use land (§ 23.41), open-space land (§ 23.52), and public access airport property (§ 23.91). The scope of the appraisal assignment will vary for those properties that are subject to special appraisal provisions as provided by Chapter 23 or Chapter 25 of the property tax code.

Section 25.18 requires each appraisal office to implement a plan to update appraised values for real property at least once every three years. ***Tarrant Appraisal District's current policy is to conduct a general reappraisal of real and business personal property value annually, meaning that a property's appraised value is established and reviewed for equality and uniformity each year.***

The district conducts an onsite field review of real property in a portion of the county annually as part of a reappraisal cycle. Business personal property is verified on an annual basis through various methods.

The appraised value of real and business personal property is calculated using specific information and data about each property. Utilizing various computer-assisted mass appraisal (CAMA) programs, and generally recognized appraisal methods and techniques, licensed and trained property tax appraisers compare the subject property information with the data for similar properties, and with recent market data. The district adheres to the standards of the International Association of Assessing Officers (IAAO) regarding its appraisal practices and procedures, and subscribes to the standards promulgated by the Appraisal Foundation known as the Uniform Standards of Professional Appraisal Practice (USPAP) to the extent they are applicable. USPAP identifies a minimum set of standards that apply in all appraisal assignments.

In cases where the appraisal district contracts for professional valuation services, the contract that is entered into by each appraisal firm requires adherence to similar professional standards. Policies and procedures are available at the office of each firm contracting with the District. The outside valuation firm is also required to develop a mass appraisal report and reappraisal plan.

Conditional Statement on the 2011-2012 Reappraisal Plan

In the second half of 2009, TAD conducted a strategic information technology assessment of the current computer systems and associated appraisal applications. An independent consulting firm performed the study and presented their comprehensive findings to the District's Board of Directors in January 2010. The key findings and results of the study identified numerous functional gaps within TAD's current Information Systems environment and indicated that the sustainability of the current system was questionable. The consulting group recommended that TAD should consider making future IS changes. The primary solution to consider was purchasing a commercial off-the-shelf system (COTS).

The TAD Board of Directors authorized the Administration staff to pursue this option. In July 2010, TAD issued a request for proposals (RFP) to a number of qualified software vendors and developers to provide a comprehensive off-the-shelf software application to replace the district's current IS applications. The deadline to respond was Aug 6, 2010 and a preliminary Board approval date is set for October 15. The objective is to procure and install a new, state-of-the-art mass appraisal software system that will support TAD in fulfilling state mandated requirements as established by the Texas legislature. The proposed timeline for making these extensive changes will coincide with the 2011-2012 Reappraisal cycle.

It is TAD's intended purpose and function to appraise all real and personal property in Tarrant County on an annual basis. The 2011-2012 Reappraisal Plan represents a roadmap in accomplishing this objective over the next two years. References are made throughout this report regarding the reappraisal activities and procedures to be accomplished using the current software applications. While it is highly likely that TAD will change software platforms within the next two years, every attempt will be made to execute the 2011-2012 reappraisal activities, as described in this written plan. Adjustments to the proposed timeline of reappraisal activities and assignment of personnel resources may be necessary to accommodate the transition to a new system.

Overview of District Operations

2011 & 2012 Proposed Calendar of Key Events (See Appendix A)

2011 & 2012 Budgets Are Adopted by Resolution

Personnel Resources

The Office of the Chief Appraiser is primarily responsible for overall planning, organizing, staffing, coordinating, and controlling all district operations. The district is organized into six primary departments: Administration, Support Services, Information Technology, Residential Appraisal, Commercial Appraisal and Business Personal Property Appraisal. A director heads each department. The Administration Department's function is to plan, organize, direct and control the business support functions related to human resources, budget, finance, records management, purchasing, fixed assets, facilities maintenance and mail service.

The Support Services Department has four divisions that perform various functions including land management (GIS and records management), customer service, exemptions administration and Appraisal Review Board operations. The Information Technology Department consists of various divisions that maintain TAD's Information Technology infrastructure. This area also includes a Data Services division.

Three separate appraisal departments are responsible for the valuation of all real and business personal property. The Commercial Department has three work divisions: Commercial Real Property Appraisal including complex commercial appraisal/abatements, Commercial Research and Reporting and Litigation/Arbitration. Business Personal Property Appraisal includes BPP, research, utilities and minerals. The Residential Department includes Residential Appraisal, Residential Research and an Agricultural Land Valuation section. The 2011 and 2012 adopted budgets will provide information for TAD employee positions and classifications.

Staff Education and Training

All appraisal district employees that perform appraisal work are subject to the provisions contained in the Texas Constitution and Texas Property Tax Code. The Legislature created the Board of Tax Professional Examiners (BTPE) in 1991 to regulate those who appraise real property or assess and collect real property taxes by monitoring compliance with the Property Taxation Professional Certification Act, Occupations Code, Chapter 1151 and other rules. In December 2008, the Texas Sunset Advisory Committee published a report with a recommendation to abolish the BTPE. The Texas Legislature passed HB2447 and in September 2009, the BTPE rights, powers and duties were transferred to the Texas Department of Licensing and Regulation (TDLR). The bill also created the Texas Tax Professional Advisory Committee, with seven members appointed by the Commission of Licensing and Regulation, to advise TDLR on tax professional regulatory

issues.

TDLR is now responsible for ensuring appraisers are professional, knowledgeable, competent and ethical. This is accomplished through a statewide program of registration, education, experience, testing and certification for all property tax professionals. The Comptroller's Property Tax Assistance Division has been given the responsibility of reviewing and approving the appraisal courses and other educational materials

Appraisers registered with the TDLR have up to five years to take nine appraisal courses and pass two additional exams in order to achieve certification as a Registered Professional Appraiser (RPA). During each subsequent five-year period after certification, appraisers must complete an additional 75 hours of continuing education. Failure to meet these minimum standards will result in the removal of the employee from an appraiser position. TDLR also ensures that all registrants comply with the requirements of the Property Taxation Professional Certification Act and adhere to the set of ethical standards set forth in the Texas Administrative Code (TAC) Chapter 94.

Additionally, all appraisal personnel receive extensive, on-the-job training in data collection and valuation methodology. Standardized manuals are provided to ensure uniform and accurate data collection. Senior personnel provide on-the-job data collection training in the office and the reappraisal field area. Managers meet regularly with staff to introduce new procedures and regularly monitor appraisal activity to ensure that all personnel are following standardized appraisal methods and techniques.

Data

U.S. Census Bureau statistics for 2009 indicate that Tarrant County had an estimated population of 1,789,900, with approximately 534,000 households and 37,000 private business establishments. This represents a 15% increase in population since 2003 or approximately 2.5% growth per year. The county has a total area of 897 square miles, comprised of 863 square miles of land and 34 square miles (3.80%) of water. For 2010, the district was responsible for establishing and maintaining approximately 630,000 real estate and 45,700 business personal property accounts located within the boundaries of Tarrant County. This represented a gain of less than 2,000 parcels from 2009 to 2010. However, over 62,000 mineral accounts were added for 2010 representing a 72% increase from the prior year. Mineral accounts are created when a property owner has a producing mineral interest in an oil or gas well. Mineral interest account are projected to increase by another 60% over the 2011-2012 reappraisal cycle while other real property and personal property account levels are expected to show minimal growth.

The following chart contains the projected numbers of Tarrant Appraisal District parcels for the 2011-2012 reappraisal cycle:

	2007	2008	2009	2010	2011	2012
Real Estate Accts	627,113	626,199	629,257	630,210	632,000	635,000
BPP Accounts	42,415	44,369	45,262	45,658	46,000	46,000
Mineral Accounts	13,018	31,000	87,421	152,000	210,000	240,000
Total Accounts	682,546	701,568	761,940	827,868	888,000	921,000
Total Added Accounts	9,953	19,022	60,372	65,928	61,020	33,000
Total % Increase	1.5%	3.0%	8.6%	8.7%	7.37%	3.7%
	Sept 1 Roll	Sept 1 Roll*	Sept 1 Roll	July 25 Roll	**Projected	**Projected

*Approx 53,000 Non-Tarrant County (Overlapping Boundary) Accounts Were Removed From 2008 TAD Roll So The Effective Increase Was 10.5% For 2008

Each TAD parcel contains data related to property characteristics, ownership and exemption information. Accurate ownership and legal description data is maintained by processing recorded deeds and plats that are provided by the Tarrant County Clerk's office. Exemptions are administered based on statutes and monetary guidelines authorized by state and local governments. Exemption data is processed and maintained in conjunction with various application requirements as stipulated in the State Property Tax Code.

Existing property characteristics data is updated and maintained through on-site inspections and other generally accepted methods. The property data related to new construction and other building permit activity is also collected through an annual field review effort. Each city within TAD's jurisdiction provides permit information either electronically or in paper form. Comparable sales data is also routinely validated as part of the building permit field review and reappraisal activities.

General demographic, economic and financial trends, construction cost, market sales and income data are acquired through various sources. These may include internally generated questionnaires to buyer and seller, public and university research centers, private market data vendors, real estate related publications and telephone contact with buyers, sellers, brokers and fee appraisers, as well as information collected from property owners and agents during the informal appeal and Appraisal Review Board process. The appraisal departments have appraisal staff assigned to research functions and they are responsible for collecting this type of data.

The district has a geographic information system (GIS) that contains cadastral maps and includes various layers of data, including parcel lines, FEMA flood data, zoning, jurisdictional boundaries and aerial photography. Tarrant Appraisal District is dependant upon local cities to provide updated zoning information for the cadastral maps.

The district's website makes a range of information available for public access, including information on appraisal district operations. The site also provides links to connect users to

related websites for taxing units, other appraisal districts and state government resources. Property owners can access additional online information from TAD's website (www.tad.org) that includes property characteristics data, preliminary and certified values, protests and appeal procedures, property maps, and a tax calendar. Residential and commercial property owners can access the district's Internet site to obtain a copy of their pending ARB case evidence. Downloadable files of related tax information and district forms; including various application forms, ARB protest notices and business personal property renditions are also available. ARB protests can be filed on a downloaded form or on-line. TAD has also implemented an online rendition process for business owners that choose to file their renditions electronically.

Management Information Systems Support

The Management Information Systems Support Division (MIS) maintains Tarrant Appraisal District's Information Technology Infrastructure. The various Management Information Support functions include Technical Support and Systems Programming, Computer Operations, Applications Systems Development and Support, Internet and Web Site Support functions, Voice and Data Communications, Network, server and Personal Computer Workstation Support, Geographic Referencing, Data Management, Geographic Information Systems in support of Cadastral mapping, and multiple layers of GIS related intelligence and digital ortho-photography, for utilization by all operating departments of the organization. The principal environment for the TAD MIS facility is supported on an IBM Z800, Model OA1 processor which may be replaced in the near future by an IBM Z9 Enterprise Server. Additionally, multiple network servers are in place to support the access through the internal and external networks for use by individuals. An I-Series mid-range processor is dedicated to the support of our voluminous Image processing environment and related workflow management features. TAD data structures reside and are supported by multiple data base tables and flat file structures. Mainframe data-access as well as server based functions is accessible through the PC Workstation and Network structure. These systems provide direct support for all operating departments involved in appraisal functions, customer service, exemption administration and the Appraisal Review Board support activities. The mainframe and server data is also utilized to fulfill all the reporting requirements for the taxing units and the State Comptroller's Property Tax Division.

Shared Appraisal District Boundaries (Overlapping Jurisdictions)

Tarrant Appraisal District is responsible for seventy-one taxing jurisdictions, covering 897 square miles. Several of these jurisdictions have boundaries that fall outside of Tarrant County. During the 2007 reappraisal year, TAD shared appraisal responsibilities in these overlapping areas with appraisal districts in Wise, Parker, Dallas, Ellis, Denton and Johnson County. Revisions to Section 6.025 of the Tax Code, in effect beginning with the 2008 tax year, now specify that the appraisal district boundaries are the same as the county's boundaries. Coordination of appraisal values, with other appraisal districts, will continue to occur for the approximately 1,000 taxable parcels that are split by county jurisdictional lines. Over 70% of the overlapping parcels are residential.

Independent Performance Test

Effective January 1, 2010, Chapter 5.102 of the Texas Property Tax Code was amended by House Bill 8 to require “at least once every two years, the Comptroller shall review the governance of each appraisal district, taxpayer assistance provided, and the operating and appraisal standards, procedures and methodology used by each appraisal district to determine compliance with generally accepted standards, procedures, and methodology.” The Comptroller’s Property Tax Assistance Division (PTAD) is currently performing the Methods and Assistance Program (MAP) review in approximately half of all Texas CADs, including Tarrant County. TAD will be scored and the PTAD will deliver a preliminary report in September 2010, with draft recommendations for corrections and compliance measures. The PTAD will continue to work with TAD to correct any deficiencies throughout the fall of 2010. In December, a final report will be submitted to TDLR, the TAD board of directors and the twenty-one school districts.

Section 403.302 of the Texas Government Code was also amended to change the frequency of the property value study (PVS) for school districts from an annual to a biennial process. As a part of the annual study, the Code requires the Comptroller to: use sales and recognized auditing and sampling techniques; review each appraisal district’s appraisal methods, standards and procedures to determine whether the district used recognized standards and practices (MSP review); test the validity of school district taxable values in each appraisal district and presume the appraisal roll values are correct when values are valid; and, determine the level and uniformity of property tax appraisal in each appraisal district. The methodology used in the property value study includes stratified samples to improve sample representativeness and techniques or procedures of measuring uniformity. This study utilizes statistical analysis of sold properties (sale ratio studies) and appraisals of unsold properties (appraisal ratio studies) as a basis for assessment ratio reporting. For appraisal districts, the reported measures include median level of appraisal, coefficient of dispersion (COD), the percentage of properties within 5% of the median, the percentage of properties within 25% of the median, and price-related differential (PRD) for properties overall and by state category (i.e., categories A, B, C, D and F1 are directly applicable to real property).

There are twenty-one independent school districts in Tarrant County for which appraisal rolls are annually developed. The preliminary results of the PTAD value study are released in January of the year following the year of appraisal. The final results of this study are certified to the Education Commissioner of the Texas Education Agency (TEA) in the following July of each year for the year of appraisal. This outside (third party) ratio study provides additional assistance to Tarrant Appraisal District in determining areas of market activity or changing market conditions. Results from the upcoming 2011 Property Value Studies will be reviewed and analyzed by appraisal management. Geographic areas or property categories with unsatisfactory ratio results will be added to the work plan for the 2011-2012 reappraisal cycles.

Overview of Reappraisal Activities

Overview of Appraisal Responsibilities

Tarrant Appraisal District appraisal responsibilities are divided between three appraisal departments, Residential, Commercial, and Business Personal Property. The Residential Appraisal Department is organized into four geographic regions or quadrants. The department also contains an Agricultural Land Appraisal Section and a Research Section. The Commercial Appraisal Department consists of three divisions; Commercial Appraisal including Complex Properties/Abatements, Commercial Research and Reporting, and Litigation/Arbitration. The Business Personal Property (BPP) department includes personal property, minerals and utilities.

In each department, the appraisal staff is responsible for collecting and maintaining property characteristic data for classification, valuation, and information processes. Accurate valuation of real and personal property by any method requires a physical description of personal property, land, and building characteristics. An effective data collection effort involves an inspection of all real and personal property accounts. It is the goal of TAD appraisal departments to periodically complete a thorough, on-site field review of all residential and commercial properties. Business personal property data is field-verified every year. Meeting this goal is dependent on budgetary constraints and staffing levels.

Overall Appraisal Resources

- **Personnel** - Tarrant Appraisal District appraisal activities are accomplished with a staff of appraisers and clerical personnel. Staffing resource numbers are reflected in the budget, adopted by reference. These employees are assigned to a specific appraisal department.
- **Data** - The residential staff utilizes existing property characteristic information contained in a CAMA (Computer Assisted Mass Appraisal) system that operates within the district's mainframe computer or legacy-operating system. Personal property utilizes a mainframe CAPPA (Computer Assisted Personal Property Appraisal) system. All commercial data collection and valuation applications reside in MARS (Mass Appraisal Records System). A limited amount of commercial data also resides in the TAD CAMA system for the purpose of ownership/records maintenance, exemption administration and entity reporting.

Appraisal Frequency and Method Summary

Tarrant Appraisal District has adopted an annual reappraisal cycle

- **Residential Appraisal** - Residential new construction is physically examined as part of an annual building permit data collection process. Appraisers determine size, class, year built, effective year of construction and other property characteristics and features that are used in the cost and sales comparison valuation methods. Vacant rural land is valued using comparable sales. Lot values in subdivisions are computed by market sales, or if unavailable, as an allocated percentage. Improved residential properties are delineated by neighborhoods as defined later in this document. On an annual basis, residential managers perform statistical analysis to evaluate whether values are equitable and consistent with the market. Based on analysis of the sales activity, market adjustment factors are developed and applied to adjust the appraised values in neighborhoods or specified geographic areas on comparable properties.
- **Commercial Appraisal** - Commercial and industrial real estate is verified by attempting to field observe and photograph each property at least once every four years to confirm class, condition and other property data. Properties are also reviewed as part of an annual building permit inspection process. The appraisers determine highest and best use and define the economic unit characteristics for a grouping of associated accounts. Economic units are delineated by improved and land market areas. On an annual basis, commercial market values are established using generally accepted appraisal methods and techniques. Land values are generally determined using comparable sales. For improved properties, appraisers consider the cost, sales comparison and income approaches and then reconcile the final value, based on the quality and availability of the most accurate and credible data for each valuation approach. A commercial cost approach model computes values at the account level. A total economic unit value is developed using the commercial sales comparison and income approach models. This total overall property value is then allocated among the accounts within an economic unit (ECU), based on each specific account's classification and property characteristics.
- **Business Personal Property** - The Business Personal Property staff reappraises businesses each year through various discovery methods. Business personal property appraisers utilize survey letters, phone calls, and on-site inspections of businesses to verify ownership, Standard Industrial Code (SIC) classification, quality and density of inventory, furniture and fixtures and other key information. SIC code identification and delineation is the cornerstone of the business personal property valuation system. The cost approach is the predominant techniques used to value personal property. Cost tables are developed for each SIC classification using actual historical cost data and market data from generally accepted cost valuation sources. The SIC models are reviewed and tested annually. Depreciation schedules are review and adjusted as

necessary. Most business owners are required to annually file rendition reports and list key information about their tangible personal property assets. Appraisers consider information from field observations, SIC models and owner's rendition values when determining the market value of the business personal property.

Data Collection Process

Residential appraisers are currently provided with a standardized field collection document in order to verify existing property characteristics or record new property data. The worksheets are batch-produced based on the geographic area that is delineated for reappraisal. Existing appraisal data is pre-printed on a residential field sheet that is used by the appraiser to record new or modified data during an on-site inspection. Field collected data is returned and entered into the TAD system by an assigned staff of data entry employees. A limited amount of data entry may be performed in the field by residential appraisers using wireless laptop computers linked directly to the TAD mainframe computer.

Commercial appraisers collect on-site field data using a hand-held computer, pen device. Commercial appraisers are assigned a daily "work plan" during field reappraisal. The work plan consists of a group of accounts to be worked in a specified area. GIS maps, aerial photography and all the property characteristics related to the accounts in the work plan can be downloaded from MARS main system to a "local" version of MARS on the pen device. The pen device and digital camera are then utilized to collect and record the field data during the on-site inspection. When a work plan is completed, an appraiser can upload all the collected data from the device back into the MARS main system.

The BPP appraisal staff collects data on pre-printed data collection forms. They also use laptop computers with wireless connectivity to access various TAD information while working away from the office.

Other field inspection resources for all departments may include a MAPSCO street directory, sales and income data, fire damage reports, private water and electrical service applications, building permits, certificates of occupancy, building plans, site plans, recorded deeds and plats, photos, published articles and actual cost information. Appraisal department managers and data management employees conduct on-going quality control of the entire data entry process using numerous edit and audit reports. Supervisors and managers verify the accuracy of collected data with periodic on-site field reviews. The review process may pinpoint areas where additional appraiser training is required.

Residential Property Valuation Process

INTRODUCTION

Scope of Responsibility

The Residential Appraisal staff appraisers are responsible for developing equal and uniform market values for improved and vacant residential property. There are approximately 516,500 residential improved parcels and 49,500 vacant residential properties in Tarrant County.

Residential appraisal assignments are delineated from commercial assignments on the basis of state use code guidelines, established by the State Comptroller. Generally, the residential staff values residential single family, all multifamily housing other than apartments, vacant residential lots, improvements on rural acreage, mobile homes and residential inventory properties.

Appraisal Resources

- **Personnel** - The Residential Appraisal staff consists of appraisers and clerical staff. A detailed count may be found in the 2011 adopted budget.
- **Data** - A common set of data characteristics for each residential dwelling in Tarrant County is collected in the field and data entered to the computer. This property-specific data drives the TAD computer-assisted mass appraisal (CAMA) approaches to valuation. Residential appraisal also requires verified sales data, actual construction cost data, and data from other real estate sources. Appraisers also review various real estate related publications to determine patterns and trends in the market data.

VALUATION APPROACH (Model Specification)

Land Analysis

Residential land analysis is conducted by each of the residential managers prior to neighborhood sales analysis. The managers develop a base lot value or primary rate for each residential parcel. Specific land adjustments are applied, where necessary, to adjust parcels outside the neighborhood norm for such factors as view, shape, size, and topography, among others. The appraisers use sales data where available or abstraction and allocation methods to insure that the land values developed best reflect the contributory market value of the land to the overall property value.

Area Analysis

Data on regional economic forces such as demographic patterns, regional location factors, employment and income patterns, general trends in real property prices and rents, interest rate trends, availability of vacant land, and construction trends and costs are collected from private vendors and public sources and provide the field appraiser a current economic outlook on the real estate market. Information is gathered from real estate publications and other outside sources including seminars, conferences, and continuing education courses approved by the Texas Comptroller's Office.

Neighborhood and Market Analysis

Neighborhood analysis involves the examination of how physical, economic, governmental and social forces and other influences affect property values. The effects of these forces are also used to identify, classify, and stratify comparable properties into smaller, manageable subsets of the universe of properties known as neighborhoods. Residential valuation and neighborhood analysis is conducted on these well-defined areas within each of the political entities known as Independent School Districts (ISD). Analysis of comparable market sales data forms the basis of estimating market activity and the level of supply and demand affecting market prices for any given market area, neighborhood or district. Market sales reflect the effects of these market forces and are interpreted by managers into an indication of market value ranges for a given neighborhood. Sales also provide an indication of property component changes considering a given time period relative to the date of appraisal. Although all three approaches to value are considered, residential sales can best be interpreted and applied using two generally accepted appraisal techniques known as the cost and market or comparable sales approach. For low density, multiple family properties, the income approach to value may also be utilized, in the absence of recent sales data.

The first step in neighborhood analysis is the identification of a group of properties that share certain common traits. A "neighborhood" for analysis purposes is defined as the largest geographic grouping of properties where the property's physical, economic, governmental and social forces are generally similar and uniform. Geographic stratification accommodates the local supply and demand factors that vary across a jurisdiction. Once a neighborhood with similar characteristics has been identified, the next step is to define its boundaries. This process is known as "delineation". Some factors used in neighborhood delineation include location, sales price range, lot size, age of dwelling, quality of construction and condition of dwellings, square footage of living area, and story height. Delineation can involve the physical drawing of neighborhood boundary lines on a map, but it can also involve statistical separation or stratification based on attribute analysis. Part of neighborhood analysis is the consideration of discernible patterns of growth that influence a neighborhood's individual market. Few neighborhoods are fixed in character. Each neighborhood may be characterized as being in a stage of growth, stability or decline. The growth period is a time of development and construction. As new neighborhoods in a community are developed, they compete with existing

neighborhoods. An added supply of new homes tends to induce a population shift from older homes to newer homes. In the period of stability, or equilibrium, the forces of supply and demand are about equal. Generally, in the stage of equilibrium, older neighborhoods can be more desirable due to their stability of residential character and proximity to the workplace and other community facilities. The period of decline may reflect diminishing demand or desirability. Declining neighborhoods may also experience renewal, reorganization, rebuilding, or restoration, which promotes increased demand and economic desirability.

Neighborhood identification and delineation is the cornerstone of the residential valuation system at the district. Most residential analysis work, in association with the residential valuation process, is neighborhood specific. Neighborhoods are visually inspected to verify delineations based on observable aspects of homogeneity. Neighborhood delineation is periodically reviewed to determine if further neighborhood specification is warranted. Whereas neighborhoods involve similar properties in the same location, a neighborhood group is simply defined as similar neighborhoods in similar locations. Each residential neighborhood is assigned and coded to a neighborhood group based on observable aspects of homogeneity between the areas. Neighborhood grouping is highly beneficial in cost-derived areas of limited or no sales and in direct sales comparison analysis. Defining comparable neighborhood groups serves to increase the available market data by linking comparable properties outside a given neighborhood. Sales ratio analysis, discussed below, is performed on at the neighborhood level, and in soft sale areas on a comparable neighborhood group basis.

Highest and Best Use Analysis

The highest and best use of property is the most reasonable and probable use that supports the highest present value as of the date of the appraisal. The highest and best use must be physically possible, legally permissible, financially feasible, and productive to its maximum. The highest and best use of residential property is generally its current use. This is due in part to the fact that residential development, in many areas, through use of deed restrictions and zoning, precludes other land uses. Residential valuation undertakes reassessment of highest and best use in transition areas and areas of mixed residential and commercial use. In transition areas with ongoing socio-economic and cultural changes, the residential and commercial appraisal staff reviews the existing residential property use and makes a determination regarding highest and best use. Once the conclusion is made that the highest and best use remains residential, further highest and best use analysis is done to decide the type of residential use on a neighborhood basis. As an example, it may be determined in a transition area that older, non-remodeled homes are not the most productive or profitable use, and the highest and best use of such property is to demolish the old homes and construct new dwellings. In areas of mixed residential and commercial use, the appraiser reviews properties on a periodic basis to determine if changes in the real estate market require reassignment of the highest and best use of a select category of properties.

In November 2009, the Texas constitution was amended by voters to limit the appraisal of a residence homestead to its value as a residence homestead, regardless of whether its residential use was the highest or best use. This change became effective on 01/10/2010.

VALUATION AND STATISTICAL ANALYSIS (Model Calibration)

Cost Schedules

The district's residential cost schedules are compared against Marshall Valuation Services, a nationally recognized cost estimator, and are reviewed and adjusted periodically to reflect the local market.

Tables are also produced in order to uniformly apply value for added amenities as determined by the marketplace. Examples may include pools, bathhouses, outbuildings, boathouses, tennis courts, and other market driven value items.

Possible adjustments for factors that may inhibit value are also in table form and are applied uniformly to any properties affected. Examples may include cracked slab, termite damage, repairs needed, etc.

The District considers all three approaches to value and recognizes the cost approach as an acceptable approach. Generally, for residential property, the district considers the market approach a more viable and accurate indicator and utilizes the market approach, in conjunction with the cost approach, to arrive at a final estimate of market value.

Income Models

The income approach to value may be useful to those real properties that are typically viewed as "income producing" when sufficient income data is available and where comparable sales are not present. In the current residential market, the income approach is not generally used.

Sales Information

A sales file for the storage of "snapshot" sales data for vacant and improved properties at the time of sale is maintained for residential real property. Residential improved and vacant sales are collected from a variety of sources, including: district survey letters sent to buyers and sellers, field discovery, protest hearings, Board of Realtor's MLS and other sales vendors, builders, and realtors and brokers. The following chart identifies the historic and projected numbers of sales that are received and processed annually by the residential research staff.

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Multiple Listing Service (MLS)	19,004	20,866	20,176	17,960	18,000	18000	18,000
Other Sources	4,651	3,890	3,694	2,727	2,700	2,700	2,700
Total Sales	23,655	24,756	23,870	20,687	20,700 Projected	20,700 Projected	20,700 Projected

A system of type, source, validity and verification codes has been established to define salient facts related to a property's purchase or transfer and to help determine relevant market sale price information. The effect of time as an influence on price can be considered by paired sales analysis and applied in the ratio study to the sales as indicated within each neighborhood area. Neighborhood sales reports are generated as an analytical tool for the managers in the development and estimation of market price ranges and property component value estimates. Abstraction and allocation of property components based on sales of similar property is an important analytical tool to interpret market sales under the cost and market approaches to value. These analytical tools help determine and estimate the effects of change, with regard to price, as indicated by sale prices for similar property within the current market.

Multiple sales of the same property are considered and analyzed for any indication of price change attributed to a time change or influence and monthly time adjustments are developed. Property characteristics, financing, and conditions of sale may be compared for each property sold in the pairing of property to isolate only the time factor as an influence on price.

Section 23.013 of the Property Tax Code addresses the "Market Data Comparison Method Of Appraisal". During the 2009 Legislative session, Section 23.013 subsection (b) was added to specify that sales used in the market data comparable method should occur within 24 months of the appraisal date, unless too few sales occurred to produce a representative sample for a certain type of property. Subsection (c) was added to require appraisal districts to appropriately adjust comparable sales for changes in the market value of the sales based on the sale date and subsection (d) includes a list of property characteristics to be considered in determining comparability between a sale and a subject property. These changes became effective on January 1, 2010.

Statistical Analysis

The residential appraisal managers perform statistical analysis annually to evaluate whether values are equitable and consistent with the market. Ratio studies are conducted on residential neighborhoods in the district to judge the two primary aspects of mass appraisal accuracy and uniformity of value. Appraisal statistics of central tendency and dispersion generated from sales ratios are available for each neighborhood and are summarized by year. These summary statistics including, but not limited to, the weighted mean, median, standard deviation, coefficient of variation, and coefficient of dispersion provide the managers a tool by which to determine both the level and uniformity of appraised value on a neighborhood basis. The level

of appraised values is determined by the weighted mean for individual properties within a neighborhood, and a comparison of neighborhood weighted means reflect the general level of appraised value between comparable neighborhoods. Review of the standard deviation, coefficient of variation, and coefficient of dispersion discerns appraisal uniformity within and between neighborhoods.

The managers, through the sales ratio analysis process, review neighborhoods annually. The first phase involves neighborhood ratio studies that compare the recent sales prices of neighborhood properties to the appraised values of these sold properties. This set of ratio studies affords the manager an excellent means of judging the present level of appraised value and uniformity of the sales. Based on the sales ratio statistics and designated parameters for a valuation update, a preliminary decision is made as to whether the value level in a neighborhood needs to be updated in an upcoming reappraisal, or whether the level of appraised value is acceptable. The residential managers perform statistical analysis annually to evaluate whether estimated values are equitable and consistent with the market.

Reconciliation And Valuation

Neighborhood, or market adjustment, factors are developed from appraisal statistics provided from ratio studies and are used to ensure that estimated values are consistent with the market. The district's approach to the valuation of residential properties is a cost-market approach. This approach accounts for neighborhood market influences not particularly specified in a purely cost model. The following equation denotes the hybrid model used:

$$MV = MA [RCN - D] + LV$$

The market value (MV) equals the market adjustment factor (MA) applied to the replacement cost new (RCN) less depreciation (D), plus the land value (LV). Market adjustments will be applied uniformly within neighborhoods to account for location variances between market areas or across a jurisdiction.

Statistical analysis of current appraised values as compared with recent sales determines the appropriate market adjustment for a neighborhood. Statistical programs developed by the TAD Information Technology and the Residential Department staffs are used to study market trends and to develop appropriate market adjustments.

Special Appraisal Provisions

Appraisal of Residential Homesteads

Article VIII, Sec. 1 (i) of the Texas constitution allows the legislature to limit the annual percentage increase in the appraised value of residence homestead to 10% under certain

conditions. This limitation is commonly referred to as a Homestead "Capped Value". Sec.23.23 of the Tax Code implements the cap on increases in value. The limited value begins in the second year the property qualifies for a residential homestead exemption. The appraised value of a qualified residence homestead will be the LESSER of:

- (1) the market value of the property for the most recent tax year that the market value was determined by the appraisal office; or
- (2) the sum of:
 - (A) 10 percent of the appraised value of the property for the preceding tax year;
 - (B) the appraised value of the property for the preceding tax year; and
 - (C) the market value of all new improvements to the property

Since Tarrant Appraisal District is on an annual reappraisal cycle, the limited appraised value must be recomputed annually. The appraised value of a homestead increases 10% annually or until the appraised value is equal to the market value. If a limited homestead property sells, the cap automatically expires as of January 1st of the year following the sale of the property and the property is appraised at its market value. The market value of a limited homestead is maintained, as well as the limited appraised value.

Residential Inventory

Section 23.12 of the Texas Property Tax Code provides the definition of market value for inventory. Inventory includes residential real property that has never been occupied as a residence and is held for sale in the ordinary course of business, if the property is unoccupied, is not leased or rented, and produces no revenue.

Residential inventory is appraised at market value. The market value of residential inventory is the price at which it would sell as a unit to a purchaser who would continue the business. The residential appraisal staff applies the same generally accepted appraisal techniques to determine the market value of residential real property inventory.

Agricultural Appraisal

The Texas Constitution permits certain kinds of agricultural land to be appraised for tax purposes at a productivity value, rather than at market value. This special appraisal value is based solely on the land's capacity to produce agricultural products. Property qualifying for agricultural appraisal will have a substantial reduction in taxes, based on the difference in special agricultural appraisal and the market value of the property. Property taxes are deferred until a change of use of the property occurs or, in a much less frequently requested type of special agricultural appraisal, when the ownership changes. At the time of use or ownership change, taxes are recaptured for up to five previous years, based on the difference in what was paid based on agricultural appraisal, and what would have been paid based on the market value of the property. Procedures for implementing this appraisal are based on the guidelines published in the Manual for the Appraisal of Agricultural Land, printed April 1990. A copy may be obtained from the State Comptroller of Public Accounts.

Application Process

The State Property Tax Code requires an application before land is considered for agricultural valuation. The deadline for filing a timely application is before May 1. Late agricultural valuation applications may be filed up to the time the appraisal roll is certified, however a penalty is imposed for late filing. After an application is filed, the property is inspected to determine its qualification.

Three criteria must be met when determining qualification.

Use- Land must be currently devoted principally to agricultural use.

Degree of Intensity- The agricultural use must be to the degree of intensity generally accepted in the area.

History of Use- The land must have been devoted principally to agricultural use for five (5) of the preceding seven (7) years. Land located within an incorporated city or town must have been devoted principally to agricultural use continuously for the preceding five (5) years.

When the land's use qualifications have been reviewed, one of three actions will be taken.

Application is Denied– Property owner is notified by certified mail and given 30 days to appeal the decision to the Appraisal Review Board.

Application is Approved- Property owner is notified of the decision and the productivity land appraised value. Once approved, the property remains valued as a special agricultural use until a change of use occurs, or the ownership changes. If the property's use remains unchanged and only ownership has changed, the new owner is notified and is required to timely apply for special agricultural valuation.

Disapprove the Application and Request More Information- The application is disapproved and the applicant is allowed thirty days to provide additional information, otherwise the application is denied. When requested information is provided, it is added to data already collected to arrive at a final decision.

INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review

The appraiser identifies individual properties in need of field review through examples such as: sales ratio analysis, ARB hearings, building permits, property owner's requests, aerial photography and other sources. Sold properties are reviewed on a regular basis to check for accuracy of data characteristics before they are used in reappraisal analysis.

As the district's parcel count has increased through new home construction, and existing home remodeling, the appraisers are required to perform associated field activity. Increased sales activity can result in a more substantial field effort on the part of the appraisers to review and reconcile sales that fall outside acceptable ranges. Additionally, the appraisers frequently field review subjective data items such as quality of construction, condition, and physical, functional and economic obsolescence, factors contributing significantly to the market value of the property. The following chart contains historical and projected permit activity for residential property.

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
NEW HOMES	14,245	9,069	6,125	4,585	3,200	3,000	3,000
OTHER PERMITS	8,235	12,882	9,944	9,316	9,300	9,000	9,000
TOTAL	22,480	21,951	16,069	13,901	12,500 Projected	12,000 Revised	12,000 Projected

Office Review

Once field review is completed, the managers conduct a routine valuation review of all properties as outlined in the discussion of ratio studies and market analysis. Previous values resulting from protest hearings, informal negotiation, or litigation are individually reviewed to determine if the value remains appropriate for the current year.

Once an appraisal manager is satisfied with the level and uniformity of value for each area, the estimates of value are prepared for a notice of proposed value.

PERFORMANCE TESTS

Sales Ratio Studies

The primary analytical tool used by the appraisal manager to measure and improve performance is the ratio study. The district ensures that the appraised values produced meet the standards of accuracy in several ways. Overall, sales ratios are generated for each ISD to allow the appraiser to review general market trends within their area of responsibility, and provide an indication of market change over a specified period. The neighborhood descriptive

statistic is reviewed for each neighborhood being updated for the current tax year. In addition to the mainframe computer generated sales ratios by school district and neighborhood, other sales ratios statistics are produced. Reported in the statistics is a level of appraisal value and uniformity profile by land use and appraised value ranges. Residential appraisers may use sales up to two years prior to, and three months after January 1st of the appraisal year to obtain a statistically valid sample.

Management Review Process

Once the proposed value estimates are finalized, the appraisal managers review the sales ratios by neighborhood and present pertinent valuation data, such as weighted sales ratio and pricing trends to the Director of Residential Appraisal and the Chief Appraiser for final review and approval. This review includes comparison of level of value between related neighborhoods within and across jurisdiction lines. The primary objective of this review is to ensure that the proposed values have met preset appraisal guidelines appropriate for the tax year in question.

Commercial Property Valuation Process

INTRODUCTION

Appraisal Responsibility

The Commercial (real property) Appraisal Department is responsible for the valuation of all commercial real property, including land and improvements, located within the boundaries of Tarrant Appraisal District's jurisdiction. This currently includes approximately 26,000 unimproved and 38,000 improved commercial accounts. Commercial real property types generally include multi-family, office, retail, warehouse/manufacturing and various other categories of business related facilities. The staff appraisers also value all commercial and rural land parcels. In general terms, the commercial appraisal staff is responsible for establishing market value on any real property for which the highest and best use is determined to be non-residential.

Commercial appraisal assignments are delineated from residential assignments on the basis of state use code guidelines established by the State Comptroller. Generally the commercial staff values all commercially improved properties including apartments, vacant commercial land, vacant acreage, and the underlying land of improved acreage. Residential properties located in areas of transition to commercial, or interim-use properties, are also valued by the commercial division. If the interim-use property does not have a residential homestead exemption, the property data and valuation models for these accounts is stored in MARS, the Mass Appraisal Records System utilized by the commercial appraisal staff. Otherwise, the records are maintained in the TAD Mainframe residential system, for purposes of calculating the 10% limitation on increases to the appraised value for a property with a general residential homestead exemption.

Appraisal Resources

Personnel - Staffing details can be found in the budgets adopted by the TAD Board for 2011/2012. The real property portion of the Commercial Appraisal Department is organized into two separate divisions or areas of responsibilities. The divisions are Commercial Appraisal including Complex Properties/Abatements, and Commercial Research and Reporting. Each division is staffed with a manager, appraisers and clerical support staff. Each Division Manager reports to the Director of Commercial Appraisal.

A separate Litigation Division also resides within the commercial department structure. This staff consists of a manager, three litigation appraisers, and clerical support. Property owners and taxing units may appeal decisions of the ARB to district court. Litigation staff activities

include performing value reviews or appraisals, assigning cases and corresponding with TADs attorneys, negotiating settlements, and working with independent expert witnesses prior to any judicial court proceedings. The litigation division also manages other post-ARB remedies including binding arbitration, which is an administrative appeal process that allows owners of real property valued at less than \$1,000,000 to appeal their ARB value to an arbitrator rather than to District Court. Starting in 2010, property owners also have the right to appeal their value and have the case heard by a chief administrative law judge with the State Office of Administrative Hearings (SOAH). Tarrant is one of six appraisal districts participating in a pilot project involving this new appeals option.

- **Commercial Appraisal and Complex Properties Division**

The Commercial Appraisal and Complex Properties Division is responsible for valuing all commercial improved real property, vacant commercial land, and vacant acreage within Tarrant Appraisal District. Within this division there are two separate sections: the Commercial Appraisal Section, and the Complex Properties Section.

The Commercial Appraisal Section is staffed with regional supervisors and appraisers. In addition, clerks and a clerical supervisor are assigned to support both commercial divisions in the department. Appraisal duties and responsibilities are divided between a north-region and a south-region workgroup. Each appraiser is assigned to a workgroup or team that is supervised by a regional supervisor.

The north appraisal team values industrial and office-related categories and all commercial land located in the northern portion of TAD's jurisdiction. The south team values multi-family and retail-related categories and land located in southern portion of Tarrant Appraisal District. The supervisor for each region is responsible for assigning geographic land areas of responsibility to each appraiser. Appraisers are also given the task of completing a field review for all permits issued in their designated area.

During the field-reappraisal phase of each reappraisal year the commercial appraisal staff makes on-site physical inspections and photographs real estate accounts of a portion of the county. A portion of the northeast quadrant of Tarrant County will be field inspected as part of the 2011 reappraisal cycle. This field inspection area covers portions of Carroll, Grapevine, Keller, Northwest and H-E-B School Districts and includes approximately 17,000 real estate accounts. Approximately 18,000 commercial accounts, located in the southeast quadrant of Tarrant County will be field inspected during the 2012 reappraisal. The southeast quadrant includes Arlington, Mansfield, Everman, Kennedale and Crowley school districts.

The Complex Properties Section is responsible for valuing complex and unique properties as well as administering abatements. The complex and unique properties consist of golf courses, utilities, railroads, high-rise downtown office buildings, the Fort

Worth downtown central business district, regional and local airports, regional shopping malls, hospitals, and possessory interest properties. The Complex properties staff also monitor properties located within designated Tax Increment Financing (TIF) areas. The higher profile complex properties that have a significant impact on the North Texas economy include Hurricane Harbor, Six Flags Theme Park, DFW and Alliance Airport, American Airlines, General Motors, Gaylord Texan Resort and five regional malls. This Section consists of a supervisor, two appraiser analysts and clerical support.

- **Research and Reporting Division**

The Research and Reporting Division consists of a manager, a senior research supervisor, appraisers and clerks. This section is primarily responsible for collecting, processing, and maintaining sales and income information that is used in the valuation process. After the information is processed and verified, the sales and income information is entered into a Mass Appraisal Records System (MARS) and stored in database tables. The database tables are integrated within the Mass Appraisal Records System valuation models. The information is easily accessible for the appraisers to use in the sale model building and calibration process, edit/valuation process, informal discussions, and Appraisal Review Board hearings. Land sales data is processed into MARS and GIS mapping software is used to outline and post the sale data onto the TAD appraisal base maps. This data is stored as a year-based layer within the Geographic Information System.

The Research and Reporting Division, with input from the commercial appraisal staff, is responsible for updating and maintaining the commercial classification manual. This includes the periodic review and calibration of various cost and depreciation tables. The research staff is also responsible for monitoring and implementing new or revised appraisal methods and techniques in order to stay proficient with current appraisal technique and maintain compliance with USPAP Standard Six for mass appraisal. An extensive resource library is maintained and includes commercial real estate and financial publications, published survey data, on-line appraisal data sources, appraisal educational textbooks and software, periodicals and journals, comptroller's reports and various other resources to assist the appraisal process.

Data - A standardized set of data characteristics for each commercial property in Tarrant County is collected and data entered by the commercial appraisal staff into MARS. This property-specific data drives the three MARS valuation models. Additional required data includes verified sales of vacant land and improved properties and the pertinent data obtained from each (sales price levels, capitalization rates, income multipliers, equity dividend rates, marketing period, etc.). Other data used by the appraisers includes sale listings, fee appraisals, actual income and expense data (typically obtained through the appeals process), actual contract rental data, leasing information (commissions, tenant finish, length of terms, etc.), and actual construction cost data. In addition to the actual data obtained from specific properties,

market data publications and published market surveys are also reviewed to provide additional support for market trends.

PRELIMINARY ANALYSIS & DATA COLLECTION

Prior to beginning of the valuation activities for an appraisal year, the appraisal department management team completes a thorough review of the results of the preceding year. Goals and objectives are determined and managers establish a plan of action. Budget, calendar issues and resource availability are all considered. Appraisal activities must be coordinated between TAD departments to avoid conflicts and ensure availability of personnel. Appraisal resources, including staff and system needs are evaluated. Appraisal Review Board activity and value changes in the informal appeals process are analyzed. Most importantly, a preliminary internal ratio study is produced to identify any property category or geographic area that may require more research or analysis. The appraisal staff works with the research division to identify priority areas for sale and income data collection and any necessary enhancements to the standardized appraisal classification manual.

Tarrant Appraisal District also coordinates its discovery and valuation activities with adjoining appraisal districts. Numerous field trips, interviews and data exchanges with adjacent appraisal districts are conducted to ensure compliance with state statutes. In addition, Tarrant Appraisal District administration and personnel interact and exchange information with other assessment officials through professional trade organizations including the International Association of Assessing Officers, Texas Association of Appraisal Districts and its subchapter Texas Metropolitan Association of Appraisal Districts and the Texas Association of Assessing Officers.

Area Analysis

Data on regional economic forces such as demographic patterns, regional location factors, employment and income patterns, general trends in real property prices and rents, interest rates, discount rates, and financing trends, availability of vacant land, and construction trends and costs are collected from private vendors and public sources. Key employees and managers analyze the data and meet regularly to discuss how these factors and trends could impact the local real estate market. More detailed analysis is then completed to determine what model recalibration and specification will need to occur during the upcoming valuation cycle.

Neighborhood Analysis

A commercial neighborhood, submarket or economic area is comprised of land and the commercial properties located within the boundaries of a specifically defined geographic location. The term used in MARS is "improved market area" otherwise known as IMA, or "land market area" otherwise known as LMA. Every commercial account and economic unit is identified with an IMA and LMA. A market area consists of a wide variety of both competing and complimentary property types including residential, commercial, industrial and governmental.

Market area delineations can be based on man-made, political, or natural boundaries. Submarket analysis involves the examination of how physical, economic, governmental and social forces at the local, national and international level influence or affect property values. The effects of these forces are used to determine the highest and best use for a property, and to select the appropriate sale, income and cost data in the valuation process.

Improved and land market areas are defined for each of the various improved property types (apartment, office, retail, warehouse and special use) based upon a qualitative and quantitative analysis of similar economic or market forces. These include but are not limited to similarities of rental rates, quality of overall buildings or projects (also known as “building rank” by area commercial market experts), date of construction, levels of market activity and competition, supply and demand, submarket stability, city ordinances, availability of infrastructure and other pertinent influences. TAD commercial IMA boundaries closely mirror the submarket areas as defined by Black’s Industrial and Office Guide, MPF Research (multifamily property) and CoStar Properties, a published source of commercial sales. Economic area identification and delineation by each major property use type is a key component in a mass-appraisal, commercial valuation system. All the MARS income and sales comparison valuation models are IMA specific. Economic areas are periodically reviewed to determine if a revised delineation is required.

Highest and Best Use Analysis

The highest and best use is the most reasonable and probable use that generates the highest present value of the real estate, as of the date of valuation. The highest and best use of any given property must be physically possible, legally permissible, financially feasible, and maximally productive. It is that use that will generate the highest net return to the property over a period of time. For vacant tracts of land within a jurisdiction, the highest and best use is considered speculative but market-oriented, and is based on the surrounding land uses in a competing land market area. The appraiser must consider the most probable use that is permitted under local administrative regulations and ordinances. While its current zoning regulation may restrict a property’s use, the appraiser may also consider the probability that the zoning could be changed, based on activity in the area and a city’s propensity for approving zoning change requests.

For improved properties, highest and best use is evaluated as currently improved and as if the site were still vacant. In many instances, the property’s current use is the same as its highest and best use. However, the appraiser may determine that the existing improvements have a transitional use, interim use, nonconforming use, multiple uses, speculative use, excess land, or a different optimum use, if the site were vacant. Improved properties reflect a wide variety of highest and best uses which include, but are not limited to: office, retail, apartment, warehouse, light industrial, special purpose, or interim uses. Proper highest and best use analysis insures that the most accurate estimate of market value can be derived.

In November 2009, the Texas constitution was amended by voters to limit the appraisal of a residence homestead to its value as a residence homestead, regardless of whether its residential use was the highest or best use. This change became effective on 01/10/2010.

“Value in use” represents the value of a property to a specific user for a specific purpose. An example of value in use is agricultural or productivity value. The Texas Property Tax Code has specific provisions for appraisal of certain types of property that require a value based on a specific use. The complex properties division manages the special requirements for appraising possessory interests and restricted use properties.

Economic Unit (ECU)

An economic unit consists of a property or grouping of properties recognized by investors in the market as a single unit. An economic unit requires common ownership and physical contiguity with natural or geographic boundaries and may contain one or more TAD accounts. In addition, the highest and best use is most probable that it would sell as one property. A commercial appraiser determines an economic unit as part of the highest and best use analysis. This grouping is represented and described in the MARS system in a customized economic unit value module. The appraiser creates an economic unit or ECU record by identifying the account numbers and other required data as indicated in the Economic Unit section of the commercial classification manual. The high level criteria that describe an economic unit are two data fields called “income class” otherwise known as ICLASS; and “improved market area”, otherwise known as IMA. An ICLASS represents the primary use of the entire property, such as low-rise office, master-metered apartment, or distribution warehouse. An ECU ICLASS may be comprised of several accounts with multiple building classes, such as a shopping center or auto dealership. The IMA or improved market area represents the location, submarket or competing market area for the economic unit. ICLASS and IMA are necessary and critical for the grouping of similar or “like” properties in the mass appraisal valuation models. Commercial appraisers make market value determinations at both the account or “parcel” level and the economic unit or “property” level.

Market Analysis

Mass-appraisal market analysis relates directly to economic market forces affecting supply and demand that effect a group of similar or “like” properties. This study involves the relationships between social, economic, environmental, governmental, and site conditions. Appraisers consider such general market data as submarket supply and demand, zoning and code restrictions, municipal services, school district characteristics, crime rate patterns, job growth patterns, income levels, population trends, transportation issues, interest rate levels, investment patterns and a myriad of other factors that influence the local real estate market.

Specific market data is gathered and analyzed including sales of commercial properties, new

construction and other permit activity, new leases, lease rates, absorption rates, vacancies, typical property operating expenses, expense ratio trends, discount rates and going-in, stabilized and reversion capitalization rate indicators. This data is used to determine market ranges in price, operating costs and investment return expectations.

DATA COLLECTION / VALIDATION

Data Collection Manuals

The Commercial Appraisal Classification Manual is the primary source and standard applicable to commercial property data collection and documentation. The commercial manual is utilized to establish uniform procedures for the correct listing of real property by field appraisers. This compilation of data collection guidelines is continually updated, providing a uniform system for listing the multitude of field data elements necessary to describe commercial real properties. All commercial properties located in TAD's jurisdiction are identified or described according to the manual and the three approaches to value are structured and calibrated based on this identification system. The field appraisers study and use the manuals extensively during their initial training and as a guide in the field inspection of properties. The manual is available in a hard-copy form or in an HTML file available on each appraiser's PC or portable computer pen tablet. Most of the data collection that is described in the manual is represented in MARS through a series of drop-down selection lists. Standardized codes are developed and used to describe commercial property at both the parcel and the economic unit level. For example, one key characteristic of a property, at the individual parcel or account level, is building class. This is similar to the Marshall and Swift component called "occupancy class". TAD employs the use of 236 different building classes to describe the various types of commercial structures. The manual also contains calibrated cost rates for various site and ancillary improvements and recommended depreciation guidelines based on condition and effective year of construction.

Commercial Building Permits

Every city within TAD's jurisdiction has a system of issuing building permits to property owners in order to ensure that building code standards are followed for all new construction or major remodeling projects. Permits may also be issued for repair or replacement of plumbing, electrical, HVAC, roofing, foundations, canopies, interior or exterior finish, parking lots, and ancillary structures. On a monthly basis, copies of those permits are either forwarded to TAD or downloaded by a TAD employee from various city websites. Permits are matched to a corresponding commercial account and pertinent permit data is entered into MARS. Commercial appraisers field inspect and measure the permitted properties as part of a reappraisal work plan assignment or during the land reappraisal cycle. Changes to property characteristics, as a result of the completed permit work, are recorded at both the account and ECU level. Value added to the roll from new construction is tabulated and reported to each

taxing units for the use in their effective tax rate calculation.

The following grid shows historic and projected Commercial permit activity:

Number Of Permit Issued For Appraisal Yr.	2007	2008	2009	2010	2011**	2012**
New Construction	1,141	1,568	1,049	699	525	525
Other Commercial Permits	1927	2807	2700	2354	2400	2400
Total # of Permits	4,010	4,375	2,753	3,053	2,925	2,925
Total Value of Permitted New Construction	\$1,357,050,165	\$1,947,705,054	\$2,114,730,259	\$2,050,621,675	\$1,500,000,000	\$1,500,000,000

**Projected **Projected

Comparable Sales Data

Commercial sales data is collected, verified and processed by the commercial research staff. A standardized workflow procedure is followed to track and accurately process the documents. The sale data items are preliminarily reviewed and verified to determine reliability of the content and the source. Some preliminary sale information is then entered into an Access-based tracking system, using Tarrant County's deed filing's instrument number as a key field. After entry into the tracking system, the staff then assembles and records detailed information about each sold property. Extensive sale details are compiled to create a "snapshot" of the economic unit and sold parcels as of the time of sale. A research appraiser will conduct a field inspection to verify the accuracy of the existing property characteristics data and attempt to determine if the property characteristics have changed since the sale date. Property, location and financial data is documented and entered in the MARS sale entry record. A final quality control review of the recorded and entered data occurs and the sales data is then released to the appraisers and for the purpose of mass appraisal valuation. Sales can be viewed in MARS individually, in the data entry module, or as part of a model-driven sales summary grid in the sales comparison module. The paper documentation for all processed sale and income information is temporarily maintained in files in the research area. This vast amount of documentation is later scanned as part of a workflow process or archived into the TAD imaging application. Property owners have access to the sales data used to value their individual properties and all non-private entity source data is available to the public under provisions of the Open Records Act.

Income and Expense Data

Income and expense data consists of property rent rolls and income statements and is generally provided by property owners during the appeals process. The appraisal staff forwards the data to the research section where it is immediately scanned into an image-processing workflow application based on property type. The data is retrieved by appraisers and processed into the MARS income and expense tables. The district also subscribes to several real estate publications, such as Blacks Office Guide and CoStar Properties that provide individual summarized income data within each specified submarket or improved market area. Pertinent income data includes contract and market rental rates, asking rental rates, physical and

economic vacancies, tenant reimbursements, operating expenses, capitalization rates, discount rates, lease up projections, and finish out costs.

Sources of Commercial Data

Property specific data is gathered as part of an on-site field inspection. The majority of cost related data is compiled by using Marshall Valuation Services as a guideline. Closing statements, actual cost documents, rent rolls and income statements provided by owners during the appeals and ARB process are considered the most reliable sources of property data. Another reliable source of verified sales and income data is the local fee appraiser community. Networking with others in the appraisal profession benefits the overall quality and credible application of the data. The TAD Records division should receive a copy of the deeds recorded in Tarrant, Dallas, Denton, Johnson, Parker, and Ellis County that convey commercially classed properties located within the TAD jurisdiction. When a deed involving a change in commercial property ownership is entered into the TAD system, a set of commercial survey letters are produced. One letter is mailed to the buyer and one to the seller, in an attempt to obtain the pertinent sale information. Tarrant Appraisal District also subscribes to CoStar, a vendor of commercial sale and property data, and to the Multiple Listing Service (MLS). Other sales sources are contacted such as the brokers involved in the sale, property managers, commercial real estate vendors, the Texas State Comptrollers Property Tax Division and other knowledgeable parties. The research staff attempts to confirm and verify all data from secondary sources.

The following grid identifies historic and projected number of commercial sales by source type. Unlike the majority of states, Texas laws do not require mandatory disclosure of sale prices. TAD Commercial sales data is provided by voluntary disclosure or purchased from third party vendors.

<u>Sources Of Commercial Sales</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010*</u>
Closing Statements	261	269	277	285	135	48
CoStar Properties-Web Publications	356	366	377	389	201	24
Multiple Listing Service (MLS)	152	157	162	167	23	11
Fee Appraisal Sale Comparables	38	39	40	41	0	0
Grantor/Grantee Survey Letters	406	419	431	444	170	103
Other	27	55	53	51	25	1
Total Commercial Sales	1240	1305	1340	1377	554	187

*As of
Report Date

VALUATION APPROACH/FORMULAS (Model Specification)

The commercial appraisal system, developed and maintained in MARS, consists of mass appraisal applications of the sales comparison, cost, and income approaches to value. The applications were developed based on economic theory, market analysis, and generally accepted appraisal techniques. Each approach to value represents a specific model or formula that defines property characteristics and their relationships in an effort to arrive at an indication of market value for a given property. The final value is a reconciliation of all three approaches to value.

Cost Approach Models

The very basic valuation model is **Market Value=Land Value Plus Improvement Value**. This model represents the formula for the cost approach to value. The formula for a cost driven valuation model begins with an estimate of replacement cost new (RCN) for all improvements (buildings, fencing, paving etc.) on a parcel of land. Three forms of depreciation are considered and subtracted from the RCN to result in an estimate of value for the improved portion of the real estate. The sales comparison approach is typically the most reliable method to value the underlying land. An overall value is then computed by adding the depreciated value of the improvements to the value of the land.

Improvement Valuation

Cost model specification involves categorizing or grouping commercial improvements by construction type or use. The Commercial Department uses a numerical coding system of building classes that represent over 282 types of commercial property construction. For each building class, key characteristics are used to describe a typical or benchmark property. The characteristics include construction quality, plumbing, interior, flooring, roof type, roof materials, heating/cooling, exterior, foundation, story height, electrical, and number of stories. The Commercial Valuation Manual contains a thorough description and a list of these specific characteristics for each property class. Photo examples of each building class are provided to assist the appraisers in making class determinations. Additional site improvements for each building class, such as concrete paving, light standards, canopies, garages, and storage buildings are also specified and valued using the cost approach. Over 300 ancillary improvement types are defined and valued in the MARS cost model.

Other key data necessary for cost valuation includes gross and net building areas, year built and effective year of construction (EYOC), percent and quality of finish-out, percent of completion, and property condition. A base cost rate is associated with each commercial building class. An improvement value or replacement cost is then computed by multiplying the base rate times the structures gross building area. An improvement can have more than one building class.

Each building class is identified in MARS as a "taxable object", otherwise known as a TO. The total improvement value for an account represents the sum of the depreciated improvement

value of all taxable objects plus any value for the additional site improvements associated with the account.

Depreciation

Accrued depreciation is the sum of all forms of loss affecting the contributory value of the improvements. It is the measured loss against replacement cost new taken from all forms of physical deterioration, functional and economic obsolescence. Accrued depreciation is estimated and developed based on losses typical for each property type at that specific age. Physical depreciation is expressed as a percentage that is computed and subtracted from estimated replacement cost value. This percentage rate is extracted from MARS depreciation tables and is dependent on the class, condition, effective age and economic life of each improvement. Individual determinations are made for functional and economic depreciation rates based on property specific conditions. The sum of the three rates is utilized in the MARS application to compute a depreciated improvement value.

Land Valuation

On an annual basis, commercial land values are analyzed to compare appraised values with recent sale prices in each designated land market area or LMA. The definition of a land market area is a geographic or economic locality comprised of commercial properties with both complimentary and competing land uses. The appraisers on the north and south work regions are each assigned a specific geographic area to collect land characteristics data and determine land values. An assigned land area generally consists of approximately 2,500 accounts and may include one or more land market areas. The parcel count per appraiser may vary depending on the land-use density and the total size of an assigned area. A densely populated urban land area generally has more accounts than a less populated rural assignment. The Complex Properties Section manages the land valuation for the 6,500 complex property accounts.

During the land reappraisal, the appraisers review sales to develop or adjust base land rates on per acre or per square footage basis. A land base rate represents the unit value for a "benchmark" land parcel whose property characteristics are described by a particular size, use, shape, zoning, topography, location, and other characteristics. Properties within a competing area that differ from the benchmark will be valued using the base rate and then adjusted for those characteristics that differ from the benchmark property. Percentage based adjustment factors and adjustment reason codes are applied on individual properties based on corner influence, depth and shape of site, easements across site, visibility, and other factors that may influence value.

The land value for each account is computed by multiplying the land size by the adjusted land rate. The depreciated improvement value is added to the land value to compute a total cost approach value at the account level. For an economic unit, the cost approach value represents

the sum of the cost for all accounts associated with the economic unit.

Sales Comparison Approach Models

Although all three of the approaches to value are based on market data, the Sales Comparison Approach is most frequently referred to as the Market Approach. This approach is utilized for estimating land value and also in comparing sales of similarly improved properties to parcels on the appraisal roll. Sales of similarly improved properties can also provide a basis for the depreciation schedules in the Cost Approach, rates and multipliers used in the Income Approach, and as a direct comparison in the Sales Comparison Approach. Improved sales are also used in ratio studies, which afford the appraiser an excellent means of judging the present level and uniformity of the appraised values.

The formula for the sales comparison approach is **Market Value=Sale Price of Comparable Properties plus or minus adjustments** (for differences between the comparables and the subject). In this model, market value is a total amount without a separation for improvement and land values. Commercial sales modeling begins by processing and storing extensive physical and financial data for each commercial sales transaction. There are currently 285 data fields in the commercial sale database. This amount of information is necessary to determine comparability and adjustments factors. The sales comparison approach requires an adequate amount of sales data to be accurate. Some commercial property categories cannot be valued with this technique because of a limited amount of verifiable sales data.

The commercial mass appraisal sales model is specified or defined based on several standardized property characteristics or comparison fields. Model characteristics can vary by property type. For example, the field "average unit size" is included in apartment models but not used in a component of office models. There are 65 comparison fields in the MARS sales comparison application. While some fields are for descriptive purposes such as ECU number, legal description, sales price and property address, the majority of the fields serve as interactive variables that more accurately define market value for a specific type of property. The variables provide a means of stratifying or grouping sales by class, age, size, location and other key attributes that influence value. The highest level of model specification is by ICLASS and IMA. There is an ICLASS/IMA model developed for every improved category that has an adequate amount of sales data. The second key level of stratification is effective age range and building size range (net rentable area). For example, effective age range groupings for apartments may be 0-10 years, 11-30 years and greater than 30 years. Because sales models are specified based on all four criteria, IMA, ICLASS, age range, and size range, each subject economic unit can only fall within the definition of one model.

Before the models are defined in MARS, the appraisers study and analyze sales using Excel software. This market analysis aids in revealing patterns in value that vary due to location, size, age, etc. The appraiser determines which ICLASS/IMA combinations have enough credible

sales data to create and calibrate a sales model. The analysis also provides a means for establishing adjustment amounts, value ranges and weightings for each comparison criteria on a property type basis. For example, sale analysis may reveal that wide ranges in net rentable area may not have as much influence on value for high-rise office sales as compared to apartments. The appraisers also use various forms of statistical analysis in Excel to measure and predict many market driven value indicators.

The key model comparison fields that are typically selected as search fields include income class (ICLASS), improved market area (IMA), income tag (ITAG) sales price per square foot or unit, effective age, effective year of construction, net rentable area, number of units, average unit size, Mapsco, story height, rent per square foot, and land to building ratio. These fields are primarily calibrated with search criteria in the MARS mass appraisal “default” model application. However, appraisers and managers also have the ability to determine, on an individual property basis, which of the 65 comparison fields are for display only and which fields are defined with specific search criteria to produce a sample of comparable sales.

Income Approach Modeling

The income approach to value is applied to those real properties which are typically viewed by market participants as “income producing”, and for which the income methodology is considered a leading value indicator. The basic formula for the income approach is **Market Value= Net Operating Income Divided By Overall Cap Rate**. This is also known as “Direct Capitalization”, which is a generally accepted appraisal technique used to convert one year’s stabilized income into an indication of market value. The MARS income approach module provides the mechanism to capture and specify a property’s income characteristics for three levels or variable situations known as “actual”, “default model” (market) and “pro forma”. These income calculations are laid out in three separate sections or tabs in the MARS income module. The income formula is the same for each income variable but the data used to calibrate or populate each variable situation may differ. A thorough analysis of both actual income and default model income data is used to develop an indication of market value represented in the income pro forma calculation. The pro forma allows the appraiser to blend market rate comparable income data with actual income characteristics that are property specific. The definition of market value denotes that appraisals are based on fee-simple interest. Therefore, income parameters are based on market data to ensure that TAD is not appraising based on the leased fee interest. Commercial properties should not be appraised using above or below market rental data in the application of the income approach for property tax purposes, unless stipulated by a special appraisal provision in the tax code.

The key model fields in the income approach formula include potential gross rent, physical vacancy, economic vacancy, secondary income, total operating expenses, net operating income and total tax rate, and capitalization rate.

The income approach formula is generally expressed the following way. A brief definition of each component of the formula is listed below.

Potential Gross Rent
Minus Vacancy & Collection Loss
Equals Effective Gross Rent
Plus Secondary Income
Equals Effective Gross Income
Minus Operating Expenses
Equals Net Operating Income
Then **Net Operating Income/Overall Cap Rate=Value**

Potential Gross Rent (PGR) - Total economic or market rent at 100% occupancy; Usually expressed as an annual amount on a per square foot or per unit basis.

Vacancy and Collection (V & C) - Loss in rental income because of physical vacancy, bad debt or economic rental concessions; often expressed as a percent of PGR; based on market cycles and trends.

Effective Gross Rent (EGR) - Rental Income after subtracting vacancy & rental loss from potential gross rent.

Secondary or Other Income - Income, other than rent, that is received from concessions; laundry rooms, parking, storage area rental, electronic communication roof space rental, and other sources related to ordinary operation of a property. Can be expressed as a percentage of PGR or EGR or dollar amount per unit of measure.

Effective Gross Income - Amount of actual income received from rent and secondary sources.

Operating Expenses - Expenses necessary to maintain a cash flow from the real property (not from the business). Typical expenses include management, utilities, property insurance, property taxes, repairs and maintenance, etc. This dollar amount can also be expressed as a percentage or ratio that represents total expenses divided by effective gross income.

Net Operating Income (NOI)- Income remaining after subtracting operating expenses from Effective Gross Income. This amount is income before debt service, property depreciation, personal income taxes, amortization, or interest payments.

Overall Capitalization Rate (OAR) - Rate used to convert income into value. An overall rate represents the requirements of discount (return), recapture and effective tax rates for the whole

property. This is expressed as cap rate plus tax rate. If the tax rate is “loaded” into the cap rate, then the amount of real estate taxes is removed as an expense item.

Actual income data is property specific, but income characteristics derived from these “actuals” are generally representative of typical, market-based characteristics for similar income-producing properties. Standardized or “default income models” are developed by grouping these actual income comparables based on specific comparison or search criteria. The groupings provide a results set of income parameters that are analyzed and calibrated to create a pre-defined or “defaulted” income model. The income parameters that are modeled include potential gross rent per square foot, economic vacancy percent, other income per square foot, expenses per square foot and as a percentage of potential gross rent.

There are 27 income comparison fields used to search and group comparables. Model search criteria can vary by property type. The variable criteria provide a means of stratifying or grouping sales by class, age, size, location and other key attributes that influence income characteristics. The highest level of model specification is by ICLASS, IMA, effective age range and building size range. Other major search fields may include average unit size, lease type, Mapsco location, number of units, rent per square foot, income level, and property rank. The TAD commercial staff strives to develop an ICLASS/IMA model for every improved category that has an adequate amount of income data. Each default model is then utilized in the mass appraisal of properties with the same ICLASS/IMA/age and size range. There are approximately 1,500 default income models used in the valuation over 12,700 improved commercial economic units.

During the 2009 legislative session, Section 23.24(b) was added to the Texas Property Tax Code to address specific circumstances where an income approach valuation may take into consideration both personal property and real property components. Effective as of 01/01/2010, the appraisal district may not separately appraise any personal property valued, as a portion of the income of the real property, and the market value of the real property must include the combined value of the real and personal property. With a few exceptions, TAD’s real property values for apartments and motel/hotels reflect compliance with this new mandate.

VALUATION PROCESS (Model Calibration)

Model calibration involves the process of estimating and periodically adjusting the mass appraisal formulas, tables, and schedules to reflect current local market conditions. Three valuation models are utilized in the mass appraisal process; cost, income and sales comparison models. These are represented in three separate modules in commercial system known as Mass Appraisal Records System or MARS. The software developed to create the commercial valuation models has been specified according to appropriate Uniform Standards of Professional Appraisal Practices and International Association of Assessing Officers mass appraisal standards and techniques. On an annual basis, adjustments or calibrations are made

to reflect local market trends, new construction procedures, materials and/or costs, new improved market area delineations, current sale and market income factors and market capitalization rates, which can vary from year to year. The basic structure of the overall mass appraisal model can be valid over an extended period of time, with recalibration or trending factors utilized for updating the data to the current market conditions. However, at some point, if the adjustment process becomes too involved, the model calibration technique can mandate new model specifications or a revised model structure.

Cost & Depreciation Schedules

The cost approach to value is applied to all improved real property utilizing the comparative unit or square foot method to determine replacement cost new. Replacement cost new should include all direct and indirect costs, including materials, labor, supervision, architect and legal fees, overhead and a reasonable profit. Development of a comparative cost unit for each building class involves the utilization of national cost data reporting services as well as consideration of actual cost information on comparable properties. A base cost rate has been developed for each building class and represents the replacement cost per unit for a benchmark property for each class. Date and location modifiers are necessary to adjust cost data to reflect conditions in a specific market and changes in costs over a period of time. Because a national cost service is used as a basis for the cost models, location modifiers are necessary to adjust these base costs specifically for Tarrant County. The national cost services provides these modifiers.

Additional cost modifiers for each building class have been developed to adjust individual properties for construction components that differ from the base property. Modifiers have been developed for wall height, story height, foundation type, heat/AC type, percentage of finished-out area, and lack of typical property amenities. TAD's method of establishing a base cost per unit and adjusting with modifiers is called a Formula-driven cost model and provides an easy mechanism to adjust periodically.

The commercial classification manual was updated in its entirety August 2001. Since then, periodic updates have been completed as necessary. Field data lists, codes and table rates are reviewed periodically for update as needed. Recent economic news has indicated that the cost of construction materials have decreased over the last year. A thorough review of TAD's commercial base cost rates will be scheduled for the fall of 2011 and may affect the 2011/2012 cost table values. The research staff will employ several methods to determine table adjustments. Marshall Valuation Service provides cost-trend factors for indexing existing costs as well as formula driven cost calculations. This data will be reconciled with actual cost data provided by local property developers to determine which cost rates require adjustments.

Accrued depreciation is estimated and developed based on losses typical for each property type at that specific age. Physical depreciation is the loss in value due to wear and tear and exposure to natural forces. For each major class of commercial property, standardized physical

depreciation tables have been developed based on physical condition and the building life expectancy. These schedules have been developed for improvements with a 15, 20, 30, 40, 50, 60 or 70-year economic life expectancy. These schedules are tested annually using sales of relatively new properties to ensure they are reflective of current market conditions. The actual and effective age of all improvements are noted in MARS. Effective age estimates are based on the utility of the improvements relative to where the improvement lies on the scale of its total economic life and its competitive position in the marketplace. In addition to age, physical depreciation is also based on five condition ratings, poor to excellent, that relate to the level of property maintenance. These condition ratings are further described in the Commercial Appraisal Classification Manual.

A depreciation calculation override can be used if the condition or effective age of a property varies from the standard. These adjustments are typically applied to a specific property type or location and can be developed via ratio studies or other market analyses. Accuracy in the development of the cost schedules, condition ratings and depreciation schedules will usually minimize the necessity of this type of an adjustment factor.

Sales Comparison Default Model Calibration

The commercial sale models are calibrated by populating the various comparison fields with specific sales search criteria. The goal of accurate calibration is to return a group of sales that are comparable to the subject property and require the least amount of adjustments. This is accomplished by accurately populating several of the 65 model comparison or variable fields with accurate and category specific search criteria. For example, in addition to specified ICLASS, IMA, age and size range criteria, an appraiser may also calibrate an apartment model for the following:

<u>Comparison Field</u>	<u>Calibrated Search Criteria</u>
Sale Date	Within 24 Months of Jan 1 of the appraisal year
ITAG	(080)- Average Unit Size Greater than 830 SF
# Of Units	Greater than 200 units
Economic Vacancy	Less than 20%
Rents Per SF	Greater than \$10.00

If the resulting set of comparables sales does not meet adequate sample standards, the appraiser can recalibrate comparison fields as needed.

Prior to the final value edit process each year, commercial managers and supervisors analyze all improved sales and determine which ICLASS/ IMA/age/ size range combinations can be modeled with a standardized set of search criteria. These standardized models are called "default models". The default models provide for uniformity and consistency in the development of sales comparison groupings in the mass appraisal process. Therefore, ECU properties within

each ICLASS that have similar physical, economic and location characteristics will be valued using similar market-driven sales indicators. There are approximately 1,300 default models that provide for the standardized valuation of 123 different ICLASS categories using the sales comparison approach.

Once the default sales comparison search criteria are defined, a search can be executed for each improved ECU property to produce a set of comparable sales. These sales are displayed in the MARS module in a sales comparison grid. The appraiser reviews the sales grid to determine if the sample is sufficient and representative of the subject economic unit. If the sample is either not sufficient, or too large to be representative, the appraiser can recalibrate the search criteria to return a modified sales sample. The appraiser can also make adjustments, as a percentage or dollar amount to individual sales, to account for differences between the sale and the subject. Each of the selected, adjusted sales carries an equal amount of weight unless the appraiser determines otherwise. The appraiser can adjust the percentage weight based on location or other factors for one or more sales, as long as the total of the weightings equals 100%.

Based on the weighted sales, the MARS application displays the average and median per unit prices and computes a total sales comparison value indication. To complete the appraisal process, the appraiser selects either the median value, the average value or can enter an override value for the subject property. This sales comparison value is saved and also displays on the Summary and Reconciliation screen in the MARS Economic Unit valuation module.

Income Model Calibration (Actual, Market, Pro Forma)

Property owners often provide TAD with rent rolls, operating statements and other income documentation that reflect the actual income characteristics of a given property. This type of data is based on actual tenant or contract rent received and actual expenses incurred by the owner. The information is analyzed and entered into the “actual” income formula in MARS. This year-based data is generally representative of the entire economic unit or ICLASS level but a separate mechanism also exists to capture data at the building class level in a table called “specialty” rents. The TAD commercial research staff processes an average of 3,500 income-related statements each year. The entry of this property-specific data serves to calibrate or populate the “actual” income model for each given property. Income from outside or contributed sources that is labeled as “pro forma” is not processed into the MARS “actual” model, even if the property owner is the source.

The default income models are calibrated by populating the various income comparison fields with specific search criteria. The goal of accurate calibration is to return a grouping of market lease comparables that can be used to determine income parameters for a specified ICLASS, IMA, and age and size category. This is accomplished by accurately defining the 27 model comparison fields with category specific search criteria.

For example, in addition to ICLASS, IMA, age and size range criteria, an appraiser may also calibrate an apartment model for the following:

<u>Comparison Field</u>	<u>Calibrated Search Criteria</u>
EYOC	Greater than 1995
ITAG	(080)- Average Unit Size Greater than 830 SF
# Of Units	Greater than 200 units
Economic Vacancy	Less than 15%
Rents Per SF	Greater than \$10.00

If the resulting set of rent comparables does not meet adequate sample standards, the appraiser can recalibrate comparison fields as needed.

The MARS income application assists in analysis of the market rent comps by computing the average, median and weighted average calculation of each income formula field. The commercial staff also gathers additional income data from various outside sources such as Blacks Office Guide, CoStar Properties, Dollars and Cents of Shopping Centers and PKF Hotel Trends. A default model for each IMA/ICLASS is then calibrated using all sources of market related data. The default income model fields include those that are defined include potential gross rent or PGR, economic vacancy percent, other income, expense per square foot or percent of PGR, cap rate, rent type, age range and size range.

Pro Forma Income Valuation

A pro forma is an operating statement used to project probable gross income, operating expenses, and net operating income based on specified market derived assumptions. The direct capitalization income approach is based on projecting rent and expense quantities that reflect how a typical, prudent property owner would manage the property. The cap rate is selected based on the projected quantity, quality and duration of these income characteristics of a property. These projections are defined or calibrated in the pro forma portion of the MARS income module. Adjustments to actual and model income data are developed and applied in the pro forma to reflect differences between a subject property's performance versus a typical property's operating performance or cash flow characteristics. Adjustments for income differences may relate to physical, functional or economic influences that affect a property's ability to generate income. Market-based similarities or differences may be represented in the pro forma model through application of higher vacancy or expense ratios, differences in capitalization rates or through application of a lease up cost adjustment. Reconciliation of actual income and model market-driven data is used to populate the income pro forma and results in a final indication of market value for each economic unit of property.

Final Valuation Summary and Reconciliation

Based on the market data analysis and the methodology described in the cost, income and sales approaches, the various models are calibrated and values are developed for each commercial property. The cost approach mass appraisal model is applied to every improved property. Additional valuation indicators may be developed and applied using the sales comparison and income approaches, depending on the property type and availability of data. The total economic unit value, resulting from the execution of each approach, is displayed on the MARS Summary and Reconciliation Screen. The final valuation of a property is estimated based on reconciling these indications of value considering the weight of the market information available for evaluation and analysis in these approaches to value.

Statistical and Capitalization Analysis

Statistical analysis of final values is an essential component of quality control. This methodology represents a comparison of the final value against the standard and provides a concise measurement of the appraisal performance. Statistical comparisons of many different standards are used including sales of similar properties, the previous year's appraised value, audit trails, value change analysis and sales ratio analysis.

Appraisal statistics of central tendency and dispersion generated from sales ratios are calculated for each property type with available sales data. These summary statistics including, but not limited to, the weighted mean provide the appraisers an analytical tool by which they determine both the level and uniformity of appraised values of a particular property type. The level of appraised values can be determined by the weighted mean for individual properties within a specific type, and a comparison of weighted means can reflect the general level of appraised values.

Appraisers review every commercial property type annually through the sales ratio analysis process. The first phase involves ratio studies that compare the recent sales prices of properties to the appraised values of the sold properties. This set of ratio studies affords the appraiser an excellent means of judging the present level of appraised value and uniformity of the appraised values. Appraisers, based on the sales ratio statistics and designated parameters for valuation update, make a preliminary decision as to whether the value level of a particular property type needs to be updated in an upcoming reappraisal, or whether the ratio of market value is at an acceptable level.

Potential gross rent estimates, occupancy levels, secondary income, allowable expenses (inclusive of non-recoverable and replacement reserves), net operating income and capitalization rate and multipliers are continuously reviewed. Income model estimates and conclusions are compared to actual information obtained on individual commercial and industrial income properties during the appeal and protest hearings process, as well as with information

received from published sources and area property managers and owners.

INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review

The date of last inspection, extent of that inspection, and the TAD appraiser responsible are listed in the MARS system. If a property owner disputes the District's records concerning this data in a protest hearing, MARS data may be altered based on the credibility of the evidence provided. Normally, a new field inspection is then required to verify this information for the current or for the next year's valuation. In addition, if a building permit is issued for a particular property indicating a change in characteristics, that property is added to a work file for review and field inspection.

A major effort is made by appraisers to field review economic areas experiencing large numbers of remodels, renovations, or retrofits, changes in occupancy levels or rental rates, new leasing activity, new construction, or wide variations in sale prices on as many properties as time and resources allow. Additionally, the appraisers frequently field review subjective data items such as building class, quality of construction (known as cost modifiers), condition, and physical, functional and economic obsolescence factors contributing significantly to the market value of the property. In some cases field reviews are warranted when sharp changes in occupancy or rental rate levels occur between building classes or between economic areas. While in the field, the appraisers make an effort to inspect sold and unsold properties for comparability and consistency of values.

Office Review

Office reviews are completed, as authorized by the International Association of Assessing Officers standards, on properties subject to field inspections and are performed in compliance with the guidelines required by the existing classification system. Office reviews are typically limited by the available market data presented for final value analysis. The appraisers may utilize aerial photography as a means to verify building characteristics and location without an on-site field inspection. These reviews summarize the pertinent data of each property as well as comparing the previous value to the proposed value conclusions of the various approaches to value. These evaluations and reviews show proposed value changes; income model attributes or overrides, economic factor (cost overrides) and special factors affecting the property valuation such as new construction status, and a three years sales history. The three-year sales history is required by the Uniform Standards of Property Appraisal Practices (USPAP) for non-residential property. The appraiser may review methodology for appropriateness to ascertain that it was completed in accordance with USPAP or more stringent statutory and district policies. This review is performed after preliminary ratio statistics have been applied. If the ratio statistics are generally acceptable overall the review process is

focused primarily on locating skewed results on an individual basis. Previous values resulting from protest hearings are individually reviewed to determine if the value remains appropriate for the current year based on market conditions. Each appraiser's review is limited to properties in their area of responsibility by property type (improved) or geographic area (commercial vacant land).

Once the appraiser, supervisors and managers are satisfied with the level and uniformity of value for each commercial property within the appraisers area of responsibility, the estimates of value are prepared to send a notice of proposed appraised value. Each parcel is subjected to the value parameters appropriate for its use type.

PERFORMANCE TESTS

Sales Ratio Studies

The primary tool to measure appraisal performance is a ratio study. A ratio study compares appraised values to market values. Sales ratio studies are an integral part of estimating equitable and accurate market values, and ultimately property assessments for the taxing jurisdictions. The primary uses of sale ratio studies include the determination of a need for general reappraisal; prioritizing selected groups of property types for reappraisal; identification of potential problems with appraisal procedures; assist in market analyses; and, to calibrate models used to estimate appraised values during valuation or reappraisal cycles.

Tarrant Appraisal District has adopted the policies of the International Association of Assessing Officers IAAO STANDARD ON RATIO STUDIES, circa July 2010 regarding its ratio study standards and practices. Ratio studies generally have six basic steps: (1) determination of the purpose and objectives, (2) data collection and preparation, (3) comparing appraisal and market data, (4) stratification, (5) statistical analysis, and (6) evaluation and application of the results.

On an annual basis, appraisal managers analyze the results of the previous years Property Value Study that is conducted by the Property Tax Division of the State Comptroller's Office. Commercial Research also produces internal ratio reports at various times during the annual appraisal cycle.

Comparative Appraisal Analysis

The commercial appraiser performs an average unit value comparison in addition to a traditional Ratio study. These studies are performed on commercially classified properties by property use type (such as apartment, office, retail and warehouse or special use). The objective to this evaluation is to determine appraisal performance of sold and unsold properties. Appraisers compute the average unit prices of sold properties and the average unit appraised values of the same parcels to develop a comparison of average value changes of sold and unsold properties. These studies are conducted on substrata such as building class and on properties located within various economic areas. In this way, overall appraisal performance is evaluated

geographically, by specific property type to discern whether sold parcels have been selectively appraised. When sold parcels and unsold parcels are appraised equally, the average unit values are similar. These sales and equity studies are performed prior to final appraisal and generation of notices of proposed appraised values.

Business Personal Property, Minerals & Utilities Valuation Process

INTRODUCTION

Appraisal Responsibility

The Business Personal Property, Mineral & Utility Department (BPP) of Tarrant Appraisal District (TAD) is responsible for developing fair and uniform market values for business personal property, minerals, and utilities located within the district. There are several different account types appraised: (1) standard business personal property, (2) leased asset/special property at multiple locations, (3) commercial and business aircraft, (4) special inventory, (5) "J" State Code utility properties and (6) mineral accounts (which are real property but the valuation is contracted out and managed by the department).

Appraisal Resources

- ❑ **Personnel** – The BPP staff consists of a department director, appraisal manager, appraisal supervisor, research manager, research specialist, valuation analyst, senior appraisers/ appraisers/valuation technicians, and a clerical staff with a senior clerk and entry/support clerks. The BPP Director reports to the Executive Director/Chief Appraiser.
- ❑ **Data** – A common set of data characteristics for each account in the district are collected by appraisers in the field, by phone, and other pertinent sources and are entered into the TAD mainframe computer by both the appraisal and clerical staff. These assigned property characteristics direct the computer-assisted personal property appraisal (CAPPA) system to a preliminary account value.

Additionally, a third party appraisal firm that values minerals and certain utility properties gathers data from the Texas Railroad Commission and other proprietary sources.

VALUATION APPROACH (model specification)

SIC Code Analysis

Four digit numeric codes, called Standard Industrial Classification (SIC) codes, are used as the basis for classification and valuation of business personal property accounts. TAD has further stratified these codes by adding alpha and numeric suffixes in order to group business types that have similar property characteristics.

SIC code identification and delineation is the cornerstone of the business personal property valuation system. Analysis work done in association with the valuation process is SIC code specific. There are approximately 900 TAD-specific SIC codes. SIC codes are delineated based on observable aspects of homogeneity and periodically reviewed to determine if revision is necessary.

Highest and Best Use Analysis

The highest and best use of property is the most reasonable and probable use that supports the highest present value as of the date of the appraisal. The highest and best use must be physically possible, legally permissible, financially feasible, and maximally productive. The highest and best use of business personal property is normally its current use.

DATA COLLECTION / VALIDATION

Data Collection Procedures

Appraisal and data collection procedures are maintained in the Business Personal Property Manual and are supplemented with work memorandums as needed. Procedures are reviewed and revised to meet the changing requirements of field data collection. Business Personal Property appraisers reappraise all businesses each year through various discovery means and resources.

Sources of Data

Standard Business Personal Property Account

District appraisers collect new data via an annual reappraisal. Various discovery publications such as the internet, Texas Department of Transportation commercially registered vehicle listing currently provided by Infonation Inc, sales tax permit listings, and local occupancy permits are also used during the reappraisal. Newspapers, business publications, business owners, and

district residents provide discovery information and other useful facts related to discovery and valuation.

Leased Asset/Special Property at Multiple Locations Account

The primary source of discovery for these accounts is owner renditions submitted in either hard copy or electronic format. Property owner survey letters, on-site inspections and the renditions of lessees are sometimes used to supplement this information.

Commercial and Business Aircraft

“Air Pac”, a private company in Edmond, Oklahoma, consolidates information from the Federal Aviation Administration (FAA) along with local airport/airfield management and provides TAD with a listing of commercial and business aircraft with situs in this district. Valuation is accomplished by referencing the Aircraft Blue Book Price Guide (Winter Edition), the Airliner Price Guide, and/or the Avitas Blue Book of Aircraft Values to establish market value. Owner renditions (and when necessary the Bureau of Transportation Statistics website) are then referenced for aircraft allocation.

Special Inventory

Monthly and annual declaration forms for boat, heavy equipment, manufactured housing, and motor vehicle dealers (as defined by Section 23 of the Texas Property Tax Code) are used for discovery and valuation of special inventory accounts. Copies of annual declarations are maintained by TAD. Alternate discovery methods may sometimes be used as described in the Standard Business Personal Property Account section.

Certain Utility, Pipeline and Mineral Accounts

Tarrant Appraisal District contracts for certain appraisal work on Electric Generating Plants, Electric Distribution, Pipelines, and Oil/Gas reserves with third party appraisal firms. Uniform Standards of Professional Appraisal Practices or USPAP certification and reappraisal plan information on these properties are maintained at the contractors individual offices. A copy of the current vendor's 2011-2012 reappraisal plan is also included in the addenda to the TAD report. (See Appendix C) A list of third party vendors is available upon request.

VALUATION AND STATISTICAL ANALYSIS (model calibration)

Cost Schedules

Research specialists develop cost schedules according to Standard Industrial Codes. Cost data is analyzed from property owner renditions, Settlement and Waiver of Protest documentation, and Appraisal Review Board (ARB) hearing evidence. Value models are reviewed as

necessary to reflect changing market conditions and are presented exclusively in a cost per square foot format.

Depreciation Schedule and Trending Factors

While all three approaches to value are considered, Tarrant Appraisal District's primary approach to the valuation of business personal property is the cost approach. The replacement cost new (RCN) is either obtained from property owner reported historical cost or from TAD developed valuation models. The "percent good", or remaining economic life, is considered to recognize the trend for changes in cost factors.

Depreciation schedules are reviewed annually and adjusted on an as needed basis. Any revisions are then adopted and their use is reflected in all of the calculations for that property. Application of this schedule ensures that market values are uniform and equal.

Computer Assisted Personal Property Appraisal (CAPPA)

The two main objectives of the CAPPA valuation process are to (1) analyze and adjust existing SIC models and (2) develop new models for business classifications not previously integrated into CAPPA. Models are created and refined using original cost data to derive a typical replacement cost new (RCN) per square foot for a specific category of assets. The RCN per square foot is depreciated by the estimated age using the depreciation table adopted for that tax year.

The data sampling process is conducted in the following order 1) prioritizing SIC codes for model analysis and 2) compiling the data and developing the reports. The models are built and adjusted using internally developed software. The typical cost per square foot is determined by a statistical analysis of the available data.

Standard Business Personal Property Account

CAPPA model values are used in the general business personal property valuation program to estimate the value of new and/or existing accounts for which a property owner's rendition has either not been received or not used to estimate a value. Historical values are used to establish review parameters for testing the valuation of property for which prior data years' data exist or for which current year rendered information is available. The calculated current year value or the prior year's value is compared to the historical value by the valuation program. If the value being tested is within an established acceptable percentage tolerance range, the account passes that range check and moves to the next valuation step. If the account fails the tolerance range check, it is flagged for individual review. Allowable tolerance ranges may be adjusted from year to year depending on the analysis of the results of the prior year.

Leased Asset/Special Property at Multiple Locations Account

Leased and multi-location assets are valued using the depreciation schedules mentioned above. If the asset to be valued in this category is a vehicle, then NADA published book values may be used.

Commercial and Business Aircraft

Valuation is accomplished by referencing the Aircraft Blue Book Price Guide (Winter Edition), the Airliner Price Guide, and from the Avitas Blue Book of Aircraft Values. The Texas Property Tax Code has a specific methodology for the valuation and/or allocation of all aircraft.

Special Inventory

The Texas Property Tax Code provides a specific methodology for valuing this category of property. Valuation is based upon the annual declaration filed by the property owner indicating the previous year's Texas sales (used as the numerator) and divided by a factor of 12 (the denominator). This establishes a monthly basis consistent with the owner's tax payment requirements. In the absence of an annual declaration, similar businesses that have filed declarations are identified and compared, with appropriate adjustments, to the subject property to establish an estimated market value.

INDIVIDUAL VALUE REVIEW PROCEDURES

Office Review

Standard Business Personal Property Account

A BPP valuation program exists in the mainframe and personal computer environment that identifies accounts in need of specific review based on a variety of conditions. Property owner renditions, accounts with field or other data changes, accounts with prior Appraisal Review Board hearings activity, newly established business accounts, and SIC value model changes are all considered. The accounts are processed by the valuation program and pass or fail preset tolerance parameters by comparing appraised values to historical information. An appraiser reviews accounts that fail the tolerance parameters.

Leased Asset/Special Property at Multiple Locations Account

Leased Asset/Special Property accounts that have a high volume of vehicles or other assets are loaded programmatically if reported by the property owner electronically. Electronic renditions may require reformatting before they can be loaded to the account. The BPP clerical staff enters accounts that render via hard copy. After data matching and entry, reports are generated and reviewed by an appraiser. Once proofed, necessary corrections are made, supervisor approval is granted, and the account is sent a notice of appraised value.

Commercial and Business Aircraft

The commercial and business aircraft accounts are simultaneously valued/reviewed with rendered data and third party market value data.

Special Inventory

TAD's perpetual account tracking system ensures dealers without a current declaration on file are contacted to advise them of their legal filing requirements and to provide TAD with the most current valuation/review data available.

PERFORMANCE TESTS

Ratio Studies

Every other year the Property Tax Division of the State Comptroller's Office conducts a Property Value Study (PVS). The PVS is a ratio study used to measure appraisal district performance. Results from the PVS play a part in school funding. Rather than a sales ratio study, the personal property PVS is a ratio study using state cost and depreciation schedules to develop comparative personal property values. These values are then compared to TAD's personal property values and ratios are determined.

LIMITING CONDITIONS

The appraised value estimates provided by the district are subject to the following conditions:

1. TAD appraisals are prepared exclusively for ad valorem tax purposes as specified in the Texas Property Tax Code. Jurisdictional exceptions may apply where compliance with part or parts of USPAP is contrary to law or public policy applicable to TAD's appraisal assignment.
2. The property characteristic data upon which the appraisals are based is assumed correct. Exterior inspections of the property appraised are performed as staff resources and time allowed. Some interior inspections of property appraised are performed at the request of the property owner or as requested by the district for clarification purposes and to correct property descriptions.
3. Validation of sales transactions is attempted through questionnaires to buyer and seller, telephone survey and field review. In the absence of such confirmation, sales data obtained from vendors is considered reliable.
4. See Appendix B for a list of staff providing significant assistance to the person signing this certification.

Certification Statement:

"I, Jeffery D. Law, Chief Appraiser/Executive Director for Tarrant Appraisal District, solemnly swear that I have made or caused to be made a reappraisal plan for Tarrant Appraisal District for the 2011/2012 tax years as required by law."

Jeffery D. Law
Chief Appraiser/Executive Director

Appendix A. 2011-2012 Proposed Calendar of Key Activities

PROJECTED

<u>DATE</u>	<u>2011 REAPPRAISAL - RELATED ACTIVITY OR EVENT</u>
July-10	<ul style="list-style-type: none"> * Appraisal Review Board Approves 2010 Appraisal Records To Create Appraisal Roll * Chief Appraiser Certifies 2010 Appraisal Roll To Taxing Units * TAD Board Adopts New Policies and Procedures Manual * TAD Administration Issues RFP For New CAMA System
August-10	<ul style="list-style-type: none"> * Begin 2011 Appraisal Field Work For Residential & Commercial New Construction * Research Depts. Begin Cost, Sale & Income Data Collection For Model Calibration * Managers Review Ratio Study Results-Identify Key Areas For 2011 Value Review * Staff Training for 2011 Commercial Field Data Collection * Texas Association Of Appraisal Districts (TAAO) Annual Conference-Ft Worth * Texas A & M Legal Seminar On Ad Valorem Taxation-San Antonio Texas * Information Systems Rollover Of TAD Data Records To Begin Appraisal Year 2011 * PTAD Methods Assistance Program (MAP)- Preliminary Recommendations for TAD
September-10	<ul style="list-style-type: none"> * Sept. 1 - Statutory Appraisal Date For Certain Inventory Properties (Sec.23.12) * Begin 2010 Appraisal Field Work For BPP * Labor Day-District Closed September 6 * 2010 ARB Hearings Continue From September 2010 Through May 2011 * Begin 2011 Commercial Field Reappraisal In Portion Of NE Tarrant County * Initial Overlapping CAD Exchange Of Deed Records and Appraisal Data * Sept. 15 - Statutory Deadline For TAD Board of Directors To Approve 2011 Budget & 2011-2012 Reappraisal Plan * PTAD Approved/TDLR Required Appraisal Course 1-Intro To Property Tax System, Course 30-Ethics and Course 32-USPAP * Begin Residential 2011 Land Value Review
October-10	<ul style="list-style-type: none"> * Taxing Units Mail 2010 Tax Bills - Appraisal Support For Phones & Customer Service * Supervisory Review of Commercial Market & Preliminary In-House Land Ratio Study * Begin 2011 Commercial Land Reappraisal/Permits Field Review * Residential Begins Review of Neighborhood Delineations * PTAD Approved/TDLR Required Appraisal Course 4- Appraisal of BPP, Course 2- Appraisal of Real Property and Course 10- Appraisal Analysis * Comptrollers 52th Annual Conference on Property Taxation-Austin TX
November-10	<ul style="list-style-type: none"> * TAD Managers & Supervisors Receive 2010 Employee Performance Review Packets * PTAD Approved/TDLR Required Appraisal Course 3- Income Approach, Course 7- Property Tax Law and Course 5- Mass Appraisal * Complete 2011 Commercial Field Reappraisal -Managers Review QC Edits * Thanksgiving Holiday-TAD Closed November 25 & 26
December-10	<ul style="list-style-type: none"> * 2011 Commercial Data Analysis and Model Calibration * 2010 PTAD MAP Review- Final Report Delivered To TAD * Christmas Holiday - TAD Closed December 23 & 24 * Mail Business Personal Property Rendition Forms

PROJECTED

<u>DATE</u>	<u>2011 REAPPRAISAL - RELATED ACTIVITY OF EVENT</u>
January-11	<ul style="list-style-type: none"> * New Years Day-TAD Closed * Jan. 1 - Statutory Appraisal Date For Most Categories Of Taxable Property * Residential & Commercial Market & Statistical Analysis Begins * Martin Luther King Day-TAD Closed * PTAD Approved/TDLR Required Appraisal Course * Long Range Planning Session - TAD Managers & Supervisors * Complete 2011 Commercial Land Reappraisal-Managers Review Edits * Analysis & Preparation For Final Value Edits - Personal Property & Commercial
February-11	<ul style="list-style-type: none"> * Begin Application of Residential Neighborhood Market Adjustments * PTAD Approved/TDLR Required Appraisal Course * TAD/Tarrant County Tax Office Roundtable Discussion * Texas Association Of Appraisal Districts (TAAD) Annual Conference, Austin TX * President's Day-TAD Closed * Business Personal Property Wrap-up Of Field Verification Activities * Begin Working 2011 Business Personal Property Renditions
March-11	<ul style="list-style-type: none"> * 4 Day BTPE In-House Appraisal Course - With TAD Instructors * Appraisal Level III and RPA Exams In Dallas
April-11	<ul style="list-style-type: none"> * Begin Preparation For 2012 Budget * Finalize Residential Changes Prior To First Value Notice Run * Agreed Upon Timeframe to Exchange 2011 Overlap Values With Overlap CADS * Complete Commercial Final Value Edits-Managers Review Reports * BPP Rendition Deadline on April 15th * Finalize Commercial & BPP Changes Prior To First Value Notice Run * Deadline To File Abatement Application on April 30th
May-11	<ul style="list-style-type: none"> * First Mailing of 2011 Real and BPP Value Notices * Mineral Property First Notice Run * Begin Informal Appeals * BPP Rendition Extension Deadline On May 15th * Statutory Date For to Match Overlapping Values * Memorial Day-TAD Closed * Statutory Deadline To File Appraisal Review Board Protest
June-11	<ul style="list-style-type: none"> * Chief Appraiser Submits 2011 Completed Appraisal Records To ARB * 2011 Appraisal Review Board Hearings Begin

PROJECTED

DATE

2012 REAPPRAISAL - RELATED ACTIVITY OF EVENT

- | | |
|---------------------|--|
| July-11 | <ul style="list-style-type: none">* Appraisal Review Board (ARB) Approves Appraisal Records-Creates Appraisal Roll* Chief Appraiser Certifies 2011 Appraisal Roll To Taxing Units* Chief Appraiser Prepares 2011 Mass Appraisal Report |
| August-11 | <ul style="list-style-type: none">* Begin 2012 Appraisal Field Work For Residential & Commercial New Construction* Research Depts. Begin Cost, Sale & Income Data Collection For 2012 Model Calibration* Managers Review Ratio Study Results-Identify Key Areas For 2012 Value Review* Staff Training for 2012 Commercial & Business Personal Property Field Data Collection* TAAO Annual Conference* Information Systems Rollover Of TAD Data Records To Begin Appraisal Year 2012 |
| September-11 | <ul style="list-style-type: none">* Sept. 1 - Statutory Appraisal Date For Certain Inventory Properties (Sec.23.12)* Begin 2012 Appraisal Field Work For BPP* Labor Day-District Closed September 5* 2011 ARB Hearings Continue From September 2011 Through March 2012* Begin 2012 Commercial Field Reappraisal – SE Tarrant County* Texas A & M Legal Seminar On Ad Valorem Taxation-San Antonio Texas* PTAD Approved/TDLR Required Appraisal Course Offerings* Sept. 15 - Statutory Deadline For TAD Board of Directors To Approve 2012 Budget* Begin Residential 2012 Land Value Review |
| October-11 | <ul style="list-style-type: none">* Taxing Units Mail 2011 Tax Bills - Appraisal Support For Phones & Customer Service* Supervisory Review of Commercial Market & Preliminary In-House Land Ratio Study* Residential Begins Review of Neighborhood Delineations* PTAD Approved/TDLR Required Appraisal Course Offerings* Comptrollers Annual Conference on Property Taxation-Austin TX |
| November-11 | <ul style="list-style-type: none">* TAD Managers & Supervisors Receive 2011 Employee Performance Review Packets* PTAD Approved/TDLR Required Appraisal Course Offerings* Complete 2012 Commercial/BPP Field Reappraisal -Managers Review QC Edits* Appraiser In-House Training For 2012 Land Reappraisal* Thanksgiving Holiday-TAD Closed November 24-25* Begin 2012 Commercial Land Reappraisal/Permits Field Review* Review & Return PTD Clerical Error Report For 2011 Property Value Study |
| December-11 | <ul style="list-style-type: none">* 2011 Employee Performance Reviews-Discussions With Staff* PTAD Approved/TDLR Required Appraisal Course Offerings* Christmas Holiday - TAD Closed December 23rd and 26th* Mail Business Personal Property Rendition Forms |

PROJECTED

DATE

2012 REAPPRAISAL - RELATED ACTIVITY OF EVENT

- | | |
|--------------------|---|
| January-12 | <ul style="list-style-type: none"> * New Years Day-TAD Closed January 2 * Jan. 1st - Statutory Appraisal Date For Most Categories Of Taxable Property * Residential & Commercial Market & Statistical Analysis Begins * Martin Luther King Day-TAD Closed January 16 * Long Range Planning Session - TAD Managers & Supervisors * Complete 2011 Commercial Land Reappraisal-Managers Review Edits * Analysis & Preparation For Final Value Edits - Personal Property & Commercial * Receive 2011 Property Value Study Results from Property Tax Division Begin Appeals Preparation |
| February-12 | <ul style="list-style-type: none"> * Begin Application of Residential Neighborhood Market Adjustments * PTAD Approved/TDLR Required Appraisal Course Offerings * Texas Association Of Appraisal Districts (TAAD) Annual Conference Austin TX * President's Day-TAD Closed * Business Personal Property Wrap-up Of Field Verification Activities * Begin Working 2012 Business Personal Property Renditions |
| March-12 | <ul style="list-style-type: none"> * Deadline to Submit 2011 Value Study Appeals Evidence * Appraisal Level III and RPA Exams In Dallas |
| April-12 | <ul style="list-style-type: none"> * Begin Preparation Of 2013 Budget and 2013-2014 Reappraisal Plan * Finalize Residential Changes Prior To First Value Notice Run * Complete Commercial Final Value Edits-Managers Review Reports * April 15 - Business Personal Property Rendition Deadline * Finalize Commercial & BPP Changes Prior To First Value Notice Run * April 30 - Deadline To File Abatement Application |
| May-12 | <ul style="list-style-type: none"> * First Mailing of 2012 Value Notices * Begin Informal Appeals * 2011 Property Value Study Appeal Hearings-Austin TX * BPP Rendition Extension Deadline on 15th * Mineral Property First Notice Run * Memorial Day-TAD Closed * Statutory Deadline To File Appraisal Review Board Protest |
| June-12 | <ul style="list-style-type: none"> * Chief Appraiser Submits 2012 Completed Appraisal Records To ARB * 2012 Appraisal Review Board Hearings Begin |
| July-12 | <ul style="list-style-type: none"> * Appraisal Review Board (ARB) Approves Appraisal Records-Creates Appraisal Roll * Chief Appraiser Certifies 2012 Appraisal Roll To Taxing Units |

Appendix B. Key Appraisal Personnel in Reappraisal Plan Implementation

<u>DEPARTMENT</u>	<u>EMPLOYEE</u>	<u>POSITION</u>
	JEFFERY D. LAW	EXECUTIVE DIRECTOR/CHIEF APPRAISER
ADMINISTRATION	JEFF CRAIG	DIRECTOR OF ADMINISTRATION
RESIDENTIAL	RANDY ARMSTRONG	DIRECTOR OF RESIDENTIAL APPRAISAL
	VICKI WILKIE	REGIONAL APPRAISAL MANAGER
	SHERYL ADAIR	REGIONAL APPRAISAL MANAGER
	JESSIE KALBA	REGIONAL APPRAISAL MANAGER
	JANIS TURNER	REGIONAL APPRAISAL MANAGER
	DAVID MUSIL	RESEARCH MANAGER
	DALE RECTOR	AGRICULTURAL APPRAISAL SPECIALIST
COMMERCIAL	DAVID LAW	DIRECTOR OF COMMERCIAL APPRAISAL
	WILLIE BRAND	COMMERCIAL/COMPLEX PROPERTIES MANAGER
	DEBBIE CABELLO	RESEARCH AND REPORTING MANAGER
	WILLIAM DURHAM	LITIGATION MANAGER
	ROY SMITH	REGIONAL SUPERVISOR
	TERRY SPRADLIN	REGIONAL SUPERVISOR
	MATT TRACY	RESEARCH AND REPORTING SUPERVISOR
	CHARLIE BRATCHER	COMPLEX PROPERTIES SUPERVISOR
BPP, MINERALS, UTILITIES	LONNIE RICHARDSON	DIRECTOR OF BPP, MINERALS, UTILITIES
	RANDY WATKINS	APPRAISAL MANAGER
	DJ WHITEHEAD	SENIOR RESEARCH SPECIALIST
SUPPORT SERVICES	DIANE COLLINS	DIRECTOR OF SUPPORT SERVICES
	DONNA PERLICK	LAND MANAGEMENT/RECORDS SUPERVISOR
	WOODY BOYKIN	LAND MANAGEMENT/GIS MANAGER
	SHERRY BROWN	ARB SUPERVISOR
	KATHY TIBBIT	CUSTOMER SERVICE SUPERVISOR
	CINDY HOWARD	EXEMPTIONS SUPERVISOR
INFORMATION SYSTEMS TECHNOLOGY	BOB TAROLA	DIRECTOR OF INFORMATION SYSTEMS
	GENE WOODALL	APPLICATIONS PROGRAMMING MANAGER
	LORETTA BASLEE	DATA SERVICES MANAGER
	GINNY EVANS	ASST DATA SERVICES MANAGER
	CHARLIE COX	COMPUTER OPERATIONS MANAGER

Appendix C. Reappraisal Plan From Third Party Vendor
See Attached Document