



REAPPRAISAL PLAN

2027 - 2028

TOM GREEN COUNTY APPRAISAL DISTRICT

Adopted by the Board of Directors: 9/10/2026

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Tom Green County Appraisal District Reappraisal Plan 2025-2026

EXECUTIVE SUMMARY

This executive summary contains the legal requirement of a reappraisal plan passed by the Texas Legislature in the 2005 regular session, and our response to these requirements is immediately below the law in bold italics. Intricate details of how the plan will be implemented are discussed in the body of this document.

Tax Code Requirement

Section 6.05, 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 biannually 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 hearings, make 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, 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). ***The plan may not include a standard or timeline that prevents the chief appraiser from appraising property as necessary to comply with the requirements of Section 23.01(a).***
- 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;

The Tom Green County Appraisal District (TGCAD) receives listings of all deeds filed in Tom Green County through a contract with Just Appraised Software. Those deeds are read and abstracted by the clerical staff of TGCAD. Information is recorded in the computer assisted mass appraisal (CAMA) software including grantor, grantee, and date of recording, volume, and page in the county clerk's records. Property identification numbers are assigned to each parcel of property that remain with the property for its life.

Business personal property is located by canvassing the county street by street, using data sources such as yellow pages, sales tax permit holder lists, and other business listing publications to ensure that all property owners are located. All assumed name filings are mailed a rendition around January 1st of each year. Owners are required by state law to list all their business personal property. Failure to render results in an immediate 10% penalty and a possible 50% penalty if fraud is involved in a false rendition. Lists of commercial vehicles are also purchased annually, and these vehicles are tied to appropriate business accounts. Renditions are also required of utility companies, railroads, and pipelines.

Maps have been developed for years that show ownership lines for all real estate. These maps are stored digitally using software from ESRI, the most popular geographic information system software in the nation. Aerial photographs of the entire county were completed in February 2008, March 2009, February 2013, June 2017, February 2019 and January 2021, 2023, and 2026. Plans have been implemented to fly the entire county in January 2027. These images can be viewed as ortho or oblique and have software attached allowing for functions such as measuring distances, acreage, sq. footage, elevation etc.

2) Identify and update relevant characteristics of each property in the appraisal records.

Real estate is physically reviewed every other year. Appraisers drive to neighborhoods within the towns and cities of Tom Green County and gather data about each home, commercial business, or vacant land tract. The appraisers drive from property to property noting the condition of the property and observing and noting any changes to the property since the previous inspection. Photos are stored in the CAMA software and assist the appraiser in making value decisions when he or she returns to the office. Other data stored in the CAMA system includes an exterior sketch of the improvement which allows the computer system to calculate square footage for the various areas of the building. The rural areas of the county are driven each spring as the plan permits with the appraisers looking for newly constructed properties and remodels since there is no permit system in the area outside the incorporated cities.

Business personal property is inspected by the BPP staff. They look at the quality of inventory, how dense the stocking is, and make general notes regarding equipment on site. If their observation is different than the rendition made by the taxpayer, additional information is gathered, and a higher value may be assigned than the rendered amount.

Specialized software programs are also used to value utility companies, railroads, and pipelines using the net income that the companies make and allocating those values to the various tax units. Utilities, railroads and pipelines are appraised by Pritchard and Abbott Appraisal Group.

3) Defining market areas in the district

Annually, appraisers combine similar types of property into “neighborhoods”. These neighborhoods have improvements that are of similar construction and type as well as similar ages of construction. Market sales are examined to confirm which areas are similar. In apartments, commercial retail, wholesale, and service retail, the properties are categorized by market demand. Trade areas with similar rents, quality, and age are combined to analyze and apply sales and rental data.

Land is also put into regions or neighborhoods with other parcels having similar characteristics, school districts, and amenities. Using these neighborhoods, values are applied to all parcels using generally accepted appraisal methods and techniques.

Residential neighborhoods within the incorporated cities of Tom Green County are grouped together by homogeneous subdivisions within the city and are kept as geographically represented as possible. On occasions, geographically separate subdivisions may be extremely similar in characteristics and market values. In these instances, subdivisions may be linked together under the same neighborhood code regardless of their geographical location within the city, to one another.

Neighborhood codes in the rural areas of the county have been established by grouping like properties within the same school district together. When assigning a neighborhood code to these properties, the appraiser will consider the quality of construction, age and condition of the improvement.

Commercial neighborhoods are established by linking similar property types together within each school district. For example, all gas station/convenient stores in San Angelo ISD will be grouped together under the same neighborhood code.

A complete list of all Tom Green County neighborhood codes and market areas is attached as Appendix “A”.

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 property, such as size, age, and condition
- C) Legal and economic attributes
- D) Easements, covenants, leases, reservations, contracts, declarations, special assessments, ordinances, or legal restrictions

Each parcel of property has detailed information recorded in the CAMA system. For land, the legal description, dimensions, size, available utilities, and special characteristics are noted in a form that can be used and compared with other land parcels.

Each improvement shows the sketch and dimensions, a picture of the improvement, the class which indicated original construction quality, the year of construction of each part of the improvement, the exterior covering of the improvement, and other attributes, and overall condition of the improvement. Any easements, covenants, leases, reservations, contracts, declarations, special assessments, ordinances or legal restrictions will be noted in the assessment and the appropriate adjustment applied.

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

The CAMA system begins with the cost approach to value estimating the original cost of each improvement. That cost is based on local modifiers to the Marshall-Swift cost systems, a nationally recognized cost estimation system. By utilizing these cost systems, properties are equalized as to their original costs. Components measured in the cost include the size of the structure, number of bathroom fixtures, quality of kitchen appliances and number of built-in appliances, type of roof structure, roof covering, exterior covering, special features such as fireplaces, pools, cabinetry and other special amenities. The market sales are then studied for improvement contributions in each neighborhood and adjustments to cost are applied to each neighborhood in the form of all types of depreciation. Finally, each structure is rated as to its current condition. Ratings range from poor to excellent. Sales are also categorized using the same condition rating system so that sales comparisons will be made to properties of like construction and condition.

This same concept is used in commercial, industrial, and apartment property. Significantly larger neighborhoods or areas are indicated for these properties using sales and income data.

Utilities, railroads and pipelines are individually appraised using the three approaches to value. The appraisal is a “unit appraisal” that looks at the entire company to be appraised, values it based on original cost less depreciation, net income to the company, and comparable equipment lines, or customers, within that jurisdiction.

6) Applying the conclusions reflected in the model to the characteristics of the properties being appraised

By utilizing sales data for each neighborhood, the appraiser measures accrued depreciation of structures by condition rating. By utilizing the age, quality, condition, construction components, and other variables, the model is developed and applied to all parcels within the neighborhood.

For commercial property and apartments, Economic Index Factors are applied to cost figures to align values with current sales data. Regions of the community are assigned similar values per square foot for similar age, construction quality, and condition. Models are developed and the CAMA system applies all the factors and assigns value to each parcel.

7) Reviewing the appraisal results to determine value

After completing the process of assigning values to all parcels within a neighborhood using the computer assisted mass appraisal programs, printouts are run to make comparisons of values per square foot within the neighborhood and comparison of those appraised values per square foot with current sales data from the neighborhood. A sales ratio is run for each neighborhood to determine if the values that have been assigned are within required ratios of law (95%-105%).

Commercial property and apartments are compared by category or type of business, e.g., fast food structures are compared to other fast-food stores. Adjustments are made in mass by the commercial appraisal staff utilizing the CAMA systems. All similar improvements are compared to verify reasonableness of value and equality.

Revaluation Decision (Reappraisal Cycle)

TGCAD reappraises all property in the district every year using sales analysis and internal ratio studies. Each parcel is physically inspected by an appraiser every other year. Property assigned as Territory A (50%) will be physically inspected in 2027 and the property assigned as Territory B (50%) will be physically inspected in 2028. The reappraisal is a complete appraisal of all properties in the district. Tax year 2027 is a reappraisal year and tax year 2028 will be a reappraisal year. The 2027 – 2028 calendars of key activities are as follows:

Projected Date

Appraisal Related Event

August

- Conduct preliminary ratio studies to determine appraisal needs and goals
- Conduct initial planning meeting for annual appraisal activities
- Finish ARB hearings
- Field reviews and confirmation of sales data gathered through protests

September

- Begin field work for Real, Commercial and Personal Property
- Implement any CAMA system updates that were intended to be done before Notice and Protest time (Coding, Neighborhoods, Data Quality, etc.)
- September 15th – Deadline for TGCAD Board of Directors to approve reappraisal plan (even numbered years)

October

- Begin review of rural land and agricultural appraisal guidelines
- Begin field work for properties within re-check/re-inspection appraisal plans from previous year and continue field work for real and personal property

November

- Continue field work for properties within re-check/re-inspection appraisal plans from previous year and continue field work for real and personal property
- Review of land regions, residential neighborhoods and commercial market area delineations

December

- Continue residential, commercial and business personal property field inspections based on permits, rechecks and the ARB protest process
- Perform data entry for completed field work
- Continue data quality improvements and CAMA updates

January

- January 1 – appraisal date for most categories of taxable property
- Enter sales information acquired into the CAMA system
- Begin implementation of schedule changes based on review of cost and market data collected
- Complete county drive-out or other special field inspection projects to identify any new construction, remodeling or other significant changes to taxable property
- Appraisers work the Jan-1 re-inspection list
- Begin rendition period for business personal property
- Mail agricultural exemption applications to new owners
- Mail BPP renditions
- Initiate planning session for annual valuation activities
- Receive Comptroller Property Value Study (PVS) or Methods and Assistance Program (MAP) review and incorporate into district ratio study analysis, valuation plan and appraisal district operating procedures
- Mail out Ag Survey letters
- Mail out Commercial income & expense surveys
- Continue field work and data entry for applicable properties for appraisal year
- Begin review of manufactured home values via monthly statement and location information, sales ratio reports and local market listing information

February

- Finalize annual valuation goals and activities, implement initial valuation processes
- Begin review of residential neighborhood profiles and market adjustments via mass appraisal reporting software (Spotfire)
- Begin review and valuation of commercial land, rural land, vacant lots and builder inventory lots via sales ratio reports and local market area listing data
- Begin review of Commercial/Industrial class codes via Marshall & Swift cost comparisons and income surveys provided by local property owners
- Review annual titling report
- Finalize updating of residential cost and depreciation schedules

March

- Finalize field inspections, data entry or any updates the appraisers have for current-year appraisals
- Field work should be completed by mid-month
- Initiate 2nd mailing of Agricultural special valuation requests and continue to review submitted ag applications
- Begin organization of business personal property rendition information and appraisal activities
- Review and enter submitted exemption applications

April

- Begin auditing the CAMA system and review valuation results via sales ratio, percentage of increase/decrease, data entry error reports, entity total reports, zero value reports and neighborhood profiles
- First mailing of Appraisal Notice to Commercial and some Residential property owners
- Finish Business Personal Property valuation and review submitted renditions
- Review appraisals conducted by the contracted appraisal firm (Pritchard & Abbott), coordinate any information or data to finalize appraisal notices and protest plans for properties appraised by the contracted appraisal group.
- Prepare preliminary value estimates for all taxing units in Tom Green County prior to April 30th
- Complete all necessary Ag application special valuation field checks
- Begin property owner inquiries and protest process

May

- Mail remaining residential notices of appraised value
- Mail Business Personal Property appraisal notices
- Continue property owner inquiries and protest process
- Submit appraisal rolls to Appraisal Review Board

June

- Prepare mass appraisal report
- Continue property owner inquiry and protest processes
- Submit preliminary budget to taxing entities before June 15th
- Schedule formal hearing to be brought before the Appraisal Review Board

July

- Appraisal Review Board approves appraisal records
- Chief Appraiser certifies appraisal roll to taxing entities
- Create new tax year in the CAMA system to begin next appraisal cycle

All residential and vacant land properties have been broken into seven territories. Each property within these territories will be physically inspected once every other year. Each territory will be divided into sub-territories, and approximately half of the territory will be done each year. When a split occurs on a property, it will be up to the appraiser working the split to apply the corresponding area/territory code as the parent account. A breakdown of parcels by territory per is listed below:

<u>Territory</u>	<u>Parcel Count</u>
Christoval ISD	3,451
Grape Creek ISD	5,883
Miles ISD	705
San Angelo ISD	48,176
Veribest ISD	1,621
Wall ISD	5,151
Water Valley ISD	3,102

GENERAL INFORMATION

Scope of Responsibility

TGCAD has prepared and published this reappraisal plan and appraisal report to provide our Board of Directors, citizens and taxpayers with a better understanding of the district's responsibilities and activities. This report consists of a general introduction followed by several sections describing appraisal efforts by the appraisal district.

TGCAD 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 nine-member Board of Directors, five appointed by the taxing units within the boundaries of Tom Green County, 3 elected by the citizens of Tom Green County, and the elected Tax Assessor-Collector constitutes the district's governing body. The Chief Appraiser, appointed by the Board of Directors, is the chief administrator and chief executive officer of the appraisal district.

The appraisal district is responsible for local property tax appraisal and exemption administration of 14 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 and estimated values by the appraisal district allocate the year's tax burden based on each taxable property's market value. TGCAD also determines eligibility for various types of property tax exemptions such as those for homeowners, the elderly, disabled veterans, charitable or religious organizations and agricultural productivity valuation.

Entities for which TGCAD provides appraisal services are:

- Christoval ISD
- City of San Angelo
- Grape Creek ISD
- Irion County Water District
- Lipan Kickapoo Water District
- Miles ISD
- Red Creek Municipal Water District
- San Angelo ISD
- Sterling County Water District
- Tom Green County Emergency Services #1
- Tom Green County
- Veribest ISD
- Wall ISD
- Water Valley ISD

Except as otherwise provided by the Property Tax Code, all taxable property is appraised at its “market value” as of January 1st. Under the tax code, “market value” means the price at which a property would transfer for cash or its equivalent under prevailing market conditions if:

- Exposed for sale in the open market with a reasonable time for the seller to find a purchaser;
- 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 enforceable restrictions on its use and;
- 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.

The Property Tax Code defines special appraisal provisions for the valuation of residential homestead property (Sec. 23.23), productivity (Sec. 23.41), real property inventory (Sec. 23.12), dealer inventory (Sec. 23.121, 23.124, 23.1241, and 23.127), nominal (Sec. 23.18) or restricted use properties (Sec. 23.83) and allocation of interstate property (Sec. 23.03). The owner of inventory may elect to have the inventory appraised at its market value as of September 1st of the year proceeding the tax year to which the appraisal applies by filing an application with the chief appraiser requesting that the inventory be appraised as of September 1st.

The Texas Property Tax Code, under Sec. 25.18, requires each appraisal office to implement a plan to update appraised values for real property at least once every three years. The district’s current policy is to conduct a general reappraisal of taxable property every year. Appraised values are reviewed annually and are subject to change. Business personal properties, minerals and utility properties are appraised every year.

The appraised value of real estate is calculated using specific information about each property. Using computer-assisted mass appraisal programs, and recognized appraisal methods and techniques, we compare that information with the data for similar properties, and with recent cost and market data. The district follows the standards of the International Association of Assessing Officers (IAAO) regarding its appraisal practices & 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.

Personnel Resources

The office of the Chief Appraiser is primarily responsible for overall planning, organizing, staffing, coordinating, and controlling of district operations. 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 and postal services.

The appraisal department is responsible for the valuation of all real and personal property accounts. The property types appraised include commercial, residential, business personal, mineral, utilities, and industrial. TGCAD's appraisers are subject to the provisions of the Property Taxation Professional Certification Act and must be duly registered with the Texas Department of Licensing and Regulation. Support functions including records maintenance, information and assistance to property owners, and hearings are coordinated by personnel in support services.

The appraisal district staff consists of 24 employees with the following classifications:

- 2 – Official/Administrator (executive level administration)
- 3 – Professional (supervisory and management)
- 9 – Technicians (appraisers, program appraisers and network support)
- 10 – Administrative Support (professional, customer service, clerical and other)

Staff Education and Training

All personnel that are performing appraisal work are registered with the Texas Department of Licensing and Regulation and are required to take appraisal courses to achieve the status of Registered Professional Appraiser within five years of employment as an appraiser. After they are awarded their license, they must receive additional training of a minimum of 30 hours total of continuing education including 2 hours in professional ethics, 3.5 hours of USPAP and the approved state laws and rules update course. Continuing education hours must be completed during the 24-month period before the expiration of registration. Failure to meet these minimum standards results in the termination of the employee.

Additionally, all appraisal personnel receive extensive training in data gathering processes including data entry and statistical analyses of all types of property to ensure equality and uniformity of appraisal of all types of property. On-the-job training is delivered by department managers for new appraisers and managers meet regularly with staff to introduce new procedures and regularly monitor appraisal activity to ensure that standardized appraisal procedures are being followed by all personnel.

Data

The district is responsible for establishing and maintaining approximately 66,000 real and personal property accounts covering 1,541 square miles within Tom Green County. This data includes property characteristics, ownership, and exemption information. Property characteristic data on new construction is updated through an annual field effort; existing property data is maintained through a field review. Sales are routinely validated during a separate field effort; however, numerous sales are validated as part of the new construction and field inspections. General trends in employment, interest rates, new construction trends, cost and market data are acquired through various sources, including internally generated questionnaires to buyer and sellers, university research centers, and market data centers and vendors.

The district has a complete geographic information system (GIS) that maintains cadastral maps and various layers of data and aerial photography. The district's website makes a broad range of information available for public access, including information on the appraisal process, property characteristics data, certified values, protests and appeal procedures. Downloadable files of related tax information and district forms, including exemption applications and business personal property renditions are also available.

Information Systems

The district's data processing facility, software applications and internet website are maintained through a contract with Southwest Data Systems and our geographical information system is maintained internally. The district also has an on-site full-time systems administrator for technical issues within the office.

Shared Appraisal District Boundaries

House Bill 1010 of the 80th Texas Legislature did away with all shared property. The appraisal district is now responsible for all appraisals that fall inside of Tom Green County regardless of the taxing entity or who collects the taxes.

Independent Performance Test

According to Chapter 5 of the TPTC and Section 403.302 of the Texas Government Code, the State Comptroller's Property Tax Assistance Division (PTAD) conducts a property value study (PVS) of each Texas school district and each appraisal district every other year. As part of this study, the code requires the Comptroller to use sales and recognized auditing and sampling techniques; 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 analyses 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 10% of the median, the percentage of properties within 25% of the median and price-related differential (PRD) for properties overall and by state category.

There are 7 independent school districts in Tom Green County for which TGCAD develops appraisal rolls annually. The preliminary results of this study are released February 1 in 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) the following July of each study year. This outside (third party) ratio study provides additional assistance to TGCAD in determining areas of market activity or changing market conditions.

During the off year of the Property Value Study, the PTAD will conduct a Methods and Assistance Program (MAP) Review of the appraisal district. This review is designed to determine whether appraisal districts meet minimum requirements for performing statutory and appraisal duties. This review is conducted in accordance with tax code section 5.102(a), effective January 1, 2010, and related comptroller rule 9.301. The comptroller is required by state law to review appraisal districts for governance, taxpayer assistance, operating procedures and appraisal standards and methodology.

These four areas will be scored as either:

Meets All – the total point score is 100

Meets – the total point score ranges from 90 to less than 100

Needs Some Improvement – the total point score ranges from 85 to less than 90

Needs Significant Improvement – the total point score ranges from 75 to less than 85

Unsatisfactory – the total point score is less than 75

In addition to this, there are five mandatory questions that the district must pass:

- 1) Does the appraisal district have up-to-date appraisal maps?
- 2) Is the implementation of the appraisal district's most recent reappraisal plan current?
- 3) Are the appraisal district's appraisal records up-to-date and is the appraisal district following established procedures and practices in the valuation of property?
- 4) Are values reproducible using the appraisal district's written procedures and appraisal records?
- 5) Does the appraisal district board of directors, through the chief appraiser, ensure administrative functions are followed in accordance with chapter 6 of the Texas property tax code?

TGCAD will have a property value study review in 2027 and a M.A.P review in 2028.

APPRAISAL ACTIVITIES

Appraisal Responsibilities

The field appraisal staff is responsible for collecting and maintaining property characteristic data for classification, valuation, and other purposes. Accurate valuation of real and personal property by any method requires a comprehensive physical description of personal property, in addition to land and building characteristics. This appraisal activity is responsible for administering, planning and coordinating all activities involving data collection and maintenance of all commercial, residential and personal property types located within the boundaries of Tom Green County and the jurisdictions of this appraisal district. The data collection effort involves the field inspection of real and personal property accounts, as well as data entry of all data collected into the existing information system. The goal is to field inspect residential, commercial, and personal properties in the district every other year. The appraisal opinion of value for all property located in the district is reviewed and evaluated each year.

Appraisal Resources

- Personnel – The appraisal activities are conducted by 13 appraisers including the Chief Appraiser.
- Data – The data used by field appraisers includes the existing property characteristic information contained in the CAMA (Computer Assisted Mass Appraisal) system from the district's computer system. Other data used includes maps, sales data, fire and damage reports, building permits, photos and actual cost and market information. Sources of information are gathered using excellent reciprocal relationships with other participants in the real estate marketplace. The district cultivates sources and gathers information from both buyers and sellers participating in the real estate market.

Appraisal Frequency and Method Summary

- Residential Property – Residential property is physically examined every other year with appraisers driving in front of each home, noting condition of the improvements, and looking for changes that might have occurred to the property since the last on-site check. In some subdivisions where change of condition is frequent, homes are examined annually. Exterior pictures are taken of homes that are not yet complete. Every subdivision is statistically analyzed annually to ensure that sales that have occurred in the subdivision during the past 12 months are within range of appraised value. If the sales do not indicate a range as prescribed by mass appraisal standards, adjustments are made to the subdivision using a process outlined in detail in the Residential Appraisal section of this report.

- **Commercial Property** – Commercial and industrial real estate is observed semi-annually to verify class and condition. Pictures are taken of the improvements when possible. Real estate accounts are analyzed against sales of similar properties in Tom Green County as well as similar communities with similar economies surrounding Tom Green County. The income approach to value is also utilized to appraise larger valued commercial properties such as shopping centers, apartment complexes, office buildings, restaurants, motels and hotels, and other types of property that typically sell based on net operating income.
- **Business Personal Property** – Business personal property is observed annually with an appraiser going into businesses to develop quality and density observations as often as possible. Similar businesses to a subject are analyzed annually to determine consistency of appraisal per square foot. Businesses are categorized using SIC codes. Rendition laws provide additional information on which to base values of all BPP accounts.
- **Utilities and Pipelines** – Utility companies and pipelines are appraised annually by a contracted appraisal firm using a unit value developed using all three approaches to value. For example, a utility company's total value in the State is estimated using cost, market, and income approaches to value and then the entire value is allocated using the components of that utility company that have situs in the various tax units of TGCAD. Components include such things as miles of transmission lines, miles of distribution lines, substations and the like for an electric utility, for example.

PRELIMINARY ANALYSIS

Data Collection/Validation

Data collection of real property involves maintaining data characteristics of the property in the Computer Assisted Mass Appraisal (CAMA) system. The information contained in the CAMA system includes site characteristics, such as land size and topography, and improvement data, such as square foot of living area, year built, quality of construction, and condition. Field appraisers are required to use a property classification system that establishes uniform procedures for the correct listing of real property. All properties are coded according to a classification system. The approaches to value are structured and calibrated based on this coding system and property description and characteristics. The field appraisers use property classification references during their initial training and as a guide in the field inspection of properties. Data collection for personal property involves maintaining information on software designed to record and appraise business personal property. The type of information contained in the BPP file includes personal property such as business inventory, furniture and fixtures, machinery and equipment, with details such as cost and location. The listing procedure utilized by the field appraisers is available in the district offices. Appraisers periodically update the classification system with input from the valuation group.

Sources of Data

The sources of data collection are through property inspection, new construction field effort, data review/re-check field effort, data mailer questionnaires, hearings, sales validation field effort, commercial sales verification and field effort, newspapers and publications, and property owner correspondence by mail or via the internet. A principal source of data comes from building permits received from taxing jurisdictions that require property owners to take out a building permit. Paper permits are received and matched manually with the property's tax account number for data entry. Area and regional real estate brokers and managers are also sources of market and property information. Data surveys of property owners requesting market information and property description information is also valuable data. Soil surveys and agricultural surveys of farming and ranching property owners and industry professionals are helpful for productivity value calibration. Improvement cost information is gathered from local building contractors and Marshall and Swift Valuation Service. Various income and rental surveys are performed by interviewing property managers and operators to determine operating income and expenses for investment and income producing real property.

Data review of entire neighborhoods is generally a good source for data collection. Appraisers drive entire neighborhoods to review the accuracy of our data and identify properties that must be re-checked. The sales validation effort in real property pertains to the collection of market data for properties that have sold. In residential, the sales validation effort involves inspection by field appraisers to verify the accuracy of the property characteristics and confirmation of the sales price. In commercial, the

commercial sales team is responsible for contacting sales participants to confirm sales prices and to verify pertinent data.

Property owners are one of the best sources for identifying incorrect data that generates a field check. Frequently, the property owner provides reliable data to allow correction of records without having to send an appraiser on-site. As the district has increased the amount of information available on the internet, property owners can review information on their property and forward corrections via e-mail. For the property owner without access to the internet, letters are sometimes submitted notifying the district of inaccurate data. Properties identified in this manner are added to a work file and inspected at the earliest opportunity. Accuracy and validity in property descriptions and characteristics data is the highest goal and is stressed throughout the appraisal process from year to year. Appraisal opinion, quality, and validity relies on data accuracy as its foundation.

Data Collection Procedures

The appraisers are assigned specific areas throughout the district to conduct field inspections. These geographic areas of assignment are maintained for several years to enable the appraiser assigned to that area of assignment to become knowledgeable of all the factors that drive values for that specific area. Appraisers of real estate and business personal property conduct field inspections and record information.

The quality of the data used is extremely important in estimating market values of taxable property. While work performance standards are established and upheld for the various field activities, quality of data is emphasized as the goal and responsibility of each appraiser. New appraisers are trained in the specifics of data collection and the classification system set forth and recognized as “rules” to follow. Experienced appraisers are routinely re-trained in listing procedures prior to major field projects such as new construction, sales validation or data review. A quality assurance process exists through supervisory review of the work being performed by the field appraisers. Quality assurance supervision is charged with the responsibility of ensuring that appraisers follow listing procedures, identifying training issues, and provide uniform training throughout the field appraisal staff.

Data Maintenance

Most of the data entry is done by the field appraiser after the inspection. The appraiser supervisor is responsible for quality assurance of data entry done by appraisers. Data entry such as mobile homes and sketching new constructions are sometimes completed by support staff and reviewed for accuracy by the clerical supervisor. Data updates and file modification for property descriptions and input accuracy is conducted as the responsibility of the field appraiser and the appraisal supervisor. There is also a suite of in-house developed, automated data analytics tools that are targeted specifically at identification and resolution of data quality issues.

IDENTIFYING & UPDATING RELEVANT PROPERTY CHARACTERISTICS

Each reappraisal year, TGCAD will identify property characteristics that affect property value in each market area including:

- a) the location and market area of property
- b) physical attributes of property, such as size, age and condition
- c) legal and economic attributes
- d) easements, covenants, leases, reservations, contracts, declarations, special assessments, ordinances, or legal restrictions.

Field and office procedures will be reviewed and revised as required for data collection and verification of value-related and descriptive property characteristics for each property. Activities scheduled for each tax year include inspection of new construction, demolition, remodeling, re-inspection of active market areas, re-inspection of the universe of properties and verification of sales information annually.

New Construction/Demolition

Field and office review procedures for inspection of new construction include on-site data collection and value review. Field production standards will be established, and quality review will be conducted to verify accuracy of data. Building permits will be received from the city and county electronically and in paper form. The process of verifying demolition of improvements will be specified.

Remodeling

Market areas with extensive remodeling will be identified through permits, and on-site inspections will be planned to verify property characteristic data. Reappraisal of significantly changed properties will take place, and values will be tested with ratio studies before they are finalized.

Re-Inspection of Changing Areas

Real property market areas, stratified by property classification, will be tested for low or high sales ratios; and high coefficients of dispersion. Market areas that fail any or all these tests will be determined to be problematic. Field reviews will be scheduled to verify and correct property characteristics data. Additional sales data will be researched and verified to assess whether the market area is correctly stratified. In the absence of adequate market data, neighborhood boundary lines may need to be redrawn and neighborhood clusters, representative of the overall market area, will be established.

Market Area Delineation/Neighborhoods

Market areas are defined by the physical, economic, governmental, and social forces that are used to identify, classify and stratify or delineate similarly situated properties into smaller, more comparable and manageable subsets for valuation purposes. Delineation can involve the physical drawing of neighborhood boundary lines on a map or, it can also involve statistical separation of stratification based on attribute analysis. These homogeneous properties have been delineated into valuation neighborhoods for residential property and economic classes for commercial property, but because there are discernible patterns of growth that characterize a neighborhood or market segment, analyst staff will annually evaluate the neighborhood boundaries or market segments to ensure homogeneity of property characteristics.

Re-Inspection of the Universe of Properties

The Texas Property Tax Code, Section 25.18(b) requires the re-inspection of the universe of properties at least once every three years. It is the policy of TGCAD to re-inspect all property once every two years. Re-inspection of properties will be completed using a combination of field inspections and office review. Office review will include the examination of aerial photography provided every year in oblique and orthographic imagery by EagleView, Connect Explorer (formerly Pictometry).

Field or Office Verification of Sales Data and Property Characteristics

Sales information must be verified and property characteristics data contemporaneous with the date of the sale will be captured. Since Texas does not require full disclosure of sales transactions, the district will obtain sales prices through deeds, voluntarily disclosed closing statements or fee appraisals usually submitted as evidence in a protest hearing, buyer and seller mail questionnaires and/or third-party sources.

Legal Attributes Affecting Value

The district will maintain an active program to identify and describe elements of recorded conveyances that will affect the use or value of the property, such as easements, covenants, reservations, and declarations. The district will also monitor the enactment or changes of governmental restrictions affecting property value, such as zoning, health ordinances, special assessments, and other legal restrictions. Where leases and other possessory interests are of a nature and duration that they affect value, they will be considered in the individual valuation of the property to which they apply.

APPRAISAL MODELS

Modeling the Sales Comparison Approach

In the sales comparison approach, sales prices of comparison properties are adjusted to reflect difference between them and the subject property.

The model appears as follows:

$$AP = SP + SFA + CA + YBA + AMA + TA$$

Where AP is adjusted sales price, SP is the sales price, SFA is the adjustment for differences in square feet, CA is an adjustment for differences in condition of the property, YBA is an adjustment for difference in year built, AMA is an adjustment for amenities and TA is for time adjustment. These adjustments could add or subtract dollars and be expressed as lump sums or percentages.

Modeling the Cost Approach

The model for the cost approach is:

$$V = LV + (RCN - D)$$

Where V is value, LV is land value, RCN is replacement cost new of improvements and D is depreciation of improvements.

Modeling the Income Approach

The model for the income approach is as follows:

$$\begin{array}{r} \text{Potential Gross Rent} \\ - \text{Vacancy and collections} \\ \hline \text{Effective Gross Rent} \\ + \text{Other Income} \\ \hline \text{Effective Gross Income} \\ - \text{Allowed Expenses} \\ \hline \text{Net Operating Income} \\ \div \text{Capitalization Rate} \\ \hline \text{Market Value} \end{array}$$

INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review

The date of last inspection and the CAD appraiser responsible are listed in the CAMA system record or property card. If a property owner or jurisdiction disputes the district's records concerning this data during a hearing, via a telephone call or other correspondence received, the record may be corrected based on the evidence provided or an on-site inspection may be conducted. Typically, a field inspection is requested to verify this information for the current year's valuation or for the next year's valuation. Every year a field review of real property located in certain areas or neighborhoods in the jurisdiction is done during the data review/re-check field effort. A field review is performed on all personal property accounts, with available situs, each year.

Office Review

Office reviews are completed on properties where updated information has been received from the owner of the property and is considered accurate and correct. Data mailers, sent en masse, or at the request of the property owner, frequently verify some property characteristic or current condition of the property. When the property data is verified in this manner, and considered accurate and correct, field inspections may not be required. The personal property department mails property rendition forms in December or January of each year to assist in the annual review of the property.

Performance Test

The property appraisers are responsible for conducting ratio studies and comparative analysis. Ratio studies are conducted on property located within certain neighborhoods or districts by appraisal staff. The sale ratio and comparative analysis of sale property to appraised property forms the basis for determining the level of appraisal and market influences and factors for the neighborhood. This information is the basis for updating property valuation for the entire area of property to be evaluated. Field appraisers, in many cases, may conduct field inspections to ensure the accuracy of the property descriptions at the time of sale for this study.

This inspection is to ensure that the ratios produced are accurate for the property sold and that appraised values utilized in the study are based on accurate property data characteristics observed at the time of sale. Also, property inspections are performed to discover if property characteristics had changed as of the sale date or after the sale date. Sale ratios should be based on the value of the property as of the date of sale not after a subsequent or substantial change was made to the property after the negotiation and agreement in price was concluded. Properly performed ratio studies are a good reflection of the level of appraisal for the district.

RESIDENTIAL PROPERTY VALUATION PROCESS

Scope of Responsibility

The residential appraisers are responsible for estimating equal and uniform market values for improved residential and vacant property. There are approximately 40,000 residential improved single and multiple family parcels and 3,400 vacant residential properties in Tom Green County.

Appraisal Resources

- Personnel – The following appraisers are responsible for estimating the market value of residential property:

Tyler Johnson	Chief Appraiser
Buffy Wilson	Deputy Chief Appraiser
Megan Pape	Director of Appraisals
Mary Doran	Residential Appraiser
Tara Fuller	Residential Appraiser
Stacey Torres	Residential Appraiser
Maddie Stewart	Residential Appraiser
John Timmons	Director of Special Properties

- Data – An individualized set of data characteristics for each residential dwelling and multiple family units in this district are collected in the field and data entered to the computer. The property characteristic data drives the application of computer-assisted mass appraisal (CAMA) under the Cost, Market, and Income Approaches to property valuation.

Valuation Approach

- Land Analysis – Residential land valuation analysis is conducted prior to neighborhood sales analysis. The value of the land component to the property is estimated based on available market sales for comparable and competing land under similar usage. A comparison and analysis of comparable land sales is conducted based on a comparison of land characteristics found to influence the market price of land located in the neighborhood. A computerized land table file stores the land information required to consistently value individual parcels within neighborhoods given known land characteristics. Specific land influences are considered, where necessary, and depending on neighborhood and individual lot or tract characteristics, to adjust parcels outside the neighborhood norm for such factors as access, view, shape, size, and topography. The appraisers use abstraction and allocation methods to insure that estimated land values 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 locational 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 gleaned from real estate publications and sources such as continuing education in the form of IAAO and TDLR classes.

- **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 various market areas within each of the political entities known as Independent School Districts (ISD). Analysis of comparable market sales 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 indicate the effects of these market forces and are interpreted by the appraiser into an indication of market price ranges and indications of property component change considering a given time period relative to the date of appraisal. Cost and Market Approaches to estimate value are the basic techniques utilized to interpret these sales. For multiple family properties the Income Approach to value is also utilized to estimate an opinion of value for investment level residential property.

The first step in neighborhood analysis is the identification of a group of properties that share 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, and square footage of living area. 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 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 reflects diminishing demand or desirability. During decline, general property use may change from residential to a mix of residential and commercial uses. 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. All the residential analysis work done in association with the residential valuation process is neighborhood specific. Neighborhoods are field inspected and delineated based on observable aspects of homogeneity. Neighborhood delineation is periodically reviewed to determine if further neighborhood delineation 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 to a neighborhood group based on observable aspects of homogeneity between neighborhoods. Neighborhood grouping is highly beneficial in cost-derived areas of limited or no sales, or use in direct sales comparison analysis. Neighborhood groups, or clustered neighborhoods, increase the available market data by linking comparable properties outside a given neighborhood. Sales ratio analysis, discussed below, is performed on a neighborhood basis, and in soft sale areas on a neighborhood group basis. A complete list of TGCAD neighborhoods can be provided by the district upon request.

- Highest and Best Use Analysis – The highest and best use of property is the 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, legal, financially feasible, and productive to its maximum.

The highest and best use of residential property is normally 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 gentrification, the appraiser 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 economic diminishments, and the highest and best use of such property is the construction of new dwellings. In areas of mixed residential and commercial use, the appraiser reviews properties in these areas on a periodic basis to determine if changes in the real estate market require reassessment of the highest and best use of a select population of properties.

Pursuant to House Bill 3613 passed by the 81st Texas Legislature and effective January 1, 2010, the value of a residence homestead must be determined solely based on the current use of the property regardless of its highest and best use.

Valuation and Statistical Analysis (Model Calibration)

- Cost Schedules – All residential parcels in the district are valued with a replacement cost estimated from identical cost schedules based on the improvement classification system using a comparative unit method. The

district's residential cost schedules are estimated from Marshall and Swift, a nationally recognized cost estimator service. These cost estimates are compared with sales of new improvements and evaluated from year to year and indexed to reflect the local residential building and labor market. Cost may also be indexed for neighborhood factors and influences that affect the total replacement cost of the improvements in a smaller market area based on evidence taken from a sample of market sales. The cost schedules are reviewed regularly because of recent state legislation requiring that the appraisal district cost schedules be within a range of plus or minus 10% from nationally recognized cost schedules.

A review of the residential cost schedule is performed annually. As part of this review and evaluation process of the estimated replacement cost, newly constructed sold properties representing various levels of quality of construction in the district are considered. The property data characteristics of these properties are verified, and photographs are taken of the samples. CAD replacement costs are compared against Marshall & Swift, a nationally recognized cost estimator, and the indicated replacement cost abstracted from these market sales of comparably improved structures. The results of this comparison are analyzed using statistical measures, including stratification by quality and reviewing of estimated building costs plus land to sales prices. As a result of this analysis, a new regional multiplier or economic index factor and indications of neighborhood economic factors are developed for use in the district's cost process. This new economic index is estimated and used to adjust the district's cost schedule to follow local building costs as reflected by the local market.

- Sales Information – Sales information for real property is maintained primarily on the network server. Residential vacant land sales, along with commercial improved and vacant land sales are also maintained in the CAMA system. Residential improved and vacant sales are collected from a variety of sources, including: district questionnaires sent to buyer and seller, field discovery, protest hearings, third parties, various sale vendors, builders, and realtors. 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 prices. If enough data is available, the effect of time as an influence on price will be considered by paired comparison and applied in the ratio study to the sales as indicated within each neighborhood area.

Neighborhood sales reports are generated as an analysis tool for the appraiser 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 analysis tool to interpret market sales under the cost and market approaches to value. These analysis tools help determine and estimate the effects of change regarding price, as indicated by sale prices for similar property within the current market.

If there is enough data available, monthly time adjustments can be estimated based on comparative analysis using paired comparison of sold property. Sales

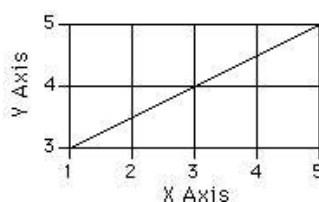
of the same property can be considered and analyzed for any indication of price change attributed to a time change or influence. Property characteristics, financing, and conditions of sale would be compared for each property sold in the pairing of property to isolate only the time factor as an influence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

- **Statistical Analysis** – The residential valuation appraisers perform statistical analysis annually to evaluate whether estimated values are equitable and consistent with the market. Ratio studies are conducted on each of the residential valuation neighborhoods in the district to judge the two primary aspects of mass appraisal accuracy—level and uniformity of value. Appraisal statistics of tendency generated from sales ratios are evaluated and analyzed for each neighborhood. The level of appraised values is determined by the weighted mean ratio for sales of individual properties within a neighborhood, and a comparison of neighborhood weighted means reflect the general level of appraised value between comparable neighborhoods.

The appraiser, through the sales ratio analysis process, reviews every neighborhood 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 appraiser an excellent means of judging the present level of appraised value and uniformity of the sales. The appraiser, based on the sales ratio statistics and designated parameters for valuation update, makes a preliminary decision as to whether the value level in a neighborhood needs to be updated or whether the level of market value in a neighborhood is at an acceptable level.

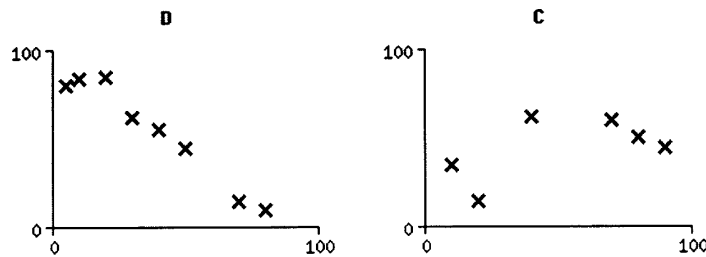
The analysis of trends that exist in neighborhood economics and the characteristics that shape the estimated market values are measured with the linear regression statistics.

PROP ID	RCN	SQ FT	SQ FT	CONTRIB	% %		RATE	F	T	DESC	AGE	RANK	C	SIZE	PHYS
					GOOD	DEPR									
052856	\$113,567	\$69.72	\$67.27	\$109,590	0.96	0.04	0.00233	V	I	RSB10	15	2	A	0.00	0.03
970084	\$156,017	\$72.97	\$69.40	\$148,385	0.95	0.05	0.04892	V	I	RSB11	1	3	A	0.00	0.00
970082	\$204,196	\$78.78	\$75.20	\$194,921	0.95	0.05	0.04542	0	I	RSB12	2	3	A	0.00	0.00
970075	\$148,064	\$72.90	\$76.03	\$154,412	1.04	-0.04	-0.04287	V	I	RSB11	4	3	A	0.00	0.00
970072	\$147,905	\$72.93	\$72.76	\$147,550	1.00	0.00	0.00240	0	I	RSB11	5	3	A	0.00	0.00



After the appraiser determines the annual depreciation rates, the rates are placed in a linear regression model that calculates a best-fit line. Linear regression attempts to explain this relationship with a straight line fit to the data which best predicts Y from X and distributes an annual depreciation driven by

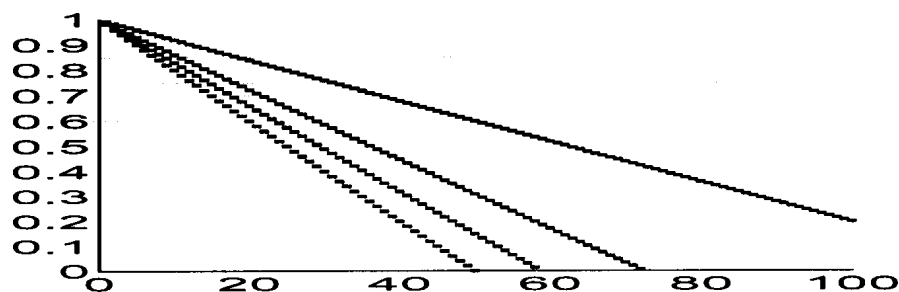
sales prices that can be calculated against the different ages of houses within a neighborhood. The product of the formula ($y = mx + b$) delivers a slope that best fits a scatter of annual depreciation rates and ages of sold properties.



Determining the slope (m) and the intercept (b) is a prerequisite to applying a slope intercept formula and is calculated in a spreadsheet which will identify the relationship between two variables, annual depreciation and age of house.

The slope ($m = y_2 - y_1 / x_2 - x_1$) of a line represents the steepness of the line. The slope is measured as the change in dependent variable Y (annual depreciation) as it is associated with a change of one unit on the independent variable X (age of house).

The following graph shows 4 lines that represent different conditions (level of depreciation, fair, average, good, excellent) of houses in a neighborhood. Each slope is based on the change of 1 on the X axis as it is associated with a change on the Y axis. For example, as X changes from 2 to 3, Y changes from 3 to 4. The excellent condition homes depreciate slower than the fair condition homes thus yielding a higher percent good, which calculates a higher price per square foot.



Lines with positive slopes go from the bottom left toward the upper right. Lines with negative slopes go from the upper left to the lower right.

When the appraiser develops and tests the regression models and approves the results, those results (annual depreciation rates) are distributed to properties with similar conditions within the neighborhood. The distribution of depreciation

rates based on sales developed through a regression model ensures all properties in the same condition will depreciate or appreciate at the same level, creating equity in the neighborhood.

- Market and Cost Reconciliation and Valuation – Neighborhood analysis of market sales to achieve an acceptable sale ratio or level of appraisal is also the reconciliation of the market and cost approaches to valuation.

Market factors are developed from appraisal statistics provided from market analysis and ratio studies and are used to ensure that estimated values are consistent with the market and to reconcile cost indicators. The district's primary approach to the valuation of residential properties uses a hybrid cost-sales comparison approach. This type of approach accounts for neighborhood market influences not particularly specified in a purely cost model.

The following equation denotes the hybrid model used:

$$MV=LV + (RCN - AD)$$

Whereas, in accordance with the cost approach, the estimated market value (MV) of the property equals the land value (LV) plus the replacement cost new of property improvements (RCN) less accrued depreciation (AD). As the cost approach separately estimates both land and building contributory values and uses depreciated replacement costs, which reflect only the supply side of the market, it is expected that adjustments to the cost values may be needed to bring the level of appraisal to an acceptable standard as indicated by market sales. Thus, demand side economic factors and influences may be observed and considered. These market, or location adjustments, may be abstracted and applied uniformly within neighborhoods to account for locational variances between market areas or across a jurisdiction. Whereas, in accordance with the Market Approach, the estimated market value (MV) of the property equals the basic unit of property, under comparison, times the market price range per unit for sales of comparable property. For residential property, the unit of comparison is typically the price per square foot of living area or the price indicated for the improvement contribution. This analysis for the hybrid model is based on both the cost and market approaches as a correlation of indications of property valuation. A significant unknown for these two indications of value is determined to be the rate of change for the improvement contribution to total property value. The measure of change for this property component can best be reflected and based on the annualized accrued depreciation rate. This cost-related factor is most appropriately measured by sales of similar property. The market approach, when improvements are abstracted from the sale price, indicates the depreciated value of the improvement component, in effect, measuring changes in accrued depreciation, a cost factor. The level of improvement contribution to the property is measured by abstraction of comparable market sales, which is the property sale price less land value. The primary unknown for the cost approach is to accurately measure accrued depreciation affecting the amount of loss attributed to the improvements as age increases and condition changes. This evaluation of cost results in the depreciated value of the improvement component based on age and condition. The evaluation of this market and cost information is the

basis of reconciliation and indication of property valuation under this hybrid model.

When the appraiser reviews a neighborhood, the appraiser reviews and evaluates a ratio study that compares recent sales prices of properties, appropriately adjusted for the effects of time, within a delineated neighborhood, with the value of the properties' based on the estimated depreciated replacement cost of improvements plus land value. The calculated ratio derived from the sum of the sold properties' estimated value divided by the sum of the time adjusted sales prices indicates the neighborhood level of appraisal based on sold properties. This ratio is compared to the acceptable appraisal ratio, 96% to 100%, to determine the level of appraisal for each neighborhood. If the level of appraisal for the neighborhood is outside the acceptable range of ratios, adjustments to the neighborhood are made.

If reappraisal of the neighborhood is indicated, the appraiser analyzes available market sales, appropriately adjusted for the apparent effects of time, by market abstraction of property components. This abstraction of property components allows the appraiser to focus on the rate of change for the improvements contribution to the property by providing a basis for calculating accrued depreciation attributed to the improvement component. This impact on value is usually the most significant factor affecting property value and the most important unknown to determine by market analysis. Abstraction of the improvement component from the adjusted sale price for a property indicates the effect of overall market suggested influences and factors on the price of improvements that were a part of this property, recently sold. Comparing this indicated price or value allocation for the improvement with the estimated replacement cost new of the improvement indicates any loss in value due to accrued forms of physical, functional, or economic obsolescence. This is a market driven measure of accrued depreciation and results in a true and relevant measure of improvement marketability, particularly when based on multiple sales that indicated the trend of this rate of change over certain classes of improvements within certain neighborhoods. Based on this market analysis, the appraiser estimates the annual rate of depreciation for given improvement descriptions considering age and observed condition. Once estimated, the appraiser recalculates the improvement value of all property within the sale sample to consider and review the effects on the neighborhood sale ratio. After an acceptable level of appraisal is achieved within the sale sample, the entire neighborhood is recalculated utilizing the indicated depreciation rates taken from market sales. This depreciation factor is the basis for trending all improvement values and when combined with any other site improvements and land value, brings the estimated property value through the cost approach closer to actual market prices as evidenced by recent sale prices available within a given neighborhood. Therefore, based on analysis of recent sales located within a given neighborhood, estimated property values will reflect the market influences and conditions only for the specified neighborhood, thus producing more representative and supportable values. The estimated property values calculated for each updated neighborhood are based on market indicated factors applied uniformly to all properties within a neighborhood. Finally, with all the market-trend factors applied, a final ratio study is generated that compares

recent sale prices with the proposed appraised values for these sold properties. From this set of ratio studies, the appraiser judges the appraisal level and uniformity in both updated and non-updated neighborhoods and verifies appraised values against overall trends as exhibited by the local market, and finally, for the school district.

- Treatment of Residence Homesteads – Beginning in 1998, the State of Texas implemented a constitutional classification scheme concerning the appraisal of residential property that receives a residence homestead exemption. Under that law, beginning in the second year a property receives a homestead exemption; increases in the assessed value of that property are “capped”. The value for tax purposes (assessed value) of a qualified residence homestead will be the lesser of:
 - the market value or
 - the preceding year’s appraised value, plus 10 percent, plus, the value of any improvements added since the last re-appraisal

Assessed values of capped properties must be recomputed annually. If a capped property is sold, 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. An analogous provision applies to new homes. While a developer owns them, unoccupied residences may be partially complete and appraised as part of an inventory. This valuation is estimated using the district’s land value and the percentage of completion for the improvement contribution that usually is like the developer’s construction costs as a basis of completion on the valuation date. However, in the year following changes in completion, occupancy, or sale, they are appraised at market value.

Individual Value Review Procedures

- Field Review – The appraiser identifies individual properties in critical need of field review through sales ratio analysis. Sold properties are field reviewed on a monthly and periodic basis to check for accuracy of data characteristics.

As the district’s parcel count has increased through new home construction, and the homes constructed in the boom years of the late 70’s and early 80’s experience remodeling, the appraisers are required to perform the field activity associated with transitioning and high demand neighborhoods. Increased sales activity has also resulted in a more substantial field effort on the part of the appraisers to review and resolve sales outliers. Additionally, the appraiser frequently field reviews 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. After preliminary estimates of value have been determined in targeted areas, the appraiser takes valuation documents to the field to test the computer-assisted values against his own appraisal judgment. During this review, the appraiser can physically inspect both sold properties and unsold properties for comparability and consistency of values.

- Office Review – Once field review is completed, the appraiser conducts a routine valuation review of all properties as outlined in the discussion of ratio studies and market analysis. Valuation reports comparing previous values against proposed and final values are generated for all residential improved and vacant properties. The percentage of value difference are noted for each property within a delineated neighborhood allowing the appraiser to identify, research and resolve value anomalies before final appraised values are released. Previous values resulting from a hearing protest are individually reviewed to determine if the value remains appropriate for the current year.

Once the appraiser is satisfied with the level and uniformity of value for each neighborhood within his area of responsibility, the estimates of value go to noticing.

Performance Tests

- Sales Ratio Studies – The primary analytical tool used by the appraisers to measure and improve performance is the ratio study. The district ensures that the appraised values that it produces meet the standards of accuracy in several ways. Overall sales ratios are generated for each neighborhood to allow the appraiser to review general market trends within their area of responsibility and provide an indication of market appreciation over a specified period. The PC-based ratio studies are designed to emulate the findings of the state comptroller's annual property value study for category A property.
- Management Review Process – Once the proposed value estimates are finalized, the appraiser reviews the sales ratios by neighborhood and presents pertinent valuation data, such as weighted sales ratio and pricing trends, to the appraisal supervisors 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 & INDUSTRIAL PROPERTY VALUATION PROCESS

Appraisal Responsibility

This mass appraisal assignment includes all the commercially described real property which falls within the responsibility of the commercial valuation appraisers of TGCAD and located within the boundaries of this taxing jurisdiction. Commercial appraisers appraise the fee simple interest of properties according to statute and court decisions. However, the effect of easements, restrictions, encumbrances, leases, contracts or special assessments are considered on an individual basis, as is the appraisal of any non-exempt taxable fractional interests in real property (i.e., certain multi-family housing projects). Fractional interests or partial holdings of real property are appraised in fee simple for the whole property and divided programmatically based on their prorated interests.

Appraisal Resources

- Personnel – The improved real property appraisal responsibilities are categorized according to major property types of multi-family or apartment, office, retail, warehouse and special use (i.e., hotels, hospitals, and nursing homes).

The following appraisers are responsible for estimating the market value of commercial and industrial property:

Tyler Johnson	Chief Appraiser
Buffy Wilson	Deputy Chief Appraiser
Terry Spradlin	Director of Commercial
Megan Pape	Director of Appraisal
Garrett Mills	Commercial Appraiser

- Data – The data used by the commercial appraiser 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 actual income and expense data (typically obtained through the hearings 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 are also reviewed to provide additional support for market trends.

Preliminary Analysis

- Market Study – Market studies are utilized to test new or existing procedures or valuation modifications in a limited sample of properties located in the district and are also considered and become the basis of updating whenever substantial changes in valuation are made. These studies target certain types of improved property to evaluate current market prices for rents and for sales of commercial and industrial real property. These comparable sale studies and ratio studies reveal whether the valuation system is producing accurate and reliable value estimates or whether procedural and economic modifications are required. The appraiser implements this methodology when developing cost approach, market

approach, and income approach models.

TGCAD coordinates discovery and valuation activities with adjoining appraisal districts. Numerous field trips, interviews and data exchanges with adjacent appraisal districts have been conducted to ensure compliance with state statutes. In addition, TGCAD administration and personnel interact 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. District staff strive to maintain appraisal skills and professionalism by continuing education in the form of courses that are offered by several professional associations such as International Association of Assessing Officers (IAAO), Texas Association of Assessing Officers (TAAO), Texas Association of Appraisal Districts (TAAD) and Texas Department of Licensing and Regulation (TDLR) courses.

Valuation Approach

- Land Value – Commercial land is analyzed annually to compare appraised values with recent sales of land in the market area. If appraised values differ from sales prices being paid, adjustments are made to all land in that region. Generally, commercial property is appraised on a price per square foot basis. Factors are placed on individual properties based on corner influence, depth of site, shape of site, easements across site, and other factors that may influence value. The land is valued as though vacant at the highest and best use.
- Area Analysis – Area data on regional economic forces such as demographic patterns, regional locational 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.
- Neighborhood Analysis – The neighborhood and market areas are comprised of the land area and commercially classed properties located within the boundaries of this appraisal jurisdiction. These areas consist of a wide variety of property types including multiple-family residential, commercial and industrial. Neighborhood and area analysis involves the examination of how physical, economic, governmental and social forces and other influences may affect property values within subgroups of property locations. The effects of these forces are also used to identify, classify, and organize comparable properties into smaller, manageable subsets of the universe of properties known as neighborhoods. In the mass appraisal of commercial and industrial properties these subsets of a universe of properties are generally referred to as market areas, neighborhoods, or economic areas.

Economic areas are defined by each of the improved property use types (apartment, office, retail, warehouse and special use) based upon an analysis of similar economic or market forces. These include but are not limited to similarities of rental rates,

Classification of projects (known as building class by area commercial market experts), date of construction, overall market activity or other pertinent

influences. Economic area identification and delineation by each major property use type is the benchmark of the commercial valuation system. All income model valuation (income approach to value estimates) is economic area specific. Economic areas are periodically reviewed to determine if re-delineation is required. The geographic boundaries as well as income, occupancy and expense levels and capitalization rates by age within each economic area for all commercial use types and its corresponding income model have been estimated for these properties.

- **Highest and Best Use Analysis** – The highest and best use is the most reasonable and probable use that generates the highest net to land and 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. For improved properties, highest and best use is evaluated as improved and as if the site were still vacant. This perspective assists in determining if the existing improvements have a transitional use, interim use, nonconforming use, multiple uses, speculative use, is excess land, or a different optimum use if the site were vacant. For vacant tracts of land within this jurisdiction, the highest and best use is considered speculative based on the surrounding land uses. 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. In many instances, the property's current use is the same as its highest and best use. This analysis ensures that an accurate estimate of market value (sometimes referred to as value in exchange) is derived. On the other hand, value in use represents the value of a property to a specific user for a specific purpose. This perspective for value may be significantly different than market value, which approximates market price under the following assumptions: (i) no coercion of undue influence over the buyer or seller to force the purchase or sale, (ii) well-informed buyers and sellers acting in their own best interests, (iii) a reasonable time for the transaction to take place, and (iv) payment in cash or its equivalent.
- **Market Analysis** – A market analysis relates directly to examining market forces affecting supply and demand. This study involves the relationships between social, economic, environmental, governmental, and site conditions. Current market activity including sales of commercial properties, new construction, new leases, lease rates, absorption rates, vacancies, allowable expenses (inclusive of replacement reserves), expense ratio trends, capitalization rate studies are analyzed to determine market ranges in price, operating costs and investment return expectations.

Data Collection and Validation

- **Data Collection Manuals** – Data collection and documentation for Commercial/Industrial property is continually updated, providing a uniform system of itemizing the multitude of components comprising improved properties. All properties located in TGCAD's inventory are coded according to a specific classification system and the approaches to value are structured and calibrated based on this coding system.

Annually, after the sales of property have been researched, verified, keyed into the database, and quality control has been completed, the sales data is summarized and produced into list form. The confirmed sales reports, known as the Commercial Improved and Vacant Land Sales listings categorize the sales by property and use type, and sort the data by location and chronological order. Many of these sales are available to the public for use during protest hearings and are also used by TGCAD appraisers during the hearings process.

- **Sources of Data** – In terms of commercial sales data, TGCAD receives a copy of the deeds recorded in Tom Green County and adjoining counties that convey commercially classed properties. These deeds involving a change in commercial ownership are entered into the sales information system and researched to obtain the pertinent sale information. Other sources of sale data include the protest hearings process and local, regional and national real estate and financial publications.

For those properties involved in a transfer of commercial ownership, a sale file is produced which begins the research and verification process. The initial step in sales verification involves a computer-generated questionnaire, which is mailed to both parties in the transaction (Grantor and Grantee). If a questionnaire is answered and returned, the documented responses are recorded into the computerized sales database system. If no information is provided, verification of many transactions are then attempted via phone calls to parties thought to be knowledgeable of the specifics of the sale. Other sources contacted are the brokers involved in the sale, property managers or commercial vendors. In other instances, sales verification is obtained from local appraisers or others that may have the desired information. Finally, closing statements are often provided during the hearing process. The actual closing statement is the most reliable and preferred method of sales verification.

Valuation Analysis

Model calibration involves the process of periodically adjusting the mass appraisal formulae tables and schedules to reflect current local market conditions. Once the models have undergone the specification process, adjustments can be made to reflect new construction procedures, materials and/or costs, which can vary from year to year.

The basic structure of a mass appraisal model can be valid over an extended period, with 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 Schedules** – The approach to value is applied to improved real property utilizing the comparative unit method. This methodology involves the utilization of national cost data reporting services as well as actual cost information on local comparable properties whenever possible. Cost models are typically developed based on the Marshall Valuation Service which indicates estimated hard or direct costs of various improvement types. Cost models include the derivation of replacement cost new (RCN) of all improvements represented within the district. These include comparative base rates, per unit adjustments and lump sum adjustments for variations in property description, design, and types of improvement construction. This approach and analysis also employs the sales comparison approach in the evaluation of soft or indirect costs of construction.

Evaluating market sales of newly developed improved property is an important part of understanding total replacement cost of improvements. What total costs may be involved in the development of the property, as well as any portion of cost attributed to entrepreneurial profit can only be revealed by market analysis of pricing acceptance levels. In addition, market related land valuation for the underlying land value is important in understanding and analyzing improved sales for all development costs and for the abstraction of improvement costs for construction and development. Time 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, locational modifiers and estimates of soft cost factors are necessary to adjust these base costs specifically for various types of improvements located in Tom Green County. Thus, local modifiers are additional cost factors applied to replacement cost estimated by the national cost service. Estimated replacement cost new will reflect all costs of construction and development for various improvements located in TGCAD as of the date of appraisal.

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. Depreciation estimates have been implemented for what is typical of each major class of commercial property by economic life categories. Estimates of accrued depreciation have been calculated for improvements with a range of variable years expected life based on observed condition considering actual age. These estimates are continually tested to ensure they are reflective of current market conditions. The actual and effective ages of improvements are noted in the CAMA system. 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. Effective age estimates are considered and reflected based on five levels or rankings of observed condition, given actual age.

Additional forms of depreciation such as external and/or functional obsolescence can be applied if observed. A depreciation calculation override can be used if the condition or effective age of a property varies from the norm by appropriately noting the physical condition and functional utility ratings on the property data characteristics. These adjustments are typically applied to specific condition adequacy or deficiency, property type or location and can be developed via ratio studies or other market analysis.

The result of estimating accrued depreciation and deducting that from the estimated replacement cost new of improvements indicates the estimated contributory value of the improvements. Adding the estimated land value, as if vacant, to the contributory value of the improvements indicates a property value by the cost approach. Given relevant cost estimates and market related measures of accrued depreciation, the indicated value of the property by the cost approach becomes a very reliable valuation technique.

- **Income Models** – 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 first step in the income approach pertains to the estimation of market rent on a per unit basis. This is derived primarily from actual rent data furnished by property owners and from local market surveys conducted by the district and by information from area rent study reviews. This per unit rental rate multiplied by the number of units results in the estimate of potential gross rent.

A vacancy and collection loss allowance is the next item to consider in the income approach. The projected vacancy and collection loss allowance is established from actual data furnished by property owners and local market survey trends. This allowance accounts for periodic fluctuations in occupancy, both above and below an estimated stabilized level. This feature may also provide for a reasonable lease-up period for a multi-tenant property, where applicable. The market derived stabilized vacancy and collection loss allowance is subtracted from the potential gross rent estimate to yield an indication of estimated annual effective gross rent to the property.

Next, a secondary income or service income is considered and, if applicable, calculated as a percentage of stabilized effective gross rent. Secondary income represents parking income, escalations, reimbursements, and other miscellaneous income generated by the operations of real property. The secondary income estimate is derived from actual data collected and available market information. The secondary income estimate is then added to effective gross rent to arrive at an effective gross income, when applicable.

Allowable expenses and expense ratio estimates are based on a study of the local market, with the assumption of prudent management. An allowance for non-recoverable expenses such as leasing costs and tenant improvements may be included in the expenses. A non-recoverable expense represents costs that the owner pays to lease rental space. Relevant expense ratios are developed for different types of commercial property based on use and market experience. For instance, retail properties are most frequently leased on a triple-net basis,

whereby the tenant is responsible for all operating expenses, such as ad valorem taxes, insurance, and common area and property maintenance. In comparison, a general office building is most often leased on a base year expense stop. This lease type stipulates that the owner is responsible for all expenses incurred during the first year of the lease. As a result, expense ratios are implemented and estimated based on observed market experience in operating various types of commercial property.

Another form of allowable expense is the replacement of short-lived items (such as roof or floor coverings, air conditioning or major mechanical equipment or appliances) requiring expenditures of lump sum costs. When these capital expenditures are analyzed for consistency and adjusted, they may be applied on an annualized basis as stabilized expenses. When performed according to local market practices by commercial property type, these expenses when annualized are known as replacement reserves. For some types of property, typical management does not reflect expense reserves and is dependent on local and industry practices.

Subtracting the allowable expenses (inclusive of non-recoverable expenses and replacement reserves when applicable) from the annual effective gross income yields an estimate of annual net operating income to the property.

Return rates and income multipliers are used to convert operating income expectations into an estimate of market value for the property under the income approach. These include income multipliers, overall capitalization rates, and discount rates. Each of these multipliers or return rates are considered and used in specific applications. Rates and multipliers may vary between property types, as well as by location, quality, condition, design, age, and other factors. Therefore, application of the various rates and multipliers must be based on a thorough analysis of the market for individual income property types and uses. These procedures are supported and documented based on analysis of market sales for these property types.

Capitalization analysis is used in the income approach models to form an indication of value. This methodology involves the direct capitalization of net operating income as an indication of market value for a specific property. Capitalization rates applicable for direct capitalization method and yield rates for estimating terminal cap rates for discounted cash flow analysis are derived from the market. Sales of improved properties from which actual income and expense data are obtained provide a very good indication of property return expectations a specific market participant is requiring from an investment at a specific point in time. In addition, overall capitalization rates can be derived and estimated from the built-up method (band-of-investment). This method relates to satisfying estimated market return requirements of both the debt and equity positions in a real estate investment. This information is obtained from available sales of property, local lending sources, and from real estate and financial publications. Rent loss concessions are estimated for specific properties with vacancy problems. A rent loss concession accounts for the impact of lost rental income while the building is moving toward stabilized occupancy. The rent loss is calculated by multiplying the rental rate by the percent difference of the

property's stabilized occupancy and its actual occupancy. Build out allowances (for first generation space or retrofit/second generation space as appropriate) and leasing expenses are added to the rent loss estimate. The total adjusted loss from these real property operations is discounted using an acceptable risk rate. The discounted value (inclusive of rent loss due to extraordinary vacancy, build out allowances and leasing commissions) becomes the rent loss concession and is deducted from the value indication of the property at stabilized occupancy. A variation of this technique allows a rent loss deduction to be estimated for every year that the property's actual occupancy is less than stabilized occupancy.

- Sales Comparison (Market) Approach – 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 not only for estimating land value but also in comparing sales of similarly improved properties to parcels on the appraisal roll. Pertinent data from actual sales of properties, both vacant and improved, is pursued throughout the year to obtain relevant information which can be used in all aspects of valuation. Sales of similarity improved properties can 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.
- Final Valuation Schedules – Based on the market data analysis and review discussed previously in the cost, income and sales approaches, the cost and income models are calibrated and finalized. The calibration results are keyed to the schedules and models in the CAMA system for utilization on all commercial properties in the district. Market factors reflected within the cost and income approaches are evaluated and confirmed based on market sales of commercial and industrial properties. The appraisers review the cost, income, and sales comparison approaches to value for each of the types of properties with available sales information. 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 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 to determine both the level and uniformity of appraised value 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 value.

The 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. The appraiser, based on the sales ratio statistics and designated parameters for valuation update, makes 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 level of market value is at an acceptable level.

Potential gross rent estimates, occupancy levels, secondary income, allowable expenses (inclusive of non-recoverables 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 protest hearings process, as well as with information 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 TGCAD appraiser responsible are listed in the CAMA system. If a property owner disputes TGCAD's records concerning this data in a protest hearing, the data in the CAMA system may be altered based on the credibility of the evidence provided. Normally, a new field check is then requested to verify this information for the current year's valuation or for the next year's valuation. In addition, if a building permit is filed for a particular property indicating a change in characteristics, that property is added to a work file for review.

Commercial appraisers are somewhat limited in the time available to field review all commercial properties of a specific use type. However, a major effort is made by appraisers to field review as many properties as possible or 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. Field review of real property accounts is accomplished while business personal property is reviewed and inspected in the field. 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. With preliminary estimates of value in

these targeted areas, the appraisers test computer assisted values against their own appraisal judgment. While in the field, the appraisers physically inspect sold and unsold properties for comparability and consistency of values.

- **Office Review** – Office reviews are completed 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. 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 factors (cost overrides) and special factors affecting the property valuation such as new construction status, and a three year sales history (USPAP property history requirement 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 is satisfied with the level and uniformity of value for each commercial property within their area of responsibility, the estimates of value go to noticing. Each parcel is subjected to the value parameters appropriate for its use type.

Performance Tests

The primary tool used to measure mass appraisal performance is the ratio study. A ratio study compares appraised values to market prices. In a ratio study, market values (value in exchange) are typically represented with the range of sale prices, i.e., a sales ratio study. Independent, expert appraisals may also be used to represent market values in a ratio study, i.e., an appraisal ratio study. If there are not enough examples of market price to provide necessary representativeness, independent appraisals can be used as indicators for market value. This can be particularly useful for commercial or industrial real property for which sales are limited. In addition, appraisal ratio studies can be used for properties statutorily not appraised at market value but reflect the use- value requirement. An example of this are multi-family housing projects subject to subsidized rent provisions or other governmental guarantees as provided by legislative statutes (affordable housing) or agricultural lands to be appraised based on productivity or use value.

TGCAD has adopted the policies of the IAAO STANDARD ON RATIO STUDIES, circa July 1999 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.

- **Sales Ratio Studies** – Sales ratio studies are an integral part of estimating equitable and accurate market values, and ultimately property assessments for these 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 analysis; and, to calibrate models used to estimate appraised values during valuation or reappraisal cycles. However, these studies cannot be used to judge the accuracy of an individual property appraised value. The TGCAD Appraisal Review Board may make individual value adjustments based on unequal appraisal (ratio) protest evidence submitted on a case-by-case basis during the hearing process.

Overall sales ratios are generated by use type semi-annually (or more often in specific areas) to allow appraisers to review general market trends in their area of responsibility and for the Property Value Study from the Property Tax Assistance Division of the Comptroller's Office. The appraisers utilize desktop applications such as Spotfire analyses to evaluate subsets of data by economic area or a specific and unique data item. On the desktop, this may be customized and performed by building class and age basis. In many cases, field checks may be conducted to ensure the ratios produced are accurate and the appraised values utilized are based on accurate property data characteristics. These ratio studies aid the appraisers by providing an indication of market activity by economic area or changing market conditions (appreciation or depreciation).

- **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 classed properties by property use type (such as apartment, office, retail and warehouse usage or special use). The objective to this evaluation is to determine appraisal performance of sold and unsold properties. Appraisers' average unit prices of sales and average unit appraised values of the same parcels and the comparison of average valuation 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 to annual noticing.

BUSINESS PERSONAL PROPERTY VALUATION PROCESS

Appraisal Responsibility

There are four different personal property types appraised by the district's personal property section: Business Personal Property accounts; leased assets; vehicles and aircraft; and multi-location assets.

- Personnel – The personal property staff consists of 3 appraisers and one support staff:

Tyler Johnson	Chief Appraiser
Buffy Wilson	Deputy Chief Appraiser
Haley Bell	Personal Property Appraiser

- Data – A common set of data characteristics for each personal property account in TGCAD is collected in the field and data entered in the CAMA system. The property characteristic data drives the CAMA system. The personal property appraisers collect the field data and maintain electronic property files making updates and changes gathered from field inspections, newspapers, property renditions, sales tax permit listing and interviews with property owners.

Valuation Approach

- SIC Code Analysis – Business personal property is classified and utilizes a four-digit numeric codes, called Standard Industrial Classification (SIC) codes that were developed by the federal government to describe property. These classifications are used by TGCAD to classify personal property by business type.

SIC code identification and delineation is the cornerstone of the personal property valuation system at the district. All of the personal property analysis work done in association with the personal property valuation process is SIC code specific. SIC codes are delineated based on observable aspects of homogeneity and business use.

- Highest and Best Use Analysis – The highest and best use of property is the reasonable and probable use that supports the greatest income and the highest present value as of the date of the appraisal. The highest and best use must be physically possible, legal, financially feasible, and productive to its maximum. The highest and best use of personal property is normally its current use.

Data Collection/Validation

- Data Collection Procedures – Personal property data collection procedures are published and distributed to all appraisers involved in the appraisal and valuation of personal property. The appraisal procedures are reviewed and revised to meet the changing requirements of field data collection.

Sources of Data

The district's property characteristic data was collected through a massive field data collection effort coordinated by the district over the recent past, and from property owner renditions. From year to year, reevaluation activities permit district appraisers to collect new data via an annual field inspection. This project results in the discovery of new businesses, changes in ownership, relocation of businesses, and closures of businesses not revealed through other sources. Tax assessors, city and local newspapers, and the public often provide the district information regarding new personal property and other useful facts related to property evaluation.

- Vehicles – An outside vendor provides TGCAD with a listing of vehicles within the jurisdiction. The vendor develops this listing from the Texas Department of Transportation (TxDOT) Title and Registration Division records. Other sources of data include property owner renditions and field inspections.
- Leased and Multi-Location Assets – The primary source of leased and multi-location assets is property owner renditions of property. Other sources of data include field inspections.

Valuation and Statistical Analysis (Model Calibration)

- Cost Schedules – Cost schedules are developed based on the SIC code by the Property Tax Division of the Comptroller's Office and by the district personal property valuation appraisers. The cost schedules are developed by analyzing cost data from property owner renditions, hearings, state schedules, and published cost guides. The cost schedules are reviewed as necessary to conform to changing market conditions. The schedules are typically in a price per square foot format, but some exception SIC's are in an alternate price per unit format, such as per room for hotels.
- Statistical Analysis – Summary statistics including, but not limited to, the median, weighted mean, and standard deviation provide the appraisers an analytical tool by which to determine both the level and uniformity of appraised value by SIC code. Review of the standard deviation can discern appraisal uniformity within SIC codes.

Depreciation Schedule and Trending Factors

TGCAD's primary approach to the valuation of business personal property is the cost approach. The replacement cost new (RCN) is either developed from property owner reported historical cost or from CAD developed valuation models. The trending factors used by the CAD to develop RCN are based on published valuation guides. The percent good depreciation factors used by TGCAD are also based on published valuation guides. The index factors and percent good depreciation factors are used to develop present value factors (PVF), by year of acquisition, as follows:

$$PVF = INDEX FACTOR \times PERCENT GOOD FACTOR$$

The PVF is used as “express” calculation in the cost approach. The PVF is applied to reported historical cost as follows:

$$\text{MARKET VALUE ESTIMATE} = \text{PVF} \times \text{HISTORICAL COST}$$

This mass appraisal PVF schedule is used to ensure that estimated values are uniform and consistent within the market and reflect current economic pressures of supply and demand.

Computer Assisted Personal Property Appraisal (CAPPA)

The CAPPA valuation process has two main objectives: 1) Analyze and adjust estimated asset cost with existing SIC models. 2) Develop new models for business classifications not previously integrated into CAPPA. The delineated sample is reviewed for accuracy of SIC code, square footage, field data, and original cost information. Models are created and refined using actual 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 the tax year.

The data sampling process is conducted in the following order: 1) Prioritizing Standard Industrial Classification (SIC) codes for model analysis. 2) Compiling the data and developing the reports. 3) Field checking the selected samples. The models are built and adjusted using internally developed software.

The models are then tested against the previous year’s data. The typical RCN per square foot (or applicable unit) is determined by a statistical analysis of the available data.

CAPPA model values are used in the general business personal property valuation program to estimate the value of new accounts for which no property owner’s rendition is filed. Model values are also used to establish tolerance parameters for testing the valuation of property for which prior 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 indicated model value by the valuation program. If the value being tested is within an established acceptable percentage tolerance range of the model value, 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.

- Vehicles – Value estimates for vehicles are provided by an outside vendor and are based on Red Book published book values, and there are also considerations available for high mileage. Vehicles that are not valued by the vendor are valued by an appraiser using PVF schedules or published guides.
- Leased and Multi-Location Assets – Leased and multi-location assets are valued using the PVF schedules mentioned above. If the asset to be valued in this category is a vehicle, then Red Book published book values are used. Assets

that are not valued by the vendor are valued by an appraiser using PVF schedules or published guides.

Individual Value Review Procedures

- Office Review – A district valuation computer program exists in a mainframe environment that identifies accounts in need of review based on a variety of conditions. Property owner renditions, accounts with field or other data changes, accounts with prior hearings, new accounts, and SIC cost table changes are all considered. The accounts are processed by the valuation program and pass or fail preset tolerance parameters by comparing appraised values to prior year and model values. The appraisers review accounts that fail the tolerance parameters.

Performance Tests

- Ratio Studies – Every two years the Property Tax Assistance Division of the state comptroller's office conducts a property value study (PVS). The PVS is a ratio study used to gauge appraisal district performance. Results from the PVS play a part 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 TGCAD's personal property values and ratios are indicated.

UTILITY PROPERTY VALUATION PROCESS

Appraisal Responsibility

Utility properties are the tangible assets of various businesses including electric production, transmission, and distribution companies, railroads, petroleum product gathering and delivery pipelines, telephone and communication providers and others. The valuation of these properties is complex due to the involvement of both tangible and intangible property elements that comprise these businesses and due to the size of some of the utilities that are regional and national companies. The appraisal of these companies becomes complex when considering the valuation of the property as a unit in place, evaluating the property by the approaches to value at the company level. Once the value of the unit is estimated, the estimated market value is allocated based on the tangible property assets that are located with TGCAD.

Appraisal Resources

Pritchard & Abbott, Ft. Worth, TX

- Data – A common set of data characteristics for each utility property account in TGCAD is collected from the various government regulatory agency records, field inspections, and property owner renditions. This data is entered to the district's computer. Individual company financial information is gathered through industry specific governmental filings such as Federal Energy Regulatory Commission Reports, Securities and Exchange Commission 10-k filings, and Public Utility Commission publications. Other company information is gathered from annual reports, internal appraisals, and other in-house and industry publications. Property owner renditions are requested to document and list property owned and located in our jurisdictions (i.e., track mileage, number of meters, pipeline size and mileage, substation and transmission capacity, etc.). The property characteristic data drives the computer-assisted appraisal of the property.

The appraisal of utility property utilizes the three-approach analysis to form an opinion of value for the property. Financial and capital market information is pertinent to understanding factors affecting valuation of complex property. Gathering financial data to attempt to understand investor and corporate attitudes for capital return expectations giving considering return components such as current interest rates, capital debt structure, bond market rates, and capital supply and demand trends. These financial factors result in overall return rates and capital structure for these companies and affects capitalization rates. The weighted average cost of capital is the most used method of estimating capitalization rates for utility properties. Capitalization rates are estimated using capital return expectations from various publications: Ibbotson's SBBI Valuation Edition, Wall Street Journal, Mergent Bond Record, Moody's Corporate Bond Yield Averages, Value Line Investment Survey "Ratings and Reports". Industry specific information is also gathered from web sites, publications, periodicals, and reference manuals. TGCAD utilizes the weighted average cost of capital to estimate the capitalization rate for utility appraisal under the income approach.

Valuation and Statistical Analysis (Model Calibration)

- Approaches to Valuation, Reconciliation – Valuation of tangible assets for utility companies relies primarily on indications of value based on the cost and income approaches to value under the unit value approach. This methodology involves developing and estimating market value considering the entirety of the company's tangible assets and resolving an allocated value for that portion of specific tangible assets located within tax jurisdictions. The valuation opinion is based on three approach analysis utilized for the indicated unit appraisal of all company tangible assets, then an estimated allocation of unit value for only assets located in the district and particular jurisdictions. This methodology is approved and recommended by the Property Tax Assistance Division of the Comptroller's Office and is an accepted standard within the industry and appraisal community.
- Value Review Procedures – Review of the valuation of utility property is based on verifying economic and financial factors utilized in the methodology as relevant to current capital markets and that these factors reflect current return expectations. Market sales of utility properties do occur and are a good source for comparison and review when the price of the tangible assets can be abstracted or allocated from the selling price. Typically, the sale of utility companies involves significant intangible property assets such as customer base, goodwill, favorable contracts, name recognition, etc. and the contributory value and allocation of these assets is subjective and unknown. In Texas, intangible property assets are exempt from taxation and must not be included on the appraisal roll as taxable property. Therefore, because of the lack of specific market information on sales of utility properties, appraised value is regularly compared to the valuation of similar property within the same set of property characteristics, business type and size. More of a comparison for equity concerns on valuation rather than the full recognition of a market level.

Of course, the estimated value is based on recognized methodology for considering the valuation of these tangible assets, but true market confirmation of these factors may not be possible due to minimal market knowledge and experience.

Ratio studies are also a method of review for relevance of appraisal valuation to market value. Again, in the absence of full disclosure of prices paid and without the abstraction of prices paid for the tangible asset components from recently utility property acquisitions or sales, market-based analysis and review is not possible. Ratio studies for utility property must rely on a comparison of one appraisal opinion as the basis for the reasonable property valuation with the district's appraised value to determine the ratio for level and uniformity of appraisal. The PTAD conducts the annual ratio study of selected utility properties to gauge the appraisal district's performance. The PTAD utilizes the same valuation methodology to estimate appraisal valuations of utility properties and the results, when compared to the appraisal valuation estimated by TGCAD for these properties yield ratios. This ratio study of certain utility properties indicates the level and uniformity of appraisal for this category of property.

Limiting Conditions

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

1. The appraisals were prepared exclusively for ad valorem tax purposes.
2. The property characteristic data upon which the appraisals are based is assumed to be correct. Exterior inspections of the appraised property were performed as staff resources and time allowed. Some interior inspections of property appraised were performed at the request of the property owner and required by the district for clarification purposes and to correct property descriptions.
3. Validation of sales transactions was attempted through questionnaires to buyer and seller, telephone survey and field review. In the absence of such confirmation, residential sales data obtained from vendors was considered reliable.

Certification Statement:

"I, Tyler Johnson, Chief Appraiser for the Tom Green County Appraisal District, solemnly swear that I have made or caused to be made a diligent inquiry to ascertain all property in the district subject to appraisal by me, and that I have included in the records all property that I am aware of at an appraised value which, to the best of my knowledge and belief, was determined as required by law."

Tyler Johnson

Tyler Johnson
Chief Appraiser

2020-2021 EDITION

2020-2021

Uniform Standards of Professional Appraisal Practice (USPAP)

Effective January 1, 2020 through December 31, 2021



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- + USPAP ADVISORY OPINIONS
- + USPAP FREQUENTLY ASKED QUESTIONS (FAQ)



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UNIFORM STANDARDS OF PROFESSIONAL APPRAISAL PRACTICE 2020-2021 EDITION



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APPRAISAL STANDARDS BOARD

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EFFECTIVE:

January 1, 2020 through December 31, 2021

STANDARD 6: MASS APPRAISAL, REPORTING

1179 In reporting the results of a mass appraisal, an appraiser must communicate each analysis, opinion,
1180 and conclusion in a manner that is not misleading.

FAQ

See also
FAQ 265-
334

1181 Comment: STANDARD 6 addresses the content and level of information required in a report that
1182 communicates the results of a mass appraisal.

1183 STANDARD 6 does not dictate the form, format, or style of mass appraisal reports. The substantive content of
1184 a report determines its compliance.

1185 STANDARDS RULE 6-1. GENERAL REPORTING REQUIREMENTS

1186 Each written report of a mass appraisal must:

- 1187 (a) clearly and accurately set forth the appraisal in a manner that will not be misleading;
- 1188 (b) contain sufficient information to enable the intended user(s) of the appraisal to understand the report
1189 properly; and

1190 Comment: Documentation for a mass appraisal for ad valorem taxation may be in the form of (1) property
1191 records, (2) sales ratios and other statistical studies, (3) appraisal manuals and documentation, (4) market
1192 studies, (5) model building documentation, (6) regulations, (7) statutes, and (8) other acceptable forms.

- 1193 (c) clearly and accurately disclose all assumptions, extraordinary assumptions, hypothetical conditions, and
1194 limiting conditions used in the assignment.

1195 STANDARDS RULE 6-2. CONTENT OF A MASS APPRAISAL REPORT

1196 The content of a mass appraisal report must be appropriate for the intended use of the appraisal and, at a
1197 minimum:

- 1198 (a) state the identity of the client, or if the client has requested anonymity, state that the identity is withheld
1199 at the client's request but is retained in the appraiser's workfile; state the identity of any intended user(s)
1200 by name or type;⁶⁴

1201 Comment: Because the client is an intended user, they must be identified in the report as such. However, if the
1202 client has requested anonymity the appraiser must use care when identifying the client to avoid violations of the
1203 Confidentiality section of the ETHICS RULE.

- 1204 (b) state the intended use of the appraisal;

- 1205 (c) disclose any assumptions or limiting conditions that result in deviation from recognized methods and
1206 techniques or that affect analyses, opinions, and conclusions;

- 1207 (d) state the effective date of the appraisal and the date of the report;

1208 Comment: In ad valorem taxation the effective date of the appraisal may be prescribed by law. If no
1209 effective date is prescribed by law, the effective date of the appraisal, if not stated, is presumed to be
1210 contemporaneous with the data and appraisal conclusions.⁶⁵

- 1211 (e) state the type and definition of value and cite the source of the definition;

1212 Comment: Stating the type and definition of value also requires any comments needed to clearly indicate to
1213 intended users how the definition is being applied.

64 See Advisory Opinion 36, *Identification and Disclosure of Client, Intended Use, and Intended Users*. Also applicable to Standards Rules 6-2(b).

65 See Advisory Opinion 34, *Retrospective and Prospective Value Opinions*.



When reporting an opinion of value, state whether the opinion is:	1214
• In terms of cash or of financing terms equivalent to cash; or	1215
• Based on non-market financing with unusual conditions or incentives.	1216
When an opinion of value is based on non-market financing terms or financing with unusual conditions or incentives, summarize the terms of such financing and any influences on value.	1217
	1218
(f) state the properties appraised including the property rights; and, when the property rights to be appraised are specified in a statute or court ruling, reference the law;	1219
	1220
<u>Comment:</u> The report documents the sources for location, describing and listing the property. When applicable, include references to legal descriptions, addresses, parcel identifiers, photos, and building sketches. In mass appraisal this information is often included in property records.	1221
	1222
	1223
(g) summarize the scope of work used to develop the appraisal,⁶⁶ and explain the exclusion of the sales comparison approach, cost approach, or income approach;	1224
	1225
<u>Comment:</u> Summarizing the scope of work includes disclosure of research and analyses performed and might also include disclosure of research and analyses not performed.	1226
	1227
(h) when any portion of the work involves significant mass appraisal assistance, summarize the extent of that assistance;⁶⁷	1228
	1229
(i) summarize and support the model specification(s) considered, data requirements, and the model(s) chosen; provide sufficient information to enable the client and intended users to have confidence that the process and procedures used conform to accepted methods and result in credible value conclusions; and include a summary of the rationale for each model, the calibration techniques to be used, and the performance measures to be used;	1230
	1231
	1232
	1233
	1234
<u>Comment:</u> In the case of mass appraisal for ad valorem taxation, stability and accuracy are important to the credibility of value opinions.	1235
	1236
(j) summarize the procedure for collecting, validating, and reporting data; and summarize the sources of data and the data collection and validation processes;	1237
	1238
<u>Comment:</u> Reference to detailed data collection manuals or electronic records must be made, as appropriate, including where they may be found for inspection.	1239
	1240
(k) summarize calibration methods considered and chosen, including the mathematical form of the final model(s); summarize how value conclusions were reviewed; and, if necessary, state the availability and location of individual value conclusions;	1241
	1242
	1243
(l) when an opinion of highest and best use, or the appropriate market or market level was developed, summarize how that opinion was determined, and reference case law, statute, or public policy that describes highest and best use requirements;	1244
	1245
	1246
<u>Comment:</u> When actual use is the requirement, the report must summarize how use-value opinions were developed. The appraiser's reasoning in support of the highest and best use opinion must be provided in the depth and detail required by its significance to the appraisal.	1247
	1248
	1249
(m) identify the appraisal performance tests used and the performance measures attained;	1250
(n) summarize the reconciliation performed, in accordance with Standards Rule 5-7; and	1251
(o) include a signed certification in accordance with Standards Rule 6-3.	1252

⁶⁶ See Advisory Opinion 28, *Scope of Work Decision, Performance, and Disclosure* and Advisory Opinion 29, *An Acceptable Scope of Work*.

⁶⁷ See Advisory Opinion 31, *Assignments Involving More than One Appraiser*.



STANDARD 6

STANDARDS RULE 6-3, CERTIFICATION

A signed certification is an integral part of the appraisal report.

- (a) The wording of a certification does not have to match the following verbatim, but each of the elements must be addressed:

I certify that, to the best of my knowledge and belief:

- the statements of fact contained in this report are true and correct.
- the reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- I have no (or the specified) present or prospective interest in the property that is the subject of this report, and no (or the specified) personal interest with respect to the parties involved.
- I have performed no (or the specified) services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding the agreement to perform this assignment.
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- my engagement in this assignment was not contingent upon developing or reporting predetermined results.
- my compensation for completing this assignment is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- my analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Professional Appraisal Practice*.
- I have (or have not) made a personal inspection of the properties that are the subject of this report. (If more than one person signs this certification, the certification must clearly specify which individuals did and which individuals did not make a personal inspection of the appraised property.)⁶⁸
- no one provided significant mass appraisal assistance to the person signing this certification. (If there are exceptions, the name of each individual providing significant mass appraisal assistance must be stated.)⁶⁹

Comment: The above certification is not intended to disturb an elected or appointed assessor's work plans or oaths of office.

- (b) An appraiser who signs any part of the appraisal report, including a letter of transmittal, must also sign a certification.

Comment: In an assignment that includes only assignment results developed by the real property appraiser, any appraiser who signs a certification accepts full responsibility for all elements of the certification, for the assignment results, and for the contents of the appraisal report. In an assignment that includes personal property assignment results not developed by the real property appraiser(s), any real property appraiser who signs a certification accepts full responsibility for the real property elements of the certification, for the real property assignment results, and for the real property contents of the appraisal report.

⁶⁸ See Advisory Opinion 2, *Inspection of Subject Property*.

⁶⁹ See Advisory Opinion 31, *Assignments Involving More than One Appraiser*.



In an assignment that includes only assignment results developed by the personal property appraiser(s), any appraiser who signs a certification accepts full responsibility for all elements of the certification, for the assignment results, and for the contents of the appraisal report. In an assignment that includes real property assignment results not developed by the personal property appraiser(s), any personal property appraiser who signs a certification accepts full responsibility for the personal property elements of the certification, for the personal property assignment results, and for the personal property contents of the appraisal report.

(c) When a signing appraiser has relied on work done by appraisers and others who do not sign the certification, the signing appraiser is responsible for the decision to rely on their work.

(i) The signing appraiser is required to have a reasonable basis for believing that those individuals performing the work are competent; and

(ii) The signing appraiser must have no reason to doubt that the work of those individuals is credible.

Comment: Although a certification must contain the names of individuals providing significant mass appraisal assistance, it is not required that a summary of the extent of their assistance be located in a certification. This disclosure may be in any part(s) of the report.

APPENDIX “A”

**TOM GREEN COUNTY NEIGHBORHOOD AND
MARKET AREAS**

Market Area ID	Market Area	ISD
MA_001	Angelo Heights	SAISD 01
MA_012	Base West	SAISD 02
MA_013	Bell East	SAISD 02
MA_014	Bell West	SAISD 02
MA_048	Bentwood	SAISD 05
MA_033	Bluffs High	SAISD 04
MA_034	Bluffs Low	SAISD 04
MA_035	Bluffs Patio Homes	SAISD 04
MA_015	Bryant South	SAISD 02
MA_038	Bryant West	SAISD 04
MA_072	Buffalo Heights	Grape Creek ISD
MA_049	Butler Farms	SAISD 05
MA_003	Capitol Heights	SAISD 01
MA_016	Century Park	SAISD 02
MA_023	Coliseum	SAISD 03
MA_024	Coliseum South	SAISD 03
MA_004	College Hills North	SAISD 01
MA_005	College Hills South	SAISD 01
MA_050	Country Club	SAISD 05
MA_069	Dos Rios	SAISD 05
MA_017	Downtown	SAISD 02
MA_022	Downtown East	SAISD 02
MA_018	Downtown South	SAISD 02
MA_051	Ducote Air Park	SAISD 05
MA_039	Edmund North	SAISD 04
MA_040	Forest Park	SAISD 04
MA_041	Glenna North	SAISD 04
MA_042	Glenna South	SAISD 04
MA_025	Green Acres	SAISD 03
MA_019	Harvest Acres	SAISD 02
MA_043	Highland Range	SAISD 04
MA_026	Lake Drive	SAISD 03
MA_070	Lake Nasworthy	SAISD 05
MA_053	Lakeshore Estates	SAISD 05
MA_054	Las Lomas	SAISD 05
MA_027	Loop North	SAISD 03
MA_028	Main East	SAISD 03
MA_020	Metcalf Heights	SAISD 02
MA_029	Northwood	SAISD 03
MA_064	Other - Christoval ISD	Christoval ISD
MA_063	Other - Grape Creek ISD	Grape Creek ISD
MA_065	Other - Miles ISD	Miles ISD
MA_006	Other - SAISD 01	SAISD 01
MA_021	Other - SAISD 02	SAISD 02
MA_030	Other - SAISD 03	SAISD 03
MA_044	Other - SAISD 04	SAISD 04

Market Area ID	Market Area	ISD
MA_055	Other - SAISD 05	SAISD 05
MA_066	Other - Veribest ISD	Veribest ISD
MA_067	Other - Wall ISD	Wall ISD
MA_068	Other - Water Valley ISD	Water Valley ISD
MA_031	Paulann	SAISD 03
MA_007	Pecan Ridge	SAISD 01
MA_062	Prestonwood	SAISD 05
MA_032	Ridgemar	SAISD 03
MA_008	River Falls	SAISD 01
MA_009	Santa Rita	SAISD 01
MA_056	Southland	SAISD 05
MA_057	Southland Townhomes I	SAISD 05
MA_058	Southland Townhomes II	SAISD 05
MA_059	Southridge	SAISD 05
MA_060	Southwest	SAISD 05
MA_061	Spring Creek	SAISD 05
MA_075	Stonewall	Wall ISD, Christoval ISD
MA_045	Texas Towns	SAISD 04
MA_010	The Trails	SAISD 01
MA_046	Townview	SAISD 04
MA_052	Twin Oaks	SAISD 05
MA_047	Van/Glenwood	SAISD 04
MA_011	Westgate	SAISD 01
MA_074	Wall MAG_01	Wall ISD
MA_073	Wall Subdivisions	Wall ISD