

**PARKER
APPRAISAL DISTRICT**

**2021-2022
Reappraisal Plan**

**Approved by PCAD Board of Directors
AUGUST 18, 2020**

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Parker County Appraisal District

Reappraisal Plan 2021- 2022

INTRODUCTION

General Overview of Tax Code Requirement

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

The Written Plan

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

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

Plan for Periodic Reappraisal

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

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

(a) PCAD's Record Department receives listings of all deeds filed in Parker County from the County Clerk's office. Deeds are read and abstracted by the Record's Department. Information is recorded in the computer assisted mass appraisal (CAMA) software including grantor, grantee, date of recording, volume, and page in the county clerk's records. A permanent property identification number is assigned to each parcel of property.

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 businesses are mailed a rendition around January 1 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. Renditions are also required of utility companies, railroads, and pipelines.

Gas wells are discovered using Texas Railroad Commission records. Production sheets for all the leases are also provided. Ownership of these royalty interests are determined by records known as division orders, which are provided by the operator of the lease.

Maps have been developed for years that show ownership lines for all real estate. These GIS maps are stored digitally using software from ESRI, the industry leader of geographic software. Aerial photographs (aka-Pictometry) of the county were flown in January, 2020, which show excellent detail of land and improvements as of that date. Also, change detection software flags those parcels that have changed since the 2018 flight. The maps are available to the appraisal district staff on their computer desktops, the district website (parkercad.org), and to the general public in the public access area of the district.

(2) Identifying and updating relevant characteristics of each property in the appraisal records;

(a) Real estate is physically reviewed every other year, but in some areas, each year. Appraisers drive to neighborhoods within the towns and cities of Parker County and gather data about each home, commercial business, or vacant land tract. The appraisers inspect each property noting the condition of the property and observing any changes to the property since the previous re-appraisal. Digital photos are captured for each account, and updated depending on condition of the subject. Those pictures are stored in the CAMA system and assist the appraiser in making value decisions. Other stored data includes, exterior sketch of the improvement which allows the computer to calculate square footage for the various areas of the building, and components within the building such as bathrooms, fireplaces, A/C, roof type, exterior type, etc. Without permitting in the county, the change detection software flags the new construction, along with any changes made to any structure.

Business personal property is inspected by the BPP staff. They look at the quality of inventory, the stocking density, and make general notes about equipment that is observed. If the inspection is different than the rendition made by the taxpayer, additional information is gathered and a higher value may be assigned than the rendered amount.

Pritchard & Abbott (contract firm with the district), who appraises oil and gas properties, utilities, railroad, and pipelines, use special software designed specifically for the valuation of leases. Using the data gathered from various sources, the software helps to determine the decline of a well and project economically recoverable reserves. Those reserves are then appraised discounting for the time that it will take to recover them from the earth. Specialized software programs are also used to value utility companies, railroads, and pipelines using the net income that the companies make and allocation those values to the various tax units in the district.

(3) Defining market areas in the district;

(a) Each appraiser in the district is assigned a distinct market area. These areas are:

Weatherford, Aledo, Azle, Springtown, Brock, Peaster, Poolville, Millsap, Garner, overlapping areas of Mineral Wells, Lipan, Cresson-Granbury and Perrin-Whitt. Annually, appraisers combine similar types of property into “neighborhoods” (see Appendix D). These neighborhoods have improvements that are of similar construction and type as well as similar years of construction. Market sales are examined to confirm which areas are similar. For 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 (see Appendix E).

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 linear regression formulae. The regression formulae take into consideration location, size, topography, and other characteristics that the market recognizes as significant.

(4) Identifying property characteristics that affect property value in each market area, including:

- (a) The location and market area of the property;**
- (b) Physical attributes of the property, such as size, age, and condition;**
- (c) Legal and economic attributes; and**
- (d) Easements, covenants, leases, reservations, contracts, declarations, Special assessments; ordinances, or legal restrictions;**

(a) Each parcel of property has detailed information recorded in the CAMA system. For land, the legal description, dimensions, zoning, 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 digital photo of the improvement, the class which indicated original construction quality, the year of construction of each part of the improvement, the type of roof, the roof covering, the exterior covering of the improvement, number of bathrooms, fireplaces, A/C, and other attributes, and overall condition of the improvement.

(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;

(a) The CAMA system begins with the cost approach to value, to estimate original costs of each improvement. That cost is based on local modifiers to the Marshall & Swift cost system, a nationally recognized cost estimation system. By utilizing these cost systems, properties are equalized as to their original cost. Components measured in the cost include the size of the structure, number of bathrooms 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 properties. Significantly larger neighborhoods or areas are indicated for these properties using sales and income data.

Oil and gas values are set for each lease in the same manner as analysts appraise a lease. Economically recoverable reserves are estimated using geological knowledge, decline curves, and production records. And the value assigned is determined using price of product, discounted value of future production, and expenses to produce.

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 being appraised, the value is based on original cost less depreciation, net income to the company, and comparable sales if they exist. Then the value for each jurisdiction is set based on the amount of equipment, lines, or customers, within that jurisdiction.

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

(a) By utilizing sales data for each neighborhood, the appraiser measures accrued depreciation of structures by condition rating. Similar properties with similar condition are assigned values per square foot based on the linear regression formulae for that neighborhood. 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.

(a) After completing the process of assigning values to all parcels within a neighborhood using the computer assisted mass appraisal programs, printouts are produced 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 conducted for each neighborhood to determine if the values that have been assigned are within acceptable ranges (95% - 105%).

Commercial property and apartments are compared by category or type of business. Office space structures are compared to other office spaces buildings. Adjustments are made in mass by the commercial appraisal staff utilizing the CAMA system. All similar improvements are compared to verify reasonableness of value and equality.

Oil and gas leases are valued individually and values for the entire lease are entered into the CAMA system. The CAMA system then distributes the value according to the ownership interest specified in the division order of the lease.

Scope of Responsibility

The Parker County Appraisal District has prepared and published this reappraisal plan and appraisal report to provide the Board of Directors, taxing units, citizens and taxpayers with a better understanding of the District's responsibilities and reappraisal activities. This report has several parts: a general introduction and then, several sections describing the proposed 2021-2022 reappraisal effort by the appraisal departments within Parker County Appraisal District.

The Parker County Appraisal District (PCAD) 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 member Board of Directors, appointed by the taxing units within the boundaries of Parker County, 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.

Parker County Appraisal District is responsible for local property tax appraisal and exemption administration for 28 jurisdictions or taxing units in the county. Each taxing unit, such as the county, a city, school district, emergency service district, etc., sets its own tax rate to generate revenue to pay for such things as police and fire protection, public schools, road and street maintenance, courts, water and sewer systems, and other public services. Property appraisals are values estimated by the appraisal district and used by the taxing units to distribute the annual tax burden. PCAD also administers and determines eligibility for various types of property tax exemptions that are authorized by the State and local governments; such as those for homeowners, the elderly, disabled veterans, and charitable or religious organizations.

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

- **(A) exposed for sale in the open market with a reasonable time for the seller to find a purchaser;**
- **(B) both the seller and the buyer know of all the uses and purposes to which the property is adapted and for which it is capable of being used and of the enforceable restrictions on its use, and;**
- **(C) both the seller and buyer seek to maximize their gains and neither is in a position to take advantage of the exigencies of the other.**

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

available evidence that is specific to the value of the property shall be taken into account in determining the property's market value". The Chief Appraiser and his staff are further instructed to consider the cost, income and sales comparison methods of appraisal and to use the most appropriate valuation method to determine the market value for each property.

Section 23.01, subsection (c) was added in 2009 to address the valuation of properties that had been lowered in the previous year under the Remedies (Subtitle F) section of the tax code. Section 23.01 © prohibits a Chief Appraiser from raising the value of these properties, in the following year unless the increase is supported by clear and convincing evidence. The subsection also places conditions on the valuation of properties that were lowered in the previous year, related to remedies for unequal appraisal. Additional instructions were also provided relative to the appraisal of a residential homestead property. The new provisions in subsection (c) became effective on 1/1/2010.

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

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. **Parker County Appraisal District's current policy is to conduct a general reappraisal of real and business personal property value biennially**, meaning that a property's appraised value is established and reviewed for equality and uniformity every other year.

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

The appraised value of real and business personal property is calculated using specific information and data about each property. Utilizing various computer-assisted mass appraisal (CAMA) programs, and generally recognized appraisal methods and techniques, licensed and trained property tax appraisers compare the subject property information with the data for similar properties, and with recent market data. The district adheres to the standards of the International Association of Assessing Officers (IAAO) regarding its appraisal practices and procedures, and subscribes to the standards promulgated by the Appraisal Foundation known

as the Uniform Standards of Professional Appraisal Practice (USPAP) to the extent they are applicable. USPAP identifies a minimum set of standards that apply in all appraisal assignments.

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

Appraisal Notification

The Parker County Appraisal District provides values for all taxable property on the PCAD website annually (parkercad.org). PCAD's notification criteria is to mail an appraisal notice annually to all new owners, any property that had an increase in market value of \$1,000 from the prior tax year, all new accounts, any account that had a capped homestead limitation value in the prior tax year, all rendered accounts, all mineral accounts and all business personal property accounts.

Overview of District Operations

2021 & 2022 Proposed Calendar of Key Events (See Appendix A)

Personnel Resources

The office of the Chief Appraiser is primarily responsible for overall planning, organizing, staffing, coordinating, and controlling of district operations. The district is organized into five primary departments: Administration, Collections/Support Services, Information Technology/Mapping, Records Department, Appraisal/Residential and Commercial. 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 Support Services Department performs various functions: collections, customer service, exemptions administration and Appraisal Review Board support. The Information Technology Department maintains PCAD's Information Technology infrastructure and includes the Data Services and GIS/Mapping function. The Records Department manages all records for the district.

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. The district'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.

The 2021 and 2022 adopted budgets will provide information for employee positions and classifications.

Staff Education and Training

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

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

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

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

regularly monitor appraisal activity to ensure that all personnel are following standardized appraisal methods and techniques.

Data

The district is responsible for establishing and maintaining approximately 119,000 real and personal property accounts covering 900 square miles within Parker County. This data includes property characteristics, ownership, and exemption information.

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

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

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

The district has a geographic information system (GIS) that maintains cadastral maps and various layers of data, including ownership lines, jurisdictional boundaries, and aerial photography.

The district's website makes a range of information available for public access, including information on appraisal district operations. The site also provides links to connect users to related websites for taxing units, other appraisal districts and state government resources. Property owners can access additional online information from PCAD's website (parkercad.org) that includes property characteristics data, preliminary and certified values, protests and appeal procedures, property maps, and a tax calendar.

Downloadable files of related tax information and district forms; including various application forms, ARB protest notices and business personal property renditions are also available. ARB protests can be filed on a downloaded form or on-line

Management Information Systems Support

The Systems Administrator and the computer mapping department manage and maintain the district's data processing facility, software applications, Internet website, and geographical information system. The district operates from ESRI Arcview server database with cooperative data sharing with the City of Weatherford, County 911, and other county agencies. The Mainframe hardware/system software is Dell Server PE 2900. The GIS Mapping Server is a Dell Server PE 2800C with two Seagate external drives. The user base is networked through the mainframe using Windows 2000 Server. Southwest Data Solutions provides software services and updates for the appraisal and collection applications.

Shared Appraisal District Boundaries (Overlapping Jurisdictions)

Parker Appraisal District is responsible for thirty-three taxing jurisdictions, covering 897 square miles. Several of these jurisdictions have boundaries that fall outside of Parker County. During the 2007 reappraisal year, PCAD shared appraisal responsibilities in these overlapping areas with appraisal districts in Tarrant, Wise, Hood, Palo Pinto, Jack, and Johnson County. Revisions to Section 6.025 of the Tax Code, effective beginning with the 2008 tax year, now specify that the appraisal district boundaries are the same as the county's boundaries. Coordination of appraisal values, with other appraisal districts, will continue to occur for the taxable parcels that are split by county jurisdictional lines.

INDEPENDENT PERFORMANCE TEST

Effective January 1, 2010, Chapter 5.102 of the Texas Property Tax Code was amended by House Bill 8 to require "at least once every two years, the Comptroller shall review the governance of each appraisal district, taxpayer assistance provided, and the operating and appraisal standards, procedures and methodology used by each appraisal district to determine compliance with generally accepted standards, procedures, and methodology." The Comptroller's Property Tax Assistance Division (PTAD) is currently performing the Methods and Assistance Program (MAP) review in approximately half of all Texas CADs, including Parker County. PCAD will be scored and the PTAD will deliver a preliminary report in September 2018, with draft recommendations for corrections and compliance measures. The PTAD will continue to work with PCAD to correct any deficiencies throughout the fall of 2020. In December, a final report will be submitted to TDLR, the PCAD board of directors and the thirteen school districts.

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

There are 13 independent school districts in Parker County Appraisal District for which appraisal rolls are annually developed. The preliminary results of this study are released January of the year following the year of appraisal. The final results of this study are certified to the Education Commissioner of the Texas Education Agency (TEA) in the following July of each year for the year of appraisal. The ratio study is used in determining state funding for the school districts in Parker County. This outside (third party) ratio study provides additional assistance to PCAD in determining areas of market activity or changing market conditions. Results from the upcoming 2019 Property Value Studies will be reviewed and analyzed by appraisal management. Geographic areas or property categories with unsatisfactory ratio results will be added to the work plan for the 2021-2022 reappraisal cycle.

Overview of Reappraisal Activities

Overview of Appraisal Responsibilities

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

Appraisal Resources

- **Personnel** - Parker County Appraisal District appraisal activities are accomplished with a staff of appraisers and clerical personnel. Staffing resource numbers are reflected in the budget, adopted by reference.
- **Data** - The data used by field appraisers includes the existing property characteristic information contained in CAMA (Computer Assisted Mass Appraisal System) from the district's computer system. The data is printed on a property record card (PRC), or personal property data sheets. 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 market place. 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 second year by the appraisal staff. The on-site inspection by the appraisal staff determines the size, class, year built, effective year of construction and other property characteristics and features that are used in the cost and sales comparison valuation methods. Also, the condition of the improvement and looking for changes that might have occurred to the property since the last inspection. In some subdivisions where change of condition is frequent, homes are examined annually. Digital photos are taken of homes upon inspection. Every subdivision is statistically analyzed biennially to ensure the sales that have occurred in the subdivision during the past 24 months are within a +-3% range of

appraised value. If the sales do not indicate that range, adjustments are made to the subdivision using a process outlined in detail in the Residential Appraisal section of this report. Vacant rural land is valued using comparable sales. Lot values in subdivisions are computed by market sales, or if unavailable, as an allocated percentage.

- **Commercial Property-** Commercial and industrial real estate is verified by attempting to field observe and photograph each property at least once every second year to confirm class, condition and other property data. Properties are also reviewed as part of an annual building permit inspection process. The appraisers determine highest and best use and define the economic unit characteristics for a grouping of associated accounts. On a biennial basis, commercial market values are established using generally accepted appraisal methods and techniques. Land values are generally determined using comparable sales. For improved properties, appraisers consider the cost, sales comparison and income approaches and then reconcile the final value, based on the quality and availability of the most accurate and credible data for each valuation approach.

The income approach to value is 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-** The Business personal property staff reappraises businesses each year through various discovery methods. Business personal property appraisers utilize survey letters, phone calls, and on-site inspections of businesses to verify ownership, Standard Industrial Code (SIC) classification, quality and density of inventory, furniture and fixtures and other key information. The cost approach is the predominant techniques used to value personal property. Cost tables are developed for each SIC classification using actual historical cost data and market data from generally accepted cost valuation sources. Depreciation schedules are reviewed and adjusted as necessary. Business owners are required to annually file rendition reports and list key information about their tangible personal property assets. Appraisers consider information from field observations, SIC models and owner's rendition values when determining the market value of the business personal property.
- **Minerals-** Working and royalty interests of producing oil and gas wells are appraised annually. The most recent production data available from the Texas Railroad Commission is downloaded into appraisal software that estimates

economically recoverable reserves. Those reserves are then valued based upon State mandated pricing using the previous year's average of oil or gas values. A discount is applied over the anticipated life of the well in order to consider the value of money over time to recover those reserves. Each producing gas well is valued as a unit and that total value is divided according to the various owners of the lease listed in division orders. Parker County Appraisal District contracts with Pritchard & Abbott, Inc. for these services.

- **Utilities and Pipelines-** Utility companies and pipelines are appraised annually 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 PCAD. Components include such things as miles of transmission lines, miles of distribution lines, substations and the like for an electric utility. These services are also contracted to Prichard & Abbott, Inc..

PRELIMINARY ANALYSIS

Data Collection/Validation

Data collection of real property involves maintaining data characteristics of the property on CAMA (Computer Assisted Mass Appraisal). The information contained in CAMA 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 Business Personal Property file includes personal property such as business inventory, furniture and fixtures, machinery and equipment, with details such as cost and location. The field appraisers conducting on-site inspections use a personal property classification system during their initial training and as a guide to correctly list all personal property that is taxable.

Sources of Data

The sources of data collection are through property inspection, new construction field effort, data review/relist 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. Where available, permits are received electronically and loaded to our CAMA system. Otherwise, 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.

The sales validation effort in real property pertains to the collection of market data for properties that have sold. For residential property, the sales validation effort involves on-site inspection by field appraisers to verify the accuracy of the property characteristics and confirmation of the sales price. For commercial property, the commercial sales group 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 have the opportunity to review information on their property. 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 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 on the property record card noting any corrections and additions that the appraiser may find in his or her field inspection.

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, identify training issues and provide uniform training throughout the field appraisal staff.

Data Maintenance

The field appraiser is responsible for the data entry of his/her fieldwork into the computer file. This responsibility includes not only data entry, but also quality assurance. The majority of the data collected in the field is input by data entry staff with supervision by the field appraiser. Data updates and file modification for property descriptions and input accuracy is conducted as the responsibility of the field appraiser and appraisal supervisors.

INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review

The date of last inspection and the responsible PCAD appraiser are listed on the CAMA 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-list 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 update information has been received from the owner of the property and is considered accurate and correct. Data mailers, sent in masse, or at the request of the property owner, frequently verify some property characteristics 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 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 insure the accuracy of the property descriptions at the time of sale for this study. This inspection is to insure 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 subsequent to 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 Valuation Process

INTRODUCTION

Scope of Responsibility

The residential appraisers are responsible for developing equal and uniform market values for residential improved and vacant property. There are approximately 49,000 residential improved parcels and 8,500 vacant residential parcels in Parker County.

Appraisal Resources

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

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. Information is gathered from real estate publications and other outside sources including seminars, conferences, and continuing education providers approved through the Property Tax Assistance Division (PTAD) and International Association of Assessing Officers (IAAO) courses.

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 gathered from real estate publications and other outside sources, including seminars, conferences, and continuing education courses approved by the Property Tax Assistance Division (PTAD).

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. Although all three approaches to value are considered, residential sales can best be interpreted and applied using two generally accepted appraisal techniques known as the cost and market or comparable sales approach. For multiple family properties the Income Approach to value is also utilized to estimate an opinion of value for investment level residential property, in the absence of recent sales data.

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

stage of growth, stability or decline. The growth period is a time of development and construction. As new neighborhoods in a community are developed, they compete with existing neighborhoods. An added supply of new homes tends to induce 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.

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 mis-improvements, 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 category of properties.

However, in November 2009, the Texas Constitution was amended by voters to limit the appraisal of a residence homestead to its value as a residence homestead, regardless of whether its residential use was the highest or best use. Therefore, The Texas Property Tax Code, Sec 23.01 (d) states, "The market value of a residence homestead shall be determined solely on the basis of the property's value as a residence homestead, regardless of whether the residential use of the property by the owner is considered to be the highest and best use of the property." This change became effective on 1/1/2010.

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. Costs 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 as a result 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. PCAD 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 be in compliance with local building costs as reflected by the local market.

Income Models

The income approach to value may be useful to those real properties that are typically viewed

as “income producing” when sufficient income data is available and where comparable sales are not present. In the current residential market, the income approach is not generally used.

Sales Information

A sales file for the storage of “snapshot” sales data at the time of sale is maintained for residential real property. Residential improved and vacant sales are collected from a variety of sources, including: district questionnaires sent to buyer and seller, field discovery, protest hearings, appraisers, informal appeals, 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. The effect of time as an influence on price was 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, with regard to price, as indicated by sale prices for similar property within the current market.

Monthly time adjustments are estimated based on comparative analysis using paired comparison of sold property. Sales of the same property were considered and analyzed for any indication of price change attributed to a time change or influence. Property characteristics, financing, and conditions of sale were compared for each property sold in the pairing of property to isolate only the time factor as an influence on price.

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

Statistical Analysis

The residential 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 central 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 mean reflect the general level of appraised value between comparable neighborhoods.

The appraiser, through the sales ratio analysis process, reviews every neighborhood biennially. 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.

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 analyses 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:

$$MV = MA (RCN - D) + LV$$

In the cost approach, the estimated market value (MV) of the property equals the land value (LV) plus the market adjustment factor (MA) applied to the replacement cost new of property improvements (RCN) less depreciation (D). 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 in the annualized 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 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 improvement 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 indicate the trending 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 of property 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 update 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 update and non-update neighborhoods and verifies appraised values against overall trends as exhibited by the local market, and finally, for the school district as a whole.

Market Adjustment or Trending Factors

Neighborhood, or market adjustment, factors are developed from appraisal statistics provided from ratio studies and are used to ensure that estimated values are consistent with the market. The district's primary approach to the valuation of residential properties is the market or sales comparison approach.

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

SPECIAL APPRAISAL PROVISIONS

Appraisal of Residential Homesteads

Article VIII, Sec. 1 (i) of the Texas constitution allows the legislature to limit the annual percentage increase in the appraised value of residence homestead to 10% under certain conditions. This limitation is commonly referred to as a Homestead "Capped Value". Sec.23.23 of the Tax Code implements the cap on increases in value. The limited value begins in the

second year the property qualifies for a residential homestead exemption. The appraised value of a qualified residence homestead will be the LESSER of:

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

The appraised value of a homestead increases 10% annually or until the appraised value is equal to the market value. If a limited homestead property sells, the cap automatically expires as of January 1st of the year following the sale of the property and the property is appraised at its market value. The market value of a limited homestead is maintained, as well as the limited appraised value.

Residential Inventory

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

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

Agricultural Appraisal

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

published in the Manual for the Appraisal of Agricultural Land, printed December 2016. A copy may be obtained from the State Comptroller of Public Accounts.

APPLICATION PROCESS

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

Three criteria must be met when determining qualification.

(1). Use – Land must be currently devoted principally to agricultural use.

(2). Degree of Intensity – The agricultural use must be to the degree of intensity generally accepted in the area.

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

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

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

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

Disapprove the Application and Request More Information- The application is disapproved and the applicant is allowed thirty (30) days to provide additional information, otherwise the application is denied. When requested information is provided, it is added to data already collected to arrive at a final decision.

INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review

The appraiser identifies individual properties in critical need of field review through sales ratio analysis, ARB hearings, building permits, property owner's requests, aerial photography, and other sources. 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 is able to 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 area within his area of responsibility, the estimates of value are prepared for a "Notice of Appraised Value".

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 ISD 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 of time. The PC-based ratio studies are designed to emulate the findings of the state comptroller's annual property value study for category A (residential) 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.

Residential Neighborhoods

A listing of all Residential Neighborhoods has been provided in Appendix D. Based on the Residential Division's pending in-house ratio studies to be conducted in 2021 any neighborhood whose ratio is less than 95% or greater than 105% will be targeted for reappraisal assuming sufficient and adequate sales data. A complete listing of those neighborhoods reappraised in 2021 will be available for review May 1, 2021. (see Appendix D)

Commercial And Industrial Property Valuation Process

INTRODUCTION

Appraisal Responsibility

This mass appraisal assignment includes all of the commercially described real property which falls within the responsibility of the commercial valuation appraisers of the Parker County Appraisal District 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 – Each appraiser is assigned an ISD, with the responsibility of valuing all real property. This area of responsibility includes commercial improved real property, vacant commercial land, and vacant acreage within the assigned ISD area. 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). Each appraiser is responsible for collection, processing, and maintaining sales and income information that is used in the valuation process.

Data - The data used by the commercial appraisers 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.

Parker County Appraisal District coordinates its 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, PCAD 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. PCAD's goal is 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 location factors, employment and income patterns, general trends in real property prices and rents, interest rate trends, availability of vacant land, and construction trends and costs are collected from private vendors and public sources.

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 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 insures 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 in an attempt 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 / 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 Parker CAD 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.

Sources of Data

In terms of commercial sales data, PCAD receives a copy of the deeds recorded in Parker 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 in an attempt 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. Verification of these transactions is 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 hearings 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 formula, 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 of time, 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 cost 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, location modifiers and estimates of soft cost factors are necessary to adjust these base costs specifically for various types of improvements located in Parker County. Therefore, 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 Parker County 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 CAMA. 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.

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 a specific condition adequacy or deficiency, property type or location and can be developed via ratio studies or other market analyses.

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 multi-tenant properties, 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 expensing 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. As previously discussed in the Data Collection / Validation section of this report, pertinent data from actual sales of properties, both vacant and improved, is

pursued throughout the year in order to obtain relevant information which can be used in all aspects of valuation. Sales of similarly 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 central tendency and dispersion generated from sales ratios are calculated for each property type with available sales data. These summary statistics including, but not limited to, the weighted mean, provide the appraisers an analytical tool by which 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 PCAD appraiser responsible are listed in the CAMA system. If a property owner disputes the District's records concerning this data in a protest hearing, CAMA 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 and field inspection.

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 on as many properties as time and resources allow. Additionally, the appraisers frequently field review subjective data items such as building class, quality of construction (known as cost modifiers), condition, and physical, functional and economic obsolescence factors contributing significantly to the market value of the property. In some cases field reviews are warranted when sharp changes in occupancy or rental rate levels occur between building classes or between economic areas. 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, as authorized by the International Association of Assessing Officers standards, on properties subject to field inspections and are performed in compliance with the guidelines required by the existing classification system. Office reviews are typically limited by the available market data presented for final value analysis. The appraisers may utilize aerial photography as a means to verify building characteristics and location without an on-site field inspection. These reviews summarize the pertinent data of each property as well

as comparing the previous value to the proposed value conclusions of the various approaches to value. These evaluations and reviews show proposed value changes, income model attributes or overrides, economic factor (cost overrides) and special factors affecting the property valuation such as new construction status, and a three years sales history (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 are prepared to send a "Notice of Appraisal Value". Each parcel is subjected to the value parameters appropriate for its use type.

PERFORMANCE TESTS

Sales Ratio Studies

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

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

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

Comparative Appraisal Analysis

The commercial appraiser performs an average unit value comparison in addition to a traditional ratio study. These studies are performed on commercially 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. Appraiser's average unit prices of sales and average unit appraised values of the same parcels and the comparison of average value changes of sold and unsold properties. These studies are conducted on substrata such as building class and on properties located within various economic areas. In this way, overall appraisal performance is evaluated geographically, by specific property type to discern whether sold parcels have been selectively appraised. When sold parcels and unsold parcels are appraised equally, the average unit values are similar. These sales and equity studies are performed prior to final appraisal and generation of "Notices of Appraised Value".

Commercial Improved Market Areas

A listing of all Commercial Improved Market Areas (IMA) has been provided in Appendix E. Based on the Commercial Division's preliminary analysis to be conducted in 2021 IMAs whose sales ratio's or overall market data indicates a reappraisal is necessary will be targeted for reappraisal. A complete listing of those IMAs reappraised in 2021 will be available for review May 1, 2021. (see Appendix E)

Business Personal Property Valuation Process

INTRODUCTION

Appraisal Responsibility

There are four different personal property types appraised by the district's personal property section: Business Personal Property accounts; leased assets/special property at multiple locations; vehicles and aircraft; special inventory; "J" State Code utility properties and mineral accounts (which are real property but the valuation is contracted out with Pritchard & Abbot and managed by the department).

- **Personnel** - The personal property staff consists of 2 appraisers and 1 clerk/data entry support staff.
- **Data** – A common set of data characteristics for each account in the district are collected by appraisers in the field, by phone, and other pertinent sources and are entered into the PCAD mainframe computer by both the appraisal and clerical staff. These assigned property characteristics direct the computer-assisted personal property appraisal system to a preliminary account value.
- Additionally, a third party appraisal firm that values minerals and certain utility properties gathers data from the Texas Railroad Commission and other proprietary sources.

VALUATION APPROACH

SIC Code Analysis

Business personal property is classified and utilizes a four digit numeric codes, called Standard Industrial Classification (SIC) codes, and used as the basis for classification and valuation of business personal property accounts. These classifications are used by Parker CAD 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 the 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

Standard Business Personal Property Account

The district's property characteristic data was collected through a 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. Local newspapers, telephone directories, and the public often provide the district information regarding new personal property and other useful facts related to property valuation.

Leased Asset/Special Property at Multiple Locations Account

The primary source of leased and multi-location assets is property owner renditions of property. Property owner survey letters, on-site inspections and the renditions of lessees are sometimes used to supplement this information.

Special Inventory

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

Certain Utility, Pipeline and Mineral Accounts

Parker Appraisal District contracts with a third party appraisal firm for appraisal services of certain property types: mineral interest, industrial, utility, and related personal property. Uniform

Standards of Professional Appraisal Practices or USPAP certification and reappraisal plan information on these properties are included in the contractor's reappraisal plan which is attached by reference.

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 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.

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 distinguish appraisal uniformity within SIC codes.

Depreciation Schedule and Trending Factors:

Although all three approaches to value are considered, Parker County Appraisal District'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 PCAD to develop RCN are based on published valuation guides. The "percent good" or remaining economic life, depreciation factors published is considered to recognize the trend for changes in cost factors.

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

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.

Standard Business Personal Property Account

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.

Leased Asset/Special Property at Multiple Locations Account

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

Special Inventory

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

INDIVIDUAL VALUE REVIEW PROCEDURES

Office Review

Standard Business Personal Property Account

A 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.

Leased Asset/Special Property at Multiple Locations Account

Leased Asset/Special Property accounts that have a high volume of vehicles or other assets are loaded programmatically if reported by the property owner electronically. Renditions either emailed or on diskette, may require reformatting before they can be loaded to the account. Accounts that render by hard copy are data entered by the BPP clerical staff. After matching and data entry, reports are generated and reviewed by an appraiser. Once proofed, necessary corrections are made, supervisor approval is granted, and the account is sent a "Notice of Appraised Value".

Special Inventory

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

PERFORMANCE TESTS

Ratio Studies

Each year the Property Tax Division of the state comptroller's office conducts a property value study (PVS). The PVS is a ratio study used to gauge appraisal district performance. Results from the PVS play a part in school funding. Rather than a sales ratio study, the personal property PVS is a ratio study using state cost and depreciation schedules to develop comparative personal property values. These values are then compared to PCAD's personal property values and ratios are determined.

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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 property appraised 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.
4. See Appendix B for a list of staff providing significant mass appraisal assistance to the person signing this certification.

Certification Statement:

"I, Larry Hammonds, Chief Appraiser for the Parker County Appraisal District, solemnly swear that I have made or caused to be made a reappraisal plan for Parker Appraisal District for the 2021/2022 tax years as required by law."



Larry Hammonds
Chief Appraiser

Appendix A. 2021-2022 Proposed Calendar for Reappraisal Plan

PROJECTED

<u>DATE 2020</u>	<u>2021 Reappraisal – Schedule of Events</u>
July	Appraisal Review Board approves 2020 Appraisal Records to create Appraisal Roll Chief Appraiser Certifies 2020 Appraisal Roll to Taxing Units Overlap Certified values e-mailed to corresponding districts
August	Begin 2021 Appraisal field work for Residential & Commercial new construction Begin 2021 Appraisal field work for Business Personal Property (BPP) Appraisal Dept begins cost, sale & income data collection for Model Calibration Appraisers review ratio study results to identify 2021 value review Texas Association of Assessing Officers (TAAO) Annual Conference-Grapevine, TX Southwest Data and PCAD staff, roll data records to begin appraisal year 2021 PTAD Methods Assistance Program (MAP), preliminary recommendations Calculating taxing units effective tax rates for 2020 ARB hearings & approval for Supplemental records Chief Appraiser certifies Supplemental Roll to Taxing Units Texas A & M 30 th Legal Seminar on Ad Valorem Taxation-San Antonio, Texas
September	Initial Overlapping CAD exchange of deed records and appraisal data Sept 15 – Statutory deadline for PCAD Board of Directors to approve 2021 Budget & Reappraisal Plan Appraisal Dept – receives Building Permits from corresponding Cities, 911 Addressing & septic permits, Fire Dept burn-out list, noting the property record cards PTAD approved Educational courses (CE’s) with TDLR (Ethics update, State Laws & Review course, Uniform Standard of Professional Appraisal Practice (USPAP), Along with 19 hours of continuing education for Registered Professional Appraisal (RPA’s) & Registered Tax Assessors (RTA’s) Review Texas Department of Licensing and Regulation (TDLR) website for Educational status of district staff (approved through PTAD). 30 hours (RPA’s), 20 hours (RTA’s). MAPS 2020 preliminary findings (final in December)
October	Mail 2020 Tax Statements – Entire staff support for phones & Customer Service Appraisal Dept review of neighborhood delineations Comptrollers 62th Annual Conference on Property Taxation – Austin, TX
November	Thanksgiving Holiday – PCAD closed November 25 & 26
December	2020 Property Tax Assistance Division (PTAD) Map Review-final report delivered To PCAD Christmas Holiday – PCAD closed December 24 & 25 Property Tax Collections – entire staff support for phones & value inquiries MAPS 2020 final findings (1 year to correct)

PROJECTED

<u>DATE 2021</u>	
January	New Years Day – PCAD closed

	<p>Jan 1st – Statutory Appraisal Date for most categories of taxable properties Martin Luther King Day – PCAD closed Meetings with overlapping jurisdictions for overlapping data exchange Mailing 2021 Business Personal Property Renditions (BPP) Weekly Staff meetings – Appraisal & Data Entry staff Delinquency Date for 2020 Property taxes-entire staff support</p>
February	<p>Texas Association of Appraisal Districts (TAAD) Annual Conference, Austin, TX President’s Day – PCAD closed Begin working 2021 BPP renditions</p>
March	<p>Wrap up of Appraisal field work for 2021 Market adjustment preparation & ratio studies for assigned areas ARB hearings - Section 25.25 ARB training seminar</p>
April	<p>Begin Preparation for 2022 Appraisal District Budget Finalize value changes prior to Notice of Appraised Values History Comparison Reports (Queries) for final values Exchange 2021 Overlap values with overlapping CAD’s BPP Rendition Deadline on April 15th Deadline to file Abatement Applications on April 30th</p>
May	<p>Mailing 2021 “Notice of Appraised Value” for all properties Minerals “Notice of Appraised Value” mailed Begin informal appeals BPP Rendition Extension deadline on May 15th Memorial Day – PCAD closed Statutory deadline to file appeal with Appraisal Review Board (ARB), May 15th PTAD’s 2021 Preliminary Property Value Study (PVS)</p>
June	<p>Chief Appraiser submits 2021 completed Appraisal records to ARB 2021 ARB hearings begin</p>
July	<p>ARB approves appraisal records – creates Appraisal Roll (by July 20th) Chief Appraiser certifies 2021 appraisal roll to Tax Units (by July 25th) Chief Appraiser prepares 2021 Mass Appraisal Report</p>
August	<p>Begin 2022 Appraisal field work for Residential & Commercial new construction Begin 2022 Appraisal field work for Business Personal Property (BPP) Appraisal Dept begins cost, sale & income data collection for Model Calibration Appraisers review ratio study results to identify 2022 value review Texas Association of Assessing Officers (TAAO) Annual Conference-Austin Southwest Data and PCAD staff roll data records to begin appraisal year 2022 Calculating taxing units effective tax rates for 2021 ARB hearings & approval for Supplemental records Chief Appraiser certifies Supplemental Roll to Taxing Units</p>
September	<p>Initial Overlapping CAD exchange of deed records and appraisal data Sept 15 – Statutory deadline for PCAD Board of Directors to approve 2022 Budget 2021 Tax statements mailed – Entire staff support for phones & Customer Service</p>

Appraisal Dept – receives Building Permits from corresponding Cities, 911 Addressing & septic permits, Fire Dept burn-out list, noting the property record Cards

PTAD approved Educational courses (CE's) with TDLR (Ethics update, State Laws & Review course, Uniform Standard of Professional Appraisal Practice (USPAP), Along with 19 hours of continuing education for Registered Professional Appraisal (RPA's) & Registered Tax Assessors (RTA's)

Review Texas Department of Licensing and Regulation (TDLR) website for Educational status of district staff (approved through PTAD). 30 hours (RPA's), 20 hours (RTA's).

October Mail 2021 Tax Statements – Entire staff support for phones & Customer Service
Appraisal Dept review of neighborhood delineations
Comptrollers 63th Annual Conference on Property Taxation – Austin, TX

November Thanksgiving Holiday – PCAD closed November 25 & 26

December Christmas Holiday – PCAD closed December 23 & 24
Property Tax Collections – entire staff support for phones & value inquiries

PROJECTED **DATE 2022**

January New Years Day – PCAD closed
Jan 1st – Statutory Appraisal Date for most categories of taxable properties
Martin Luther King Day – PCAD closed
Meetings with overlapping jurisdictions for overlapping data exchange
Mailing 2022 Business Personal Property Renditions (BPP)
Weekly Staff meetings – Appraisal & Data Entry staff
PTAD's preliminary PVS results
PTAD's preliminary 2022 MAPS review on site (preliminary results – finals in Dec)
Delinquency Date for 2021 Property taxes-entire staff support

February Texas Association of Appraisal Districts (TAAD) Annual Conference, Grapevine, TX
President's Day – PCAD closed
Begin working 2022 BPP renditions

March Wrap up of Appraisal field work for 2022
Market adjustment preparation & ratio studies for assigned areas
ARB hearings - Section 25.25
ARB training seminar

April Begin Preparation for 2023 Appraisal District Budget
Finalize value changes prior to Notice of Appraised Values
History Comparison Reports (Queries & quality controls) for final values
Exchange 2022 Overlap values with overlapping CAD's
BPP Rendition Deadline on April 15th
Deadline to file Abatement Applications on April 30th

- May Mailing 2022 “Notice of Appraised Value” for all properties
 Minerals “Notice of Appraised Value” mailed
 Begin informal appeals
 BPP Rendition Extension deadline on May 15th
 Memorial Day – PCAD closed
 Statutory deadline to file appeal with Appraisal Review Board (ARB), May 31st
- June Chief Appraiser submits 2022 completed Appraisal records to ARB
 2022 ARB hearings begin
- July ARB approves appraisal records – creates Appraisal Roll (by July 20th)
 Chief Appraiser certifies 2022 appraisal roll to Tax Units (by July 25th)
 Chief Appraiser prepares 2022 Mass Appraisal Report

Appendix B. Key Appraisal Personnel in Reappraisal Plan Implementation

<u>EMPLOYEE</u>	<u>TITLE</u>
LARRY HAMMONDS	CHIEF APPRAISER, RPA, RTA, CTA
TAMMY MORGAN	ADMINISTRATIVE ASSISTANT, RTA
RICK ARMSTRONG	DEPUTY CHIEF APPRAISER, RPA, CTA
ROD OWEN	COMMERCIAL-SENIOR APPRAISER, RPA, CTA
JERAD GABBERT	COMMERCIAL APPRAISER IV, AG APPS, RPA
GARY BONNER	RESIDENTIAL APPRAISER IV, MANAGER, RPA
CHRIS JOHNSON	RESIDENTIAL APPRAISER IV, MANAGER, RPA
MATT GIBSON	RESIDENTIAL APPRAISER IV, RPA
JOHN NOLAND	RESIDENTIAL APPRAISER IV, RPA
JASON MARTIN	RESIDENTIAL APPRAISER IV, RPA
BRIAN VASQUEZ	RESIDENTIAL APPRAISER IV, RPA
BEN DALE	RESIDENTIAL APPRAISER IV, RPA
STEPHEN JONES	RESIDENTIAL APPRAISER III
CHRIS MOUTON	RESIDENTIAL APPRAISER II
BRUCE LANGLOIS	RESIDENTIAL APPRAISER I
ROY McCLEERY	RESIDENTIAL APPRAISER I
JUSTIN SHIFFLETT	DIRECTOR PERSONAL PROPERTY, RPA
MISHAY APPLEBEE	PERSONAL PROPERTY APPRAISER, RPA
TANYA BARRETT	APPRAISAL ANALYST, ARB COORDINATOR
NICOLE CUDD	APPRAISAL ANALYST, ARB
ANGELA BELCHER	APPRAISAL ANALYST, ARB
KELLY MASSEY	APPRAISAL ANALYST, ARB
BRADY GABBERT	APPRAISAL ANALYST, ARB
AMBER HOGAN	APPRAISAL ANALYST, ARB

CINDY GETCHELL	DIRECTOR OF /MAPPING & INFO SYSTEMS
JEREMY STEWART	MAPPING ASSISTANT
GARRETT LOVE	MAPPING ASSISTANT
CHUCK WESTBROOK	MAPPING ASSISTANT
MELANIE ELVINGTON	RECORDS SUPERVISOR
TERESA ELVINGTON	RECORDS ANALYST
CHRISTINA GABBERT	RECORDS ANALYST
SHAWN HAZELWOOD	COLLECTIONS SUPERVISOR/DP MGR/ CUSTOMER SERVICE /DELINQUENT SUITS
PAM HENSON	EXEMPTIONS COORDINATOR
JENNIFER KENNEDY	COLLECTIONS DEPUTY
LINDA BOX	COLLECTIONS DEPUTY
CANDIE PETERSON	COLLECTIONS DEPUTY
TYLER GABBERT	COLLECTIONS DEPUTY
MADISON HOBSON	TELEPHONE RECEPTIONIST
KRISTI WOLF	AGENCY BOOKKEEPER

Appendix C. Parker County Board of Directors

Richard Barret – Chairman

Jerry Durant – Vice Chairman

John Hinton – Secretary

Cody Lane – Member

Sterling Naron – Member

Appendix D. Market Neighborhoods

10015	10255	10495	10785	11030	11360
10020	10260	10500	10787	11035	11380
10025	10270	10550	10790	11045	11384
10026	10275	10551	10800	11050	11385
10027	10278	10560	10810	11070	11390
10028	10279	10561	10835	11100	11395
10030	10280	10562	10837	11140	11397
10031	10281	10563	10838	11145	11400
10032	10282	10565	10840	11148	11402
10033	10283	10570	10842	11149	11403
10034	10284	10573	10843	11150	11405
10035	10285	10575	10845	11151	11420
10060	10287	10580	10865	11152	11430
10065	10290	10581	10867	11153	11431
10070	10295	10583	10870	11154	11432
10073	10300	10585	10875	11155	11435
10075	10304	10587	10877	11156	11437
10080	10305	10590	10880	11157	11438
10081	10325	10595	10900	11158	11439
10082	10326	10596	10901	11159	11440
10083	10327	10597	10902	11160	11441
10085	10330	10600	10903	11161	11442
10086	10360	10601	10904	11175	11443
10087	10365	10620	10905	11180	11444
10090	10370	10640	10906	11185	11445
10095	10372	10645	10907	11190	11450
10100	10375	10650	10908	11200	11470
10105	10385	10660	10910	11205	11485
10110	10387	10680	10913	11210	11490
10120	10390	10694	10915	11215	11495
10123	10395	10700	10920	11220	11497
10130	10400	10705	10921	11225	11500
10131	10405	10710	10922	11230	11510
10133	10407	10720	10960	11235	11520
10135	10408	10750	10963	11240	11525
10137	10409	10751	10965	11250	11530
10140	10410	10752	10970	11251	11535
10143	10420	10753	10975	11252	11550
10144	10430	10754	10978	11255	11560
10145	10435	10755	10980	11256	11565
10146	10450	10756	11000	11257	11566

10150	10470	10758	11010	11258	11567
10200	10473	10760	11015	11300	11570
10240	10474	10780	11018	11303	11578
10242	10475	10782	11020	11304	11580
10244	10476	10783	11025	11305	11590
10245	10480	10784	11028	11310	11600
11620	11785	12090	12482	12885	13271
11625	11786	12100	12483	12890	13290
11630	11787	12105	12484	12935	13330
11640	11788	12110	12485	12936	13335
11644	11789	12115	12486	12938	13340
11645	11790	12120	12487	12940	13350
11649	11791	12122	12488	12945	13355
11650	11792	12125	12489	12950	13390
11660	11793	12126	12490	13000	13400
11663	11794	12135	12500	13020	13410
11665	11795	12137	12560	13040	13415
11680	11796	12138	12590	13050	13420
11683	11797	12139	12600	13060	13450
11685	11798	12140	12640	13090	13455
11710	11799	12141	12648	13092	13460
11712	11800	12142	12650	13095	13480
11713	11805	12143	12651	13100	13482
11715	11808	12145	12680	13110	13484
11716	11809	12155	12690	13115	13485
11718	11810	12160	12700	13120	13486
11720	11811	12165	12730	13135	13487
11725	11812	12185	12740	13140	13490
11730	11813	12190	12750	13150	13520
11750	11814	12195	12755	13191	13525
11760	11815	12200	12757	13240	13528
11763	11816	12220	12770	13241	13550
11764	11817	12222	12780	13242	13551
11765	11820	12225	12784	13243	13580
11766	11850	12226	12785	13244	13581
11767	11855	12240	12786	13245	13582
11768	11856	12300	12787	13246	13583
11769	11895	12301	12788	13247	13585
11770	11900	12310	12789	13248	13587
11771	11910	12320	12790	13249	13590
11772	11951	12330	12800	13250	13600
11773	11980	12390	12805	13251	13610
11774	11990	12400	12807	13252	13615

11775	12000	12405	12810	13253	13616
11776	12020	12408	12820	13254	13618
11777	12025	12410	12825	13255	13620
11778	12030	12415	12830	13256	13621
11779	12040	12420	12835	13260	13623
11780	12060	12425	12880	13261	13625
11781	12065	12428	12881	13262	13635
11782	12070	12430	12882	13263	13650
11783	12075	12480	12883	13265	13675
11784	12080	12481	12884	13270	13700
13701	14018	14480	14887	15225	15685
13723	14020	14500	14888	15226	15735
13725	14025	14501	14890	15270	15740
13730	14026	14550	14900	15275	15750
13735	14027	14555	14925	15278	15753
13740	14030	14560	14926	15280	15755
13755	14060	14563	14950	15285	15757
13790	14065	14565	14955	15300	15760
13800	14070	14575	14973	15305	15761
13810	14075	14590	14974	15310	15762
13825	14105	14600	14975	15311	15763
13830	14120	14630	14976	15315	15775
13850	14135	14635	14977	15318	15778
13870	14136	14638	14978	15320	15779
13875	14137	14640	14979	15350	15780
13879	14138	14645	14980	15370	15782
13880	14140	14650	14981	15375	15800
13899	14150	14651	14982	15385	15820
13900	14151	14653	14983	15390	15825
13901	14160	14655	14984	15400	15830
13902	14162	14660	14985	15430	15845
13908	14165	14670	14986	15470	15850
13910	14235	14680	14987	15475	15874
13915	14238	14690	14988	15495	15875
13920	14240	14700	14989	15500	15876
13925	14260	14710	14990	15535	15880
13926	14290	14711	14991	15537	15883
13927	14300	14715	14992	15540	15885
13928	14310	14750	14993	15541	15886
13929	14340	14751	14994	15550	15887
13930	14370	14753	14995	15555	15889
13931	14371	14754	14996	15570	15890
13950	14375	14755	14997	15575	15900

13960	14380	14756	14998	15578	15905
13965	14384	14760	15025	15580	15925
13970	14385	14780	15040	15590	15930
13975	14390	14850	15050	15592	15933
13980	14395	14855	15074	15595	15935
13981	14430	14860	15075	15605	15960
13982	14450	14861	15110	15610	15963
13985	14453	14863	15115	15628	15965
13990	14455	14865	15120	15630	15968
13995	14460	14875	15165	15635	15970
14000	14465	14877	15175	15640	16040
14010	14470	14879	15176	15675	16045
14013	14473	14880	15220	15680	16046
14015	14475	14885	15223	15683	16047
16048	16295	16725	17235	17387	17730
16049	16300	16730	17236	17390	17740
16050	16305	16745	17237	17393	17743
16051	16320	16750	17238	17395	17745
16052	16330	16751	17239	17396	17747
16053	16335	16753	17240	17400	17750
16055	16340	16754	17241	17430	17760
16060	16345	16755	17242	17440	17765
16065	16355	16780	17243	17450	17770
16066	16358	16785	17244	17451	17780
16068	16360	16800	17245	17460	17810
16070	16365	16805	17246	17470	17815
16073	16370	16810	17247	17480	17820
16075	16380	16820	17248	17482	17821
16077	16390	16850	17249	17485	17822
16080	16400	16870	17250	17487	17823
16083	16401	16874	17251	17490	17825
16085	16450	16875	17252	17500	17830
16120	16475	16885	17253	17505	17838
16122	16480	16890	17254	17509	17840
16125	16500	16893	17255	17510	17850
16160	16550	16895	17256	17511	17855
16165	16552	16898	17257	17513	17860
16170	16555	16900	17258	17514	17862
16190	16556	16915	17259	17515	17895
16200	16557	16920	17260	17517	17900
16220	16558	16930	17261	17520	17910
16225	16560	16950	17262	17530	17915
16230	16565	16980	17263	17550	17916

16235	16570	17020	17275	17552	17917
16240	16571	17025	17278	17555	17918
16260	16572	17027	17280	17565	17919
16279	16575	17028	17285	17575	17920
16280	16578	17030	17295	17577	17930
16281	16580	17035	17296	17580	17932
16282	16583	17080	17300	17581	17935
16283	16585	17081	17302	17585	17940
16284	16590	17082	17303	17590	17942
16285	16593	17083	17305	17595	17943
16286	16595	17100	17310	17598	17945
16287	16600	17105	17350	17600	17948
16288	16610	17110	17355	17610	17950
16289	16645	17113	17380	17620	17951
16290	16650	17114	17381	17630	17955
16292	16690	17115	17382	17670	17970
16293	16700	17150	17385	17705	18010
16294	16705	17200	17386	17720	18011
18013	18446	18924	19235	19580	
18014	18447	18925	19250	19590	
18015	18448	18930	19252	19620	
18016	18450	18940	19255	19640	
18017	18455	18950	19285	19650	
18019	18456	18955	19335	19655	
18020	18457	18970	19340	19660	
18021	18458	18975	19345	19675	
18022	18460	18980	19346	19680	
18030	18461	18985	19348	19690	
18050	18462	18995	19350	19745	
18080	18465	18998	19355	19750	
18083	18470	19000	19380	19755	
18085	18475	19001	19381	19760	
18086	18476	19002	19383	19761	
18090	18480	19004	19385	19762	
18100	18481	19005	19390	19765	
18155	18482	19007	19395	19773	
18175	18483	19008	19450	19775	
18200	18484	19010	19452	19776	
18220	18485	19030	19453	19778	
18230	18490	19033	19455	19780	
18235	18500	19035	19456	19781	
18237	18505	19040	19460	19782	
18240	18507	19043	19461	19783	

18250	18510	19044	19465	19785
18255	18511	19045	19470	19786
18260	18512	19046	19475	19787
18275	18535	19047	19480	19788
18285	18540	19048	19500	19789
18325	18550	19049	19503	19800
18330	18555	19050	19504	19802
18340	18560	19055	19505	19805
18343	18590	19056	19506	19810
18345	18592	19060	19507	19890
18346	18600	19100	19508	19910
18350	18690	19115	19509	19920
18370	18693	19116	19510	19925
18375	18695	19117	19511	19930
18376	18740	19118	19512	19933
18420	18785	19119	19513	19935
18430	18805	19120	19514	19950
18435	18830	19130	19515	
18438	18870	19150	19516	
18440	18875	19155	19520	
18443	18920	19175	19525	
18445	18923	19230	19579	

Appendix E. Commercial Improved Market Areas

21	37	51	65	78	92	202
25	38	52	66	80	93	205
30	39	53	70	81	94	206
31	40	55	71	85	95	207
32	41	56	74	87	97	208
33	45	60	75	88	99	209
35	49	61	76	89	200	
36	50	62	77	90	201	

Appendix F. Reappraisal Plan – Third Party Vendor (Pritchard & Abbott)



S.B. 1652* BIENNIAL REAPPRAISAL PLAN

**FOR THE ANNUAL APPRAISAL FOR
AD VALOREM TAX PURPOSES OF
MINERAL, INDUSTRIAL, UTILITY AND
RELATED PERSONAL PROPERTY**

For Tax Years:

2019 and 2020

Originally Printed: June 13, 2018

*Senate Bill 1652 passed by the Texas Legislature, 79th Regular Session in 2005, amending Section 6.05 of the Texas Property Tax Code, adding Subsection (i) as follows:

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

**REAPPRAISAL PLAN OF MINERAL, INDUSTRIAL, UTILITY AND RELATED PERSONAL PROPERTY
PRITCHARD & ABBOTT, INC.
TAX YEARS 2019 AND 2020**

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**REAPPRAISAL PLAN OF MINERAL, INDUSTRIAL, UTILITY AND RELATED PERSONAL PROPERTY
PRITCHARD & ABBOTT, INC.
TAX YEARS 2019 AND 2020**

**POLICY STATEMENT OF PRITCHARD & ABBOTT, INC., ON THE
UNIFORM STANDARDS OF PROFESSIONAL APPRAISAL PRACTICE**

Pritchard & Abbott, Inc., (P&A), a privately held company engaged primarily, but not wholly, in the ad valorem tax valuation industry endorses Uniform Standards of Professional Appraisal Practice (USPAP) as the basis for the production of sound appraisals. Insofar as the statutory requirement to appraise groups (or a “universe”) of real and personal property within an established period of time using standardized procedures—and subjecting the resulting appraisals to statistical measures—is the definition of mass appraisal, P&A subscribes to USPAP Standards 5 and 6 (Mass Appraisal, Development and Reporting) whenever applicable in the development and defense of values. When circumstances clearly dictate the use of single property appraisal procedures, P&A adheres to the spirit and intent of the remaining USPAP Standards within all appropriate, practical, and/or contractual limitations or specifications.

The USPAP definition of “appraiser” is one who is expected to perform valuation services competently and in a manner that is independent, impartial, and objective. USPAP Advisory Opinion 21 states that this expectation (by clients and intended users of appraisal reports) is the basis that creates an ethical obligation to comply with USPAP, even if not legally required.

The majority of property types that P&A typically appraises for ad valorem tax purposes are categorized as unique, complex, and/or “special purpose” properties (mineral interests, industrial, utility, and related personal property). These categories of properties do not normally provide sufficient market data of reliable quality and/or quantity to support the rigorous use of all USPAP-prescribed mass appraisal development mandates (Standard 5: Mass Appraisal, Development), particularly with regards to some, but not all, of the *model calibration* and *statistical performance testing* confines. However, P&A does strive to employ all or most elements of mass appraisal techniques with regards to the *definition* and *identification of property characteristics* and *model specification* and application.

Residential real estate property appraisers most frequently apply mass appraisal methods within the sales comparison (market) approach to value. Through the use of standardized data collection (i.e., actual market sales), specification and calibration of mass appraisal models, tables, and schedules are possible. Through ratio study analysis and other performance measures, a cumulative summary of valuation accuracy can thus be produced in order to calibrate the appraisal model(s). Where sufficient data of reliable quality exists, mass appraisal is also used for other types of real estate property such as farms, vacant lots, and some commercial uses (e.g., apartments, offices, and small retail).

Regarding mass appraisal reports due the client and other intended users per USPAP (Standard 6 (Mass Appraisal, Reporting), P&A will clearly state or otherwise make known all extraordinary assumptions, hypothetical conditions, limitations imposed by assignment conditions, and/or jurisdictional exceptions in its appraisal reports as they are conveyed to our clients. **Intended users of our reports are typically the client(s) for which we are under direct contract.** Although taxpayers or their agents who own and/or represent the subject property being appraised often receive these reports either by law or as a courtesy of the client or P&A, this receipt does not mean these parties automatically become Intended Users as defined by USPAP. **A party receiving a copy of a report in order to satisfy disclosure requirements does not become an intended user of the appraisal or mass appraisal unless the appraiser specifically identifies such party as an intended user.** Potential other users include parties involved in adjudication of valuation disputes (review board members, lawyers, judges, etc.), governmental agencies which periodically review our appraisals for various statutory purposes (such as the Texas Comptroller’s Office) and private parties who may obtain copies of our appraisals through Open Records Requests made to governmental agencies.

USPAP does not currently address communications of assignment results prior to completion of the assignment, thus such communications have no requirements other than to comply with the general requirements in the ETHICS RULE, the COMPETENCY RULE, and the JURISDICTIONAL EXCEPTION RULE. The client and all intended users should be aware that mass appraisals, as opposed to most “fee” appraisals, are somewhat inherently “limited” versus “complete” and that appraisal reports, unless otherwise contracted for by the client, will most often be of a “restricted” nature whereas explanations of appraisal methods and results are more concise versus lengthy in order to promote brevity, clarity, and transparency to the intended user(s).

Per USPAP, the appropriate reporting option and level of information in a report are dependant on the intended use and the

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intended users. Although the reporting verbiage in USPAP Standard 6 does not specifically offer or promulgate a "Restricted Appraisal Report" such as in Standard 2 (Real Property Appraisal, Reporting) and Standard 8 (Personal Property Appraisal, Reporting), it should be noted that: a) all mass appraisals and mass appraisal reports deal with real and personal property in some form or fashion; and b) P&A is a private consulting firm, a fact which may necessitate the withholding of certain data and/or appraisal models/techniques which are deemed confidential, privileged and/or proprietary in nature. The use of "limited" appraisals in conjunction with "restricted" reports in no way implies non-compliance with USPAP. The substantive content of a report determines its compliance.

P&A believes that, with its vast experience and expertise in these areas of appraisal, all concluded values and reports thereof are credible, competent, understandable, uniform and consistent; and most importantly for ad valorem tax purposes, accomplished in a cost-efficient and timely manner.

Per previous ASB comments under Standard 6-2(b) [*scope of work... special limiting conditions*]:

"Although appraisers in ad valorem taxation should not be held accountable for limitations beyond their control, they are required by this specific requirement to identify cost constraints and to take appropriate steps to secure sufficient funding to produce appraisals that comply with these standards. Expenditure levels for assessment administration are a function of a number of factors. Fiscal constraints may impact data completeness and accuracy, valuation methods, and valuation accuracy. Although appraisers should seek adequate funding and disclose the impact of fiscal constraints on the mass appraisal process, they are not responsible for constraints beyond their control."

In any event, however, it is not P&A's intent to allow constraints, fiscal or otherwise, to limit the scope of work to such a degree that the mass appraisal results provided to our clients are not credible within the context of the intended use(s) of the appraisal.

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PREAMBLE

The purpose of USPAP is to establish requirements and conditions for ethical, thorough, and transparent property valuation services. Valuation services pertain to all aspects of property value and include services performed by appraisers and other professionals including attorneys, accountants, insurance estimators, auctioneers, or brokers. Valuation services include appraisal, appraisal review, and appraisal consulting. The primary intent of these Standards is to promote and maintain a high level of public trust in professional appraisal practice.

It is essential that professional appraisers develop and communicate their analyses, opinions, and conclusions to intended users of their services in a manner that is meaningful and not misleading. The importance of the role of the appraiser places ethical obligations upon those who serve in this capacity. These USPAP Standards reflect the current standards of the appraisal profession.

These Standards are for both appraisers and users of appraisal services. To maintain a high level of professional practice, appraisers observe these Standards. However, these Standards do not in themselves establish which individuals or assignments must comply. The Appraisal Foundation nor its Appraisal Standards Board is not a government entity with the power to make, judge, or enforce law. Compliance with USPAP is only required when either the service or the appraiser is obligated to comply by law or regulation, or by agreement with the client or intended users. When not obligated, individuals may still choose to comply.

USPAP addresses the ethical and performance obligations of appraisers through DEFINITIONS, Rules, Standards, Standards Rules, and Statements (if any). USPAP Standards deal with the procedures to be followed in performing an appraisal or appraisal review and the manner in which each is communicated. A brief description of the USPAP Standards are as follows:

- **Standards Rules 1 and 2:** establish requirements for the development and communication of a real property appraisal.
- **Standards Rules 3 and 4:** establishes requirements for the development and communication of an appraisal review.
- **Standards Rules 5 and 6:** establishes requirements for the development and communication of a mass appraisal.
- **Standards Rules 7 and 8:** establish requirements for the development and communication of a personal property appraisal.
- **Standards Rules 9 and 10:** establish requirements for the development and communication of a business or intangible asset appraisal.

Section 23.01(b) [Appraisals Generally] of the Texas Property Tax Code states:

"The market value of property shall be determined by the application of generally accepted appraisal methods and techniques. If the Appraisal District determines the appraised value of a property using mass appraisal standards, the mass appraisal standards must comply with the Uniform Standards of Professional Appraisal Practice...." (underline added for emphasis)

Consequently, USPAP Standards Rules 5 and 6 are assumed to be the applicable standard for ad valorem tax purposes in Texas, if mass appraisal practices are in fact being used to appraise the subject property. USPAP Advisory Opinion 32 suggests several USPAP standards other than Standards 5 or 6 can or should apply in ad valorem tax work. However, it appears that an appraiser engaged in ad valorem tax work in Texas is not specifically required by law to follow these USPAP standards if in fact mass appraisal practices have not been used to appraise the subject property. In this case it could be deemed appropriate to invoke the Jurisdictional Exception Rule which is applicable when there is a contradiction between the requirements of USPAP and the law or regulation of a jurisdiction. Please see the P&A Policy Statement on USPAP as provided elsewhere in this report for a more detailed discussion regarding this matter.

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ETHICS RULE

Because of the fiduciary responsibilities inherent in professional appraisal practice, the appraiser must observe the highest standards of professional ethics. This Ethics Rule is divided into three sections:

- Conduct;
- Management;
- Confidentiality.

This Rule emphasizes the personal obligations and responsibilities of the individual appraiser. However, it should be noted that groups and organizations *which are comprised of individual appraisers engaged in appraisal practice* effectively share the same ethical obligations. To the extent the group or organization does not follow USPAP Standards when legally required, individual appraisers should take steps that are appropriate under the circumstances to ensure compliance with USPAP.

Compliance with these Standards is required when either the service or the appraiser is obligated by law or regulation, or by agreement with the client or intended users, to comply. Compliance is also required when an individual, by choice, represents that he or she is performing the service as an appraiser.

An appraiser must not misrepresent his or her role when providing valuation services that are outside of appraisal practice.

Honesty, impartiality, and professional competency are required of all appraisers under USPAP Standards. To document recognition and acceptance of his or her USPAP-related responsibilities in communicating an appraisal or appraisal review completed under USPAP, an appraiser is required to certify compliance with these Standards.

CONDUCT

An appraiser must perform assignments with impartiality, objectivity, and independence, and without accommodation of personal interests.

An appraiser:

- must not perform an assignment with bias;
- must not advocate the cause or interest of any party or issue;
- must not accept an assignment that includes the reporting of predetermined opinions and conclusions;
- must not misrepresent his or her role when providing valuation services that are outside of appraisal practice;
- must not communicate assignment results with the intent to mislead or to defraud;
- must not use or communicate a report or assignment results known by the appraiser to be misleading or fraudulent;
- must not knowingly permit an employee or other person to communicate a report or assignment results that are misleading or fraudulent report;
- must not use or rely on unsupported conclusions relating to characteristics such as race, color, religion, national origin, gender, marital status, familial status, age, receipt of public assistance income, handicap, or an unsupported conclusion that homogeneity of such characteristics is necessary to maximize value;
- must not engage in criminal conduct;
- must not willfully or knowingly violate the requirements of the RECORD KEEPING RULE; and must not perform an assignment in a grossly negligent manner.

If known prior to accepting an assignment, and/or if discovered at any time during the assignment, an appraiser must disclose to the client, and in each subsequent report certification:

- any current or prospective interest in the subject property or parties involved; and
- any services regarding the subject property performed by the appraiser within the three year period immediately preceding acceptance of the assignment, as an appraiser or in any other capacity.

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The appraiser can agree with the client to keep the mere occurrence of a prior appraisal assignment confidential. If an appraiser has agreed with the client not to disclose that he or she has appraised a property, the appraiser must decline all subsequent assignment that fall with the three year period. In assignments in which there is no report, only the initial disclosure to the client is required.

Presumably all parties in ad valorem tax appraisal will be aware of the ongoing yearly nature of the appraisal assignments performed by valuation consulting firms like Pritchard & Abbott, Inc. — i.e., it will not be confidential — so that this particular conduct instruction is more or less a moot point (regarding the three year period discussed) if the prior service is in fact the ad valorem tax appraisals performed in previous tax years.

MANAGEMENT

The payment of a fee, commission, or a thing of value by the appraiser in connection with the procurement of an assignment must be disclosed. This disclosure must appear in the certification and in any transmittal letter in which conclusions of value are stated; however, the disclosure of the amount paid is not required. Intra-company payments to employees of groups or organizations involved in appraisal practice for business development do not require disclosure.

It is unethical for an appraiser to accept compensation for performing an assignment when it is contingent upon the reporting of a predetermined result, a direction in assignment results that favors the cause of the client, the amount of a value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the appraiser's opinions and specific to the assignment's purpose.

Advertising for or soliciting assignments in a manner that is false, misleading, or exaggerated is unethical. Decisions regarding finder or referral fees, contingent compensation, and advertising may not be the responsibility of an individual appraiser, but for a particular assignment it is the responsibility of the individual appraiser to ascertain that there has been no breach of ethics, that the assignment consulting assignment has been prepared in accordance with USPAP Standards, and that the report can be properly certified when required by USPAP Standards Rules 2-3, 3-3, 5-3, 6-9, 8-3, or 10-3.

An appraiser must affix, or authorize the use of, his or her signature to certify recognition and acceptance of his or her USPAP responsibilities in an appraisal or appraisal review assignment. An appraiser may authorize the use of his or her signature only on an assignment-by-assignment basis.

In addition, an appraiser must not affix the signature of another appraiser without his or her consent. An appraiser must exercise due care to prevent unauthorized use of his or her signature. However, an appraiser exercising such care is not responsible for unauthorized use of his or her signature.

CONFIDENTIALITY

An appraiser must protect the confidential nature of the appraiser-property owner relationship.

An appraiser must act in good faith with regard to the legitimate interests of the client in the use of confidential information and in the communication of assignment results.

An appraiser must be aware of, and comply with, all confidentiality and privacy laws and regulations applicable in an assignment.

An appraiser must not disclose confidential factual data obtained from a property owner to anyone other than:

1. The client;
2. Parties specifically authorized by the client;
3. State appraiser regulatory agencies;
4. Third parties as may be authorized by due process of law; or
5. A duly authorized professional peer review committee except when such disclosure to a committee would violate

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applicable law or regulation.

An appraiser must take reasonable steps to safeguard access to confidential information and assignment results by unauthorized individuals, whether such information or results are in physical or electronic form. In addition, an appraiser must ensure that employees, co-workers, sub-contractors, or others who may have access to confidential information or assignments results, are aware of the prohibitions on disclosure of such information or results.

It is unethical for a member of a duly authorized professional peer review committee to disclose confidential information presented to the committee.

When all confidential elements of confidential information are removed through redaction or the process of aggregation, client authorization is not required for the disclosure of the remaining information, as modified.

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RECORD KEEPING RULE

An appraiser must prepare a workfile for each appraisal or appraisal review assignment. A workfile must be in existence prior to the issuance of any report or other communication of assignment results. A written summary of an oral report must be added to the workfile within a reasonable time after the issuance of the oral report.

The workfile must include the name of the client and the identity, by name or type, of any other intended users, and true copies of all written reports, documented on any type of media. (A true copy is a replica of the report transmitted to the client. A photocopy or an electronic copy of the entire report transmitted to the client satisfies the requirement of a true copy.) A workfile must contain summaries of all oral reports or testimony, or a transcript of testimony, including the appraiser's signed and dated certification; and all other data, information, and documentation necessary to support the appraiser's opinions and conclusions and to show compliance with USPAP, or references to the location(s) of such other data, information, and documentation.

A workfile in support of a Restricted Appraisal Report or an oral appraisal report must be sufficient for the appraiser to produce an Appraisal Report. A workfile in support of an oral appraisal review report must be sufficient for the appraiser to produce an Appraisal Review Report.

An appraiser must retain the workfile for a period of at least five years after preparation or at least two years after final disposition of any judicial proceeding in which the appraiser provided testimony related to the assignment, whichever period expires last.

An appraiser must have custody of the workfile, or make appropriate workfile retention, access, and retrieval arrangements with the party having custody of the workfile. This includes ensuring that a workfile is stored in a medium that is retrievable by the appraiser throughout the prescribed record retention period. An appraiser having custody of a workfile must allow other appraisers with workfile obligations related to an assignment appropriate access and retrieval for the purpose of:

- submission to state appraiser regulatory agencies;
- compliance with due process of law;
- submission to a duly authorized professional peer review committee; or
- compliance with retrieval arrangements.

A workfile must be made available by the appraiser when required by a state appraiser regulatory agency or due process of law.

An appraiser who willfully or knowingly fails to comply with the obligations of this Record Keeping Rule is in violation of the Ethics Rule.

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SCOPE OF WORK RULE

For each appraisal or appraisal review assignment, an appraiser must:

1. Identify the problem to be solved;
2. Determine and perform the scope of work necessary to develop credible assignment results; and
3. Disclose the scope of work in the report.

An appraiser must properly identify the problem to be solved in order to determine the appropriate scope of work. The appraiser must be prepared to demonstrate that the scope of work is sufficient to produce credible assignment results.

Scope of work includes, but is not limited to:

- the extent to which the property is identified;
- the extent to which tangible property is inspected;
- the type and extent of data researched; and
- the type and extent of analyses applied to arrive at opinions or conclusions.

Appraisers have broad flexibility and significant responsibility in determining the appropriate scope of work for an appraisal or appraisal review assignment. Credible assignment results require support by relevant evidence and logic. The credibility of assignment results is always measured in the context of the intended use.

PROBLEM IDENTIFICATION

An appraiser must gather and analyze information about those assignment elements that are necessary to properly identify the appraisal, appraisal review or appraisal consulting problem to be solved. The assignment elements necessary for problem identification are addressed in the Standards Rule 6-2:

- client and any other intended users;
- intended use of the appraiser's opinions and conclusions;
- type and definition of value;
- effective date of the appraiser's opinions and conclusions;
- subject of the assignment and its relevant characteristics; and
- assignment conditions.

This information provides the appraiser with the basis for determining the type and extent of research and analyses to include in the development of an appraisal. Similar information is necessary for problem identification in appraisal review and appraisal consulting assignments. Assignment conditions include:

- assumptions;
- extraordinary assumptions;
- hypothetical conditions;
- laws and regulations;
- jurisdictional exceptions; and
- other conditions that affect the scope of work.

SCOPE OF WORK ACCEPTABILITY

The scope of work must include the research and analyses that are necessary to develop credible assignment results. The scope of work is acceptable when it meets or exceeds:

- the expectations of parties who are regularly intended users for similar assignments; and
- what an appraiser's peers' actions would be in performing the same or a similar assignment.

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Determining the scope of work is an ongoing process in an assignment. Information or conditions discovered during the course of an assignment might cause the appraiser to reconsider the scope of work. An appraiser must be prepared to support the decision to exclude any investigation, information, method, or technique that would appear relevant to the client, another intended user, or the appraiser's peers.

An appraiser must not allow assignment conditions to limit the scope of work to such a degree that the assignment results are not credible in the context of the intended use. In addition, the appraiser must not allow the intended use of an assignment or a client's objectives to cause the assignment results to be biased.

DISCLOSURE OBLIGATIONS

The report must contain sufficient information to allow intended users to understand the scope of work performed. Proper disclosure is required because clients and other intended users may rely on the assignment results. Sufficient information includes disclosure of research and analyses performed or not performed.

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JURISDICTIONAL EXCEPTION RULE

If any applicable law or regulation precludes compliance with any part of USPAP, only that part of USPAP becomes void for that assignment. When compliance with USPAP is required by federal law or regulation, no part of USPAP can be voided by a law or regulation of a state or local jurisdiction. *When an appraiser properly follows this Rule in disregarding a part of USPAP, there is no violation of USPAP.*

In an assignment involving a jurisdictional exception, an appraiser must:

- identify the law or regulation that precludes compliance with USPAP;
- comply with that law or regulation;
- clearly and conspicuously disclose in the report the part of USPAP that is voided by that law or regulation; and
- cite in the report the law or regulation requiring this exception to USPAP compliance.

The purpose of the Jurisdictional Exception Rule is strictly limited to providing a saving or severability clause intended to preserve the balance of USPAP if one or more of its parts are determined as contrary to law or public policy of a jurisdiction. By logical extension, there can be no violation of USPAP by an appraiser who disregards, with proper disclosure, only the part or parts of USPAP that are void and of no force and effect in a particular assignment by operation of legal authority.

It is misleading for an appraiser to disregard a part or parts of USPAP as void and of no force and effect in a particular assignment without identifying the part or parts disregarded and the legal authority justifying this action in the appraiser's report.

"Law" includes constitutions, legislative and court-made law, and administrative rules (such as from the Office of the Texas Comptroller of Public Accounts) and ordinances. "Regulations" include rules or orders having legal force, issued by an administrative agency. Instructions from a client or attorney do not establish a jurisdictional exception.

A jurisdictional exception prevalent in Texas is that appraisers are seeking to establish "fair market value" as defined by the Texas Property Tax Code instead of "market value" as found in the USPAP definitions section.

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**USPAP STANDARDS 5 AND 6: MASS APPRAISAL, DEVELOPMENT AND REPORTING
(General Discussion)**

In developing a mass appraisal, an appraiser must be aware of, understand, and correctly employ those recognized methods and techniques necessary to produce and communicate credible mass appraisals.

Standards 5 and 6 apply to all mass appraisals of real and personal property regardless of the purpose or use of such appraisals. It is directed toward the substantive aspects of developing and communicating competent analyses, opinions, and conclusions in the mass appraisal of properties, whether real property or personal property. Standard 5 is directed toward the substantive aspects of developing credible analyses, opinions, and conclusions in the mass appraisal of properties, while Standard 6 addresses the content and level of information required in a report that communicates the results of a mass appraisal. The reporting and jurisdictional exceptions applicable to public mass appraisals prepared for purposes of ad valorem taxation do not apply to mass appraisals prepared for other purposes.

A mass appraisal includes:

- identifying properties to be appraised;
- defining market areas of consistent behavior that applies to properties;
- identifying characteristics (supply and demand) that affect the creation of value in that market area;
- developing (specifying) a model structure that reflects the relationship among the characteristics affecting value in the market area;
- calibrating the model structure to determine the contribution of the individual characteristics affecting value;
- applying the conclusions reflected in the model to the characteristics of the properties being appraised; and
- reviewing the mass appraisal results.

The Jurisdictional Exception Rule may apply to several sections of Standards 5 and 6 because ad valorem tax administration is subject to various state, county, and municipal laws.

As previously stated in the P&A Policy Statement (page 2), it may not be possible or practicable for all the mass appraisal attributes listed above to be rigorously applied to the many types of complex and/or unique properties that P&A typically appraises. Often there are contractual limitations on the scope of work needed or required. More prevalently, these types of properties do not normally provide a reliable database of market transactions (or details of transactions) necessary for statistically supportable calibration of appraisal models and review of appraisal results. Generally these two functions are effectively accomplished through annual extended review meetings with taxpayers (and clients) who provide data, sometimes confidentially, that allows for appraisal models to be adjusted where necessary. Nevertheless, and notwithstanding whether P&A implicitly or explicitly employs or reports all attributes listed above, in all cases P&A at the minimum employs tenants of "generally accepted appraisal methods" which are the genesis of USPAP Standards.

Per USPAP guidelines, P&A will make known all departures and jurisdictional exceptions when invoked (if an appraisal method or specific requirement is applicable but not necessary to attain credible results in a particular assignment).

The various sections of Standard 5 (development of mass appraisal) and Standard 6 (communication of the mass appraisal results) are briefly summarized below:

- **Standard 5-1:** Establishes the appraiser's technical and ethical framework. Specifically, appraisers must recognize and use established principles, methods and techniques of appraisal in a careful manner while not committing substantial errors of fact or negligence that would materially affect the appraisal results and not give a credible estimate of fair market value. To this end appraisers must continuously improve his or her skills to maintain proficiency and keep abreast of any new developments in the real and personal property appraisal profession. This Standards Rule does not imply that competence requires perfection, as perfection is impossible to attain. Instead, it requires appraisers to employ every reasonable effort with regards to due diligence and due care.

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- **Standard 5-2:** Defines the introductory framework requirements of developing a mass appraisal, focusing on the identification and/or definition of: client(s), intended users, effective date, appraisal perspective, scope of work, extraordinary assumptions, hypothetical conditions, the type and definition of value being developed (typically “fair market value” for ad valorem tax purposes), characteristics of the property being appraised in relation to the type and definition of value and intended use, the characteristics of the property’s market, the property’s real or personal attributes, fractional interest applicability, highest and best use analysis along with other land-related considerations, and any other economic considerations relevant to the property.
- **Standard 5-3:** Defines requirements for developing and specifying appropriate mass appraisal data and elements applicable for real and personal property. For real property, the data and elements include: existing land use regulations, reasonably probable modification of such regulations, economic supply and demand, the physical adaptability of the real estate, neighborhood trends, and highest and best use analysis. For personal property, the relevant data and elements include: identification of industry trends, trade level, highest and best use, and recognition of the appropriate market consistent with the type and definition of value.
- **Standard 5-4:** Further defines requirements for developing mass appraisal models, focusing on development of standardized data collection forms, procedures, and training materials that are used uniformly on the universe of properties under consideration. This rule specifies that appraisers employ recognized techniques for specifying and calibrating mass appraisal models. Model specification is the formal development of a model in a statement or mathematical equation, including all due considerations for physical, functional, and external market factors as they may affect the appraisal. These models must accurately represent the relationship between property value and supply and demand factors, as represented by quantitative and qualitative property characteristics. Models must be calibrated using recognized techniques, including, but not limited to, multiple linear regression, nonlinear regression, and adaptive estimation. Models may be specified incorporating the income, market, and/or cost approaches to value and may be tabular, mathematical, linear, nonlinear, or any other structure suitable for representing the observable property characteristics such as adaptive estimation. Model calibration refers to the process of analyzing sets of property and market data to determine the specific parameters of a model.
- **Standard 5-5:** Defines requirements for collection of sufficient factual data, in both qualitative and quantitative terms, necessary to produce credible appraisal results. The property characteristics collected must be contemporaneous with the effective date of the appraisal. The data collection program should incorporate a quality control procedure, including checks and audits of the data to ensure current and consistent records. This rule also calls for calls for an appraiser, in developing income and expense statements and cashflow projections, to weigh historical information and trends, current market factors affecting such trends, and reasonably anticipated events, such as competition from developments either planned or under construction. Terms and conditions of any leases should be analyzed, as well as the need for and extent of any physical inspection of the properties being appraised.
- **Standard 5-6:** Defines requirements for application of a calibrated model to the property being appraised. This rule calls for: the appraiser to recognize methods or techniques based on the cost, market, and income approaches for improved parcels; the appraiser to value sites by recognized methods or techniques such as allocation method, abstraction method, capitalization of ground rent, and land residual; the appraiser to develop value of leased fee or leasehold estates with consideration for terms and conditions of existing leases, and, when applicable by law, as if held in fee simple whereas market rents are substituted for actual contract rents; the appraiser to analyze the effect on value, if any, of the assemblage of the various parcels, divided interests, or component parts of a property; the appraiser to analyze anticipated public or private improvements located on or off the site, and analyze the effect on value, if any, of such anticipated improvements to the extent they are reflected in market actions.
- **Standard 5-7:** Defines the reconciliation process of a mass appraisal. Specifically, appraisers must analyze the results and/or applicability of the various approaches used while ensuring that, on an overall basis, standards of reasonableness and accuracy are maintained with the appraisal model selected (underline added for emphasis). It is implicit in mass appraisal that, even when properly specified and calibrated models are used, some individual value conclusions will not meet standards of reasonableness, consistency, and accuracy. Appraisers have a professional responsibility to ensure that, on an overall basis, models produce value conclusions that meet attainable standards of accuracy.

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- **Standard 6-1:** Defines requirements of a mass appraisal written report by addressing the content and level of information required in a report that communicates the results of a mass appraisal (elements of which are further detailed in the next three sections of this report that discuss P&A appraisal procedures with regards to specific categories of property).
- **Standard 6-2:** Defines requirements for appraiser certification of the mass appraisal written report.

The following sections of this report discuss in detail the various elements of the mass appraisal written report as required by USPAP Standard 6-1, with regards to P&A appraisal of Mineral Interests, Industrial-Utility-Personal Property, and Real Estate.

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USPAP STANDARDS RULE 6-1: MASS APPRAISAL OF MINERAL INTERESTS

Note: This section, in conjunction with any attached or separately provided P&A-generated appraisal reports specific to the subject property or properties, constitutes the "mass appraisal written report" as required by USPAP Standards Rule 6-1. USPAP Standards Rule 6-2 (certification) can be found at the end of this report. USPAP Standards Rules 5-1 through 5-7 (instructions and explanations regarding the development, application, and reconciliation of mass appraisal values), as they apply to P&A mass appraisal procedures, are discussed below. USPAP DOES NOT DICTATE THE FORM, FORMAT, OR STYLE OF APPRAISAL REPORTS, WHICH ARE FUNCTIONS OF THE NEEDS OF USERS AND PROVIDERS OF APPRAISAL SERVICES. USPAP ALSO DOES NOT MANDATE THAT EACH APPRAISAL REPORT BE LENGTHY AND FULL OF DISCLAIMERS. Readers should note that all P&A reports, unless stated otherwise, are of a "restricted" nature whereas additional documentation and detail may be available per certain Texas Property Tax Code provisions.

INTRODUCTION

Definition of Appraisal Responsibility (Scope of Effort): The Mineral Valuation Department of Pritchard & Abbott, Inc. ("P&A" hereinafter), is responsible for developing credible values for mineral interests (full or fractional percentage ownership of oil and gas leasehold interest, the amount and type of which are legally and/or contractually created and specified through deeds and leases, et.al.) associated with producing (or capable of producing) leases. Mineral interests are typically considered real property because of their derivation from the bundle of rights associated with original fee simple ownership of land. Typically all the mineral interests that apply to a single producing lease are consolidated by type (working vs. royalty) with each type then appraised for full value which is then distributed to the various fractional decimal interest owners prorata to their individual type and percentage amount.

P&A's typical client is a governmental entity charged with appraisal responsibility for ad valorem tax purposes, although other types of clients (private businesses, individuals, etc.) occasionally contract for appraisal services which are strictly for various non-ad valorem tax purposes so that no conflicts of interest are created with P&A's core ad valorem tax work.

P&A hereby makes the assumption that, in all appraisal assignments performed for governmental entities in satisfaction of contractual obligations related to ad valorem tax, the client does not wish to or cannot legally request the appraisal report not identify the client.

Intended users of our reports are typically the client(s) for which we are under direct contract. Although taxpayers or their agents who own and/or represent the subject property being appraised often receive these reports either by law or as a courtesy of the client or P&A, this receipt does not mean these parties automatically become Intended Users as defined by USPAP. **A party receiving a copy of a report in order to satisfy disclosure requirements does not become an intended user of the appraisal or mass appraisal unless the appraiser specifically identifies such party as an intended user.** Potential other users include parties involved in adjudication of valuation disputes (review board members, lawyers, judges, etc.), governmental agencies which periodically review our appraisals for various statutory purposes (such as the Texas Comptroller's Office) and private parties who may obtain copies of our appraisals through Open Records Requests made to governmental agencies.

This section of P&A's USPAP report is not applicable to any mineral or mineral interest property that an appraisal district appraises outside of P&A's appraisal services, in which case the appraisal district's overall USPAP report should be referenced.

P&A makes the **Extraordinary Assumption** that all properties appraised for ad valorem tax purposes are marketable whereas ownership and title to property are free of encumbrances and other restrictions that would affect fair market value to an extent not obvious to the general marketplace. If and/or when we are made aware of any encumbrances, etc., these would be taken into account in our appraisal in which case the extraordinary assumption stated above would be revoked.

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P&A is typically under contract to determine current market value or "fair market value" of said mineral interests. Fair market value is typically described as the price at which a property would sell for if:

- exposed in the open market with a reasonable time for the seller to find a purchaser;
- both the buyer and seller know of all the uses and purposes to which the property is, or can be, adapted and of the enforceable restrictions on its use; and
- both the buyer and seller seek to maximize their gains and neither is in a position to take advantage of the exigencies of the other. [Exigencies are pressing or urgent conditions that leave one party at a disadvantage to the other.]

For ad valorem tax purposes the effective date is usually legislatively specified by the particular State in which we are working - for example, in Texas the lien date is January 1 per the Texas Property Tax Code. For ad valorem tax purposes, the date of the appraisals and reports are typically several months past the effective date, thereby leaving open the possibility that a retrospective approach is appropriate under limited and prescribed circumstances (information after the effective date being applicable only if it confirms a trend or other appraisal condition that existed and was generally known as of the effective date).

P&A believes this section of this report, in conjunction with any attached or separately provided P&A-generated report(s), meets the USPAP definition of "typical practice"; i.e., it satisfies a level of work that is consistent with:

- the expectations of participants in the market for the same or similar appraisal services; and
- what P&A's peers' actions would be in performing the same or similar appraisal services in compliance with USPAP.

Legal and Statutory Requirements: In Texas, the provisions of the Texas Property Tax Code and other relevant legislative measures involving appraisal administration and procedures control the work of P&A as an extension of the Appraisal District. Other states in which P&A is employed will have similar controlling legislation, regulatory agencies, and governmental entities. P&A is responsible for appraising property on the basis of its fair market value as of the stated effective date (January 1 in Texas) for ad valorem tax purposes for each taxing unit that imposes ad valorem taxes on property in the contracted Appraisal District. All mineral properties (interests) are reappraised annually. The definition of Fair Market Value is provided and promulgated for use in ad valorem tax work in Texas by the Texas Property Tax Code, and therefore as a **Jurisdictional Exception** supercedes the definition of "market value" as found in USPAP definitions.

NOTE: IN TEXAS, P&A BELIEVES THE PROPERTY BEING APPRAISED AND PLACED ON THE TAX ROLL IS THE **INTEREST** AND NOT THE OIL OR GAS MINERAL ITSELF, PER PROPERTY TAX CODE SECTION 1.04(2)(F). WHILE OIL AND GAS RESERVES CERTAINLY HAVE VALUE, THE FACT IS THAT IT IS THE INTERESTS IN THESE MINERALS THAT ARE BOUGHT AND SOLD, NOT THE MINERALS THEMSELVES. THE SALE OF MINERALS AS THEY ARE EXTRACTED FROM THE SUBSURFACE OF THE LAND WHERE THEY RESIDE AS MINERALS IN PLACE "MONETIZES" THE INTEREST AND THUS GIVES THE INTEREST ITS VALUE. WHENEVER P&A REFERS TO "MINERAL PROPERTIES" IN THIS REPORT OR IN ANY OTHER SETTING, IT IS THE MINERAL INTEREST, AND NOT THE MINERAL ITSELF, THAT IS THE SUBJECT OF THE REFERENCE.

Administrative Requirements: P&A endorses the principals of the International Association of Assessing Officers (IAAO) regarding its appraisal practices and procedures. P&A also endorses, and follows when possible, the standards promulgated by the Appraisal Foundation known as the Uniform Standards of Professional Appraisal Practice (USPAP). In all cases where IAAO and/or USPAP requirements cannot be satisfied for reasons of practicality or irrelevancy, P&A subscribes to "generally accepted appraisal methods and techniques" so that its value conclusions are credible and defensible. P&A submits annual or biannual contract bids to the Appraisal District Board of Directors or the Office of the Chief Appraiser and is bound to produce appraisal estimates on mineral properties within the cost constraints of said bid. Any appraisal practices and procedures followed by P&A not explicitly defined or allowed through IAAO or USPAP requirements are specified by the Texas Property Tax Code or at the specific request or direction of the Office of the Chief Appraiser.

Appraisal Resources

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Personnel: The Mineral Valuation Division staff consists of competent Petroleum Engineers, Geologists, and Appraisers. All personnel are Registered Professional Appraisers with the State of Texas, or are progressing towards this designation within the allowable time frames prescribed by the Texas Department of Licensing and Regulation (TDLR) and/or other licensing and regulatory agencies as applicable.

Data: For each mineral property a common set of data characteristics (i.e. historical production, price and expense data) is collected from various sources and entered into P&A's mainframe computer system. Historical production data and price data is available through state agencies (Texas Railroad Commission, Texas Comptroller, et al.) or private firms who gather, format and repackage such data for sale commercially. Each property's characteristic data drives the computer-assisted mass appraisal approach to valuation.

Information Systems: The mainframe systems are augmented by the databases that serve the various in-house and 3rd-party applications on desktop personal computers. In addition, communication and dissemination of appraisals and other information is available to the taxpayer and client through electronic means including internet and other phone-line connectivity. The appraiser supervising any given contract fields many of the public's questions or redirects them to the proper department personnel.

VALUATION APPROACH (MODEL SPECIFICATION)

Concepts of Value: The valuation of oil and gas properties is not an exact science, and exact accuracy is not attainable due to many factors. Nevertheless, standards of reasonable performance do exist, and there are usually reliable means of measuring and applying these standards.

Petroleum properties are subject to depletion, and capital investment must be returned before economic exhaustion of the resource (mineral reserves). The examination of petroleum properties involves understanding the geology of the resource (producing and non-producing), type of reservoir energy, the methods of secondary and enhanced recovery (if applicable), and the surface treatment and marketability of the produced petroleum product(s).

Evaluation of mineral properties is a continuous process; the value as of the lien date merely represents a "snapshot" in time. The potential value of mineral interests derived from sale of minerals to be extracted from the ground change with mineral price fluctuation in the open market, changes in extraction technology, costs of extraction, and other variables such as the value of money.

Approaches to Value for Petroleum Property

Cost Approach: The use of cost data in an appraisal for market value is based upon the economic principle of substitution. The cost approach typically derives value by a model that begins with replacement cost new (RCN) and then applies depreciation in all its forms (physical depreciation, functional and economic obsolescence). This method is difficult to apply to oil and gas properties since lease acquisition and development may bear no relation to present worth. Though very useful in the appraisal of many other types of properties, the cost approach is not readily applicable to mineral properties. [Keep in mind that the property actually being appraised is the mineral interest and not the oil and gas reserves themselves. Trying to apply the cost approach to evaluation of mineral interests is like trying to apply the cost approach to land; it is a moot point because both are real properties that are inherently non-replaceable.] **As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., does not employ the cost approach in the appraisal of mineral interests.**

Market Approach: This approach may be defined as one which uses data available from actual transactions recorded in the market place itself, i.e., sales of comparable properties from which a comparison to the subject property can be made. Ideally, this approach's main advantage involves not only an opinion but an opinion supported by the actual spending of money. Although at first glance this approach seems to more closely incorporate the aspects of fair market value per its classical definition, there are two factors that severely limit the usefulness of the market approach for appraising oil and gas properties. First, oil and gas property sales data is seldom disclosed (in non-disclosure states such as Texas); consequently there is usually a severe lack of market data sufficient for meaningful statistical analysis. Second, all conditions of each sale

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must be known and carefully investigated to be sure one does have a comparative indicator of value per fair market value perquisites.

Many times when these properties do change hands, it is generally through company mergers and acquisitions where other assets in addition to oil and gas reserves are involved; this further complicates the analysis whereby a total purchase price must be allocated to the individual components - a speculative and somewhat arbitrary task at best. In the case of oil and gas properties, a scarcity of sales requires that every evidence of market data be investigated and analyzed. Factors relative to the sale of oil and gas properties are:

- current production and estimated declines forecast by the buyer;
- estimated probable and potential reserves;
- general lease and legal information which defines privileges or limitation of the equity sold;
- undeveloped potential such as secondary recovery prospects;
- proximity to other production already operated by the purchaser;
- contingencies and other cash equivalents; and
- other factors such as size of property, gravity of oil, etc.

In the event that all these factors are available for analysis, the consensus effort would be tantamount to performing an income approach to value (or trying to duplicate the buyer's income approach to value), thereby making the market approach somewhat moot in its applicability. **As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., rarely employs a rigorous application of the market approach in the appraisal of mineral interests.**

Income Approach: This approach to value most readily yields itself to the appraisal of mineral interests. Data is readily available whereby a model can be created that reasonable estimates a future income stream to the property. This future income may then be converted (discounted) into an estimate of current value. Many refer to this as a capitalization method, because capitalization is the process of converting an income stream into a capital sum (value). As with any method, the final value is no better than the reliability of the input data. The underlying assumption is that people purchase the property for the future income the property will yield. If the land or improvements are of any residual value after the cessation of oil and gas production, that value should also be included (if those components are also being appraised).

The relevant income that should be used is the expected future net income. Assumptions of this method are:

- Past income and expenses are not a consideration, except insofar as they may be a guide to estimating future net income.
- That the producing life as well as the reserves (quantity of the minerals) are estimated for the property.
- Future income is less valuable than current income, and so future net income must be discounted to make it equivalent to the present income. This discount factor reflects the premium of present money over future money, i.e., interest rate, liquidity, investment management, and risk.

As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., relies predominantly on the income approach to value in the appraisal of mineral interests.

DATA COLLECTION/VALIDATION

Sources of Data: The main source of P&A's property data is data from the Railroad Commission of Texas as reported by operators. As a monthly activity, the data processing department receives data tapes or electronic files which have updated and new well and production data. Other discovery tools are fieldwork by appraisers, financial data from operators, information from chief appraisers, tax assessors, trade publications and city and local newspapers. Other members of the public often provide P&A information regarding new wells and other useful facts related to property valuation.

Another crucial set of data to obtain is the ownership of these mineral interests. Typically a mineral lease is fractionated and executed with several if not many owners. This information is typically requested (under a promise of confidentiality concerning owners' personal information) from pipeline purchasers and/or other entities (such as operators) who have the

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responsibility of disbursing the income to the mineral interest owners. Another source of ownership information is through the taxpayers themselves who file deeds of ownership transfer and/or correspond with P&A or the appraisal district directly.

Data Collection Procedures: Electronic and field data collection requires organization, planning and supervision of the appraisal staff. Data collection procedures for mineral properties are generally accomplished globally by the company; i.e., production and price data for the entire state is downloaded at one time into the computer system. Appraisers also individually gather and record specific and particular information to the appraisal file records, which serves as the basis for the valuation of mineral properties. P&A is divided into four district offices covering different geographic areas. Each office has a district manager, appraisal and ownership maintenance staff, and clerical staff as appropriate. While overall standards of performance are established and upheld for the various district offices, quality of data is emphasized as the goal and responsibility of each appraiser.

VALUATION ANALYSIS (MODEL CALIBRATION)

Appropriate revisions and/or enhancements of schedules or discounted cash flow software are annually made and then tested prior to the appraisals being performed. Calibration typically involves performing multiple discounted cash flow tests for leases with varying parameter input to check the correlation and relationship of such indicators as: Dollars of Value Per Barrel of Reserves; Dollars of Value Per Daily Average Barrel Produced; Dollars of Expense Per Daily Average Barrel Produced; Years Payout of Purchase Price (Fair Market Value). In a more classical calibration procedure, the validity of values by P&A's income approach to value is tested against actual market transactions, if and when these transactions and verifiable details of these transactions are disclosed to P&A. Of course these transactions must be analyzed for meeting all requisites of fair market value definition. Any conclusions of this analysis are then compared to industry benchmarks for reasonableness before being incorporated into the calibration procedure.

INDIVIDUAL VALUE REVIEW PROCEDURES

Individual property values are reviewed several times in the appraisal process. P&A's discounted cashflow software dynamically generates various benchmark indicators that the appraiser reviews concurrent with the value being generated. These benchmarks often prompt the appraiser to reevaluate some or all of the parameters of data entry so as to arrive at a value more indicative of industry standards. Examples of indicators are dollars of value per barrel of oil reserve, years payout, etc. In addition to appraiser review, taxpayers are afforded the opportunity to review the appraised values, either before or after Notices of Appraised Value are prepared. Operators routinely meet with P&A's appraisers to review parameters and to provide data not readily available to P&A through public or commercial sources, such as individual lease operating expense and reserve figures. And of course, all property values are subject to review through normal protest and Appraisal Review Board procedures, with P&A acting as an extension of the Office of the Chief Appraiser.

PERFORMANCE TESTS

An independent test of the appraisal performance of properties appraised by P&A is conducted by the State of Texas Comptroller's Office through the annual Property Value Study for school funding purposes. This study determines the degree of uniformity and the median level of appraisal for mineral properties. School jurisdictions are given an opportunity to appeal any preliminary findings. After the appeal process is resolved, the Comptroller publishes a report of the findings of the study, including in the report the median level of appraisal, the coefficient of dispersion around the median level of appraisal and any other standard statistical measures that the Comptroller considers appropriate.

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**USPAP STANDARDS RULE 6-1: MASS APPRAISAL OF INDUSTRIAL, UTILITY
AND RELATED PERSONAL PROPERTY**

Note: This section, in conjunction with any attached or separately provided P&A-generated appraisal reports specific to the subject property or properties, constitutes the "mass appraisal written report" as required by USPAP Standards Rule 6-1. USPAP Standards Rule 6-2 (certification) can be found at the end of this report. USPAP Standards Rules 5-1 through 5-7 (instructions and explanations regarding the development, application, and reconciliation of mass appraisal values), as they apply to P&A mass appraisal procedures, are discussed below. USPAP DOES NOT DICTATE THE FORM, FORMAT, OR STYLE OF APPRAISAL REPORTS, WHICH ARE FUNCTIONS OF THE NEEDS OF USERS AND PROVIDERS OF APPRAISAL SERVICES. USPAP ALSO DOES NOT MANDATE THAT EACH APPRAISAL REPORT BE LENGTHY AND FULL OF DISCLAIMERS. Readers should note that all P&A reports, unless stated otherwise, are of a "restricted" nature whereas additional documentation and detail may be available per certain Texas Property Tax Code provisions.

INTRODUCTION

Definition of Appraisal Responsibility: The Engineering Services Department of Pritchard & Abbott, Inc. (P&A) is responsible for developing fair and uniform market values for industrial, utility and personal properties.

P&A's typical client is a governmental entity charged with appraisal responsibility for ad valorem tax purposes, although other types of clients (private businesses, individuals, etc.) occasionally contract for appraisal services which are strictly for various non-ad valorem tax purposes so that no conflicts of interest are created with P&A's core ad valorem tax work.

P&A hereby makes the assumption that, in all appraisal assignments performed for governmental entities in satisfaction of contractual obligations related to ad valorem tax, the client does not wish to or cannot legally request the appraisal report not identify the client.

Intended users of our reports are typically the client(s) for which we are under direct contract. Although taxpayers or their agents who own and/or represent the subject property being appraised often receive these reports either by law or as a courtesy of the client or P&A, this receipt does not mean these parties automatically become Intended Users as defined by USPAP. **A party receiving a copy of a report in order to satisfy disclosure requirements does not become an intended user of the appraisal or mass appraisal unless the appraiser specifically identifies such party as an intended user.** Potential other users include parties involved in adjudication of valuation disputes (review board members, lawyers, judges, etc.), governmental agencies which periodically review our appraisals for various statutory purposes (such as the Texas Comptroller's Office) and private parties who may obtain copies of our appraisals through Open Records Requests made to governmental agencies.

P&A believes this section of this report, in conjunction with any attached or separately provided P&A-generated report(s), meets the USPAP definition of "typical practice"; i.e., it satisfies a level of work that is consistent with:

- the expectations of participants in the market for the same or similar appraisal services; and
- what P&A's peers' actions would be in performing the same or similar appraisal services in compliance with USPAP.

This section of P&A's USPAP report is not applicable to any Industrial, Utility, or related Personal Property that an appraisal district appraises outside of P&A's appraisal services, in which case the appraisal district's overall USPAP report should be referenced.

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P&A makes the **Extraordinary Assumption** that all properties appraised for ad valorem tax purposes are marketable whereas ownership and title to property are free of encumbrances and other restrictions that would affect fair market value to an extent not obvious to the general marketplace. If and/or when we are made aware of any encumbrances, etc., these would be taken into account in our appraisal in which case the extraordinary assumption stated above would be revoked.

Legal and Statutory Requirements: The provisions of the Texas Property Tax Code and relevant legislative measures involving appraisal administration and procedures control the work of P&A as a subcontractor to the Appraisal District. P&A is responsible for appraising property on the basis of its market value as of January 1 for ad valorem tax purposes for each taxing unit that imposes ad valorem taxes on property in the contracted Appraisal District. All industrial, utility and personal properties are reappraised annually. The definition of Fair Market Value is provided and promulgated for use in ad valorem tax work in Texas by the Texas Property Tax Code, and therefore as a **Jurisdictional Exception** supercedes the definition of "market value" as found in USPAP definitions.

Administrative Requirements: P&A follows generally accepted and/or recognized appraisal practices and when applicable, the standards of the International Association of Assessing Officers (IAAO) regarding its appraisal practices and procedures. P&A, when applicable, also subscribes to the standards promulgated by the Appraisal Foundation known as the Uniform Standards of Professional Appraisal Practice (USPAP). P&A submits annual or biannual contract bids to the Office of the Chief Appraiser and is bound to produce appraisal estimates on industrial, utility and personal properties within the cost constraints of said bid. Any appraisal practices and procedures followed by P&A not explicitly defined through IAAO or USPAP requirements are specified by the Texas Property Tax Code and/or at the specific request or direction of the Office of the Chief Appraiser.

Appraisal Resources

Personnel: The Engineering Services Department and P&A's appraisal staff consists of appraisers with degrees in engineering, business and accounting. All personnel are Registered Professional Appraisers with the State of Texas, or are progressing towards this designation as prescribed by the Texas Department of Licensing and Regulation (TDLR).

Data: A set of data characteristics (i.e. original cost, year of acquisition, quantities, capacities, net operating income, property description, etc.) for each industrial, utility and personal property is collected from various sources. This data is maintained in either hard copy or computer files. Each property's characteristic data drives the appropriate computer-assisted appraisal approach to valuation.

Information Systems: P&A's mainframe computer system is composed of in-house custom software augmented by schedules and databases that reside as various applications on personal computers (PC). P&A offers a variety of systems for providing property owners and public entities with information services.

VALUATION APPROACH (MODEL SPECIFICATION)

Concepts of Value: The valuation of industrial, utility and personal properties is not an exact science, and exact accuracy is not attainable due to many factors. These are considered complex properties and some are considered Special Purpose properties. Nevertheless, standards of reasonable performance do exist, and there are reliable means of measuring and applying these standards.

The evaluation and appraisal of industrial, utility and personal property relies heavily on the discovery of the property followed by the application of recognized appraisal techniques. The property is subject to inflation and depreciation in all forms. The appraisal of industrial and personal property involves understanding petroleum, chemical, steel, electrical power, lumber and paper industry processes along with a myriad of other industrial processes. Economic potential for this property usually follows either the specific industry or the general business economy. The appraisal of utility properties involves understanding telecommunications, electrical transmission and distribution, petroleum pipelines and the railroad industry.

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Utility properties are subject to regulation and economic obsolescence. The examination of utility property involves the understanding of the present value of future income in a regulated environment.

The goal for valuation of industrial, utility and personal properties is to appraise all taxable property at "fair market value". The Texas Property Tax Code defines Fair Market value as 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 purchaser know of all the uses and purposes to which the property is adapted and for which it is capable of being used and of the enforceable restrictions on its use; and
- both the seller and purchaser seek to maximize their gains and neither is in a position to take advantage of the exigencies of the other.

Approaches to Value for Industrial, Utility, and Personal Property

Cost Approach: The use of cost data in an appraisal for market value is based upon the economic principle of substitution. This method is most readily applicable to the appraisal of industrial and personal property and some utility property. Under this method, the market value of property equals the value of the land plus the current cost of improvements less accrued depreciation. An inventory of the plant improvements and machinery and equipment is maintained by personally inspecting each facility every year. As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., relies predominantly on the cost approach to value in the appraisal of industrial, utility, and personal property.

Market Approach: This approach is characterized as one that uses sales data available from actual transactions in the market place. There are two factors that severely limit the usefulness of the market approach for appraising industrial, utility and personal properties. First, the property sales data is seldom disclosed; consequently there is insufficient market data for these properties available for meaningful statistical analysis. Second, all conditions of sale must be known and carefully investigated to be sure one does have a comparative indicator of value. Many times when these properties do change hands, it is generally through company mergers and acquisitions where other assets and intangibles in addition to the industrial, utility and personal property are involved. The complexity of these sales presents unique challenges and hindrances to the process of allocation of value to the individual components of the transaction.

In the case of industrial, utility and personal properties, a scarcity of sales requires that all evidence of market data be investigated and analyzed. Factors relative to the sale of these properties are:

- plant capacity and current production; terms of sale, cash or equivalent;
- complexity of property;
- age of property;
- proximity to other industry already operated by the purchaser; and
- other factors such as capital investment in the property.

As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., rarely employs a rigorous application of the market approach in the appraisal of industrial, utility, and personal property.

Income Approach: This approach to value most readily yields itself to all income generating assets, especially utility properties. Data for utility properties is available from annual reports submitted to regulatory agencies whereby future income may be estimated, and then this future income may be converted into an estimate of value. The valuation of an entire company by this method is sometimes referred to as a Unit Value. Many refer to this as a capitalization method, because capitalization is the process of converting an income stream into a capital sum (value). As with any method, the final value estimate is no better than the reliability of the input data. The underlying assumption is that people purchase the property for the future income the property will yield.

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The relevant income that should be used in the valuation model is the expected future net operating income after depreciation but before interest expense (adjustments for Federal Income Taxes may or may not be required). Assumptions of this method are:

- Past income and expenses are a consideration, insofar as they may be a guide to future income, subject to regulation and competition.
- The economic life of the property can be estimated.
- The future production, revenues and expenses can be accurately forecasted. Future income is less valuable than current income, and so future net income must be discounted to make it equivalent to the present income. This discount factor reflects the premium of present money over future money, i.e., interest rate, liquidity, investment management, and risk.

As a general rule, and for the reasons stated above, Pritchard & Abbott, Inc., employs the income approach in the appraisal of industrial and utility property only when quantifiable levels of income are able to be reliably determined and/or projected for the subject property. P&A does not employ the income approach in the appraisal of personal property.

DATA COLLECTION/VALIDATION

Sources of Data: The main source of P&A's property data for industrial and personal property is through fieldwork by the appraisers and commercially/publicly available schedules developed on current costs. Data for performing utility appraisals is typically provided by the taxpayer or is otherwise available at various regulatory agencies (Texas Railroad Commission, Public Utilities Commission, FERC, et. al.). Other discovery tools are financial data from annual reports, information from chief appraisers, renditions, tax assessors, trade publications and city and local newspapers. Other members of the public often provide P&A information regarding new industry and other useful facts related to property valuation.

Data Collection Procedures: Electronic and field data collection requires organization, planning and supervision of the appraisal staff. Data collection procedures have been established for industrial and personal properties. Appraisers gather and record information in the mainframe system, where customized programs serve as the basis for the valuation of industrial, utility and personal properties. P&A is divided into multiple district offices covering different geographic zones. Each office has a district manager and field staff. While overall standards of performance are established and upheld for the various district offices, quality of data is emphasized as the goal and responsibility of each appraiser. Additionally, P&A's Engineering Services Department provides supervision and guidance to all district offices to assist in maintaining uniform and consistent appraisal practices throughout the company.

VALUATION ANALYSIS (MODEL CALIBRATION)

The validity of the values by P&A's income and cost approaches to value is tested against actual market transactions, if and when these transactions and verifiable details of the transactions are disclosed to P&A. These transactions are checked for meeting all requisites of fair market value definition. Any conclusions from this analysis are also compared to industry benchmarks before being incorporated in the calibration procedure. Appropriate revisions of cost schedules and appraisal software are annually made and then tested for reasonableness prior to the appraisals being performed.

INDIVIDUAL VALUE REVIEW PROCEDURES

Individual property values are reviewed several times in the appraisal process. P&A's industrial, utility, personal property programs and appraisal spreadsheets afford the appraiser the opportunity to review the value being generated. Often the appraiser is prompted to reevaluate some or all of the parameters of data entry so as to arrive at a value more indicative of industry standards. Examples of indicators are original cost, replacement cost, service life, age, net operating income, capitalization rate, etc. In addition to appraiser review, taxpayers are afforded the opportunity to review the appraised values

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either before or after Notices of Appraised Value are prepared. Taxpayers, agents and representatives routinely meet with P&A's appraisers to review parameters and to provide data not readily available to P&A through public or commercial sources, such as investment costs and capitalization rate studies. And of course, all property values are subject to review through normal protest and Appraisal Review Board procedures, with P&A acting as a representative of the Office of the Chief Appraiser.

PERFORMANCE TESTS

An independent test of the appraisal performance of properties appraised by P&A is conducted by the State of Texas Comptroller's Office through the annual Property Value Study for school funding purposes. This study determines the degree of uniformity and the median level of appraisal for utility properties. School jurisdictions are given an opportunity to appeal any preliminary findings. After the appeal process is resolved, the Comptroller publishes a report of the findings of the study, including in the report the median level of appraisal, the coefficient of dispersion around the median level of appraisal and any other standard statistical measures that the Comptroller considers appropriate.

