

Hall County Appraisal District
Mass Appraisal Report
2019

Purpose

The purpose of this report is to better inform the property owners within the boundaries of the Hall County Appraisal District (CAD) and to comply with Standards Rule 6-7 of Uniform Standards of Professional Appraisal Practice (USPAP), effective January 1, 2019 – December 31, 2019. Standards Rule 6-7 addresses a written summary report of a mass appraisal for ad valorem taxation. Mass appraisal is the process of valuing a group of properties as of a given date, using standard methods, and employing common data, which allows for statistical testing. The intended use of the appraised values is to establish a tax base upon which a property tax will be levied. Each taxing unit within Hall County Appraisal District boundaries will use the appraised values for ad valorem tax purposes only.

The purpose of the appraisals performed by CAD is to estimate market value on January 1 of each year as defined by the Texas Property Tax Code (Sec. 1.04) on all taxable property within the boundaries of Hall County Appraisal District. “Market Value” is defined by Sec. 1.04 as 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 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
- (C) both the seller and the purchaser seek to maximize their gains and neither is in a position to take advantage of the exigencies of the other.

Responsibilities

The Hall County Appraisal District is responsible for local property tax appraisal and exemption administration for nine (9) taxing units. The taxing units within the boundaries of the Hall County Appraisal District are:

- Hall County
- City of Memphis
- City of Lakeview
- City of Turkey
- City of Estelline
- Hall County Hospital District
- Mesquite Groundwater Conservation District
- Memphis – Lakeview I.S.D.
- Turkey – Quitaque I.S.D.

The Hall County Appraisal District certified 7,665 parcels with a total market value of \$269,129,030 for 2019. The following are those parcels and values by property type:

Code	Property Type	Parcel Count	Market Value
A	Single Family Homes	1,393	42,846,760
B	Multi Family Homes	7	108,810
C	Vacant Lot	1,242	1,995,520
D1	Qualified Ag Land	3,079	58,583,270
D2	Improvements of qualified Ag	407	3,943,300
E	Non-Qualified Ag Land	314	10,512,990
F1	Commercial Real Property	240	18,429,310
F2	Industrial Real Property	25	3,942,380
G	Oil & Gas	0	0
J	Utilities	213	92,546,330
L1	Commercial Personal Property	149	5,693,320
L2	Industrial Personal Property	207	7,771,300
M1	Tangible Personal Mobile Home	14	481,690
O	Residential Inventory	0	0
S	Special Inventory	0	0
X	Total Exempt Property	375	22,274,050

Each taxing unit, such as the county, a city, school district, municipal utility district, ect., 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. Appraisals established by the appraisal district allocate the year's tax burden on the basis of each taxable property's January 1st market value. We also determine eligibility for various types of property tax exemptions such as those for homeowners, the elderly, disabled veterans, and charitable and religious organizations.

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

The Texas Property Tax Code, under sec. 25.18, requires each appraisal office to implement a plan to update appraised values for real and personal property at least once every three years. The district's current policy is to conduct an onsite inspection of real estate on a three year cyclical. However, appraised values are reviewed annually and are subject to change for purposes of equalization. Personal property, business personal property, industrial property, complex commercial property, and utility property values are reviewed or reappraised every year. (See Reappraisal Plan)

The appraisal value of real estate is calculated using specific information about each property. Using computer-assisted appraisal programs, and recognized appraisal methods and techniques, we compare that information with the data for similar properties, and with recent market data. The district follows 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. 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.

Personnel Resources

The office of the chief appraiser is primarily responsible for overall planning, organizing, staffing, coordinating, and controlling of district operations. The Administration Department's function is to plan, organize, direct, and control the business support functions related to human resources, budget, finance, records management, purchasing, fixed assets, facilities, and postal services. The Appraisal Department is responsible for the valuation of all real and personal property accounts. The property types appraised include commercial, residential, business personal and industrial. The Appraisal Department is also responsible for the following support groups: review appraisal, productivity valuation, and special audit. The district's

appraisers are subject to the provision of the Property Taxation Professional Certification Act and must be duly registered with Texas Department of Licensing and Regulations. Support functions including records maintenance, information, and assistance to property owners, and hearings support are coordinated by support service department.

The appraisal district staff consists of three (3) full-time employees

- Chief Appraiser
- Bookkeeper
- Clerk

All appraisers are required to be registered with the Texas Department of Licensing & Regulation (TDLR). TDLR registration requires that each appraiser must successfully complete a five-year educational program and pass a required number of course hours within a specified time. Additionally, all appraisers must pass review exams at levels three and four of the certification program. After successfully completing the required curriculum and approval of a demonstration appraisal, an appraiser is awarded the designation of Registered Professional Appraiser (RPA). There is also a requirement of at least 30 hours of continuing education units every 2 years in order to recertify the RPA & RTA designations. The Hall County Appraisal District staff stays abreast of current trends affecting property through review of published materials, attendance at conferences, course work, and continuing education.

The Board of Directors of the Hall County Appraisal District has contracted with Pritchard & Abbott, Inc., an appraisal firm to appraise all Single-Family Residential, Multi-Family Residential, Vacant Lots and Tracts, Agricultural Land Schedules, Market Land Schedules, Farm and Ranch improvements, Commercial, Industrial, (Manufacturing), Business Personal Property, Mobile Home Schedules and Miscellaneous improvement schedules, Utility Companies within the boundaries of the appraisal district, and conduct ratio studies. The Hall County Appraisal District leases computer equipment from Pritchard & Abbott, Inc., for data processing and record management.

Shared Appraisal District Boundaries

Due to passing of House Bill 1010, the appraisal of property ends at the county line.

Hall CAD has overlapping properties with Childress, Collingsworth, and Donley Counties. By agreement, Hall CAD honors the appraised values from Childress, Collingsworth, and Donley counties for the overlapping properties within their Appraisal Districts, and, also by agreement Hall CAD provides values to Childress County for the overlapping properties within their Appraisal District.

Philosophy Statement

The Hall County Appraisal District believes that the most important asset of the District is its people. Every employee is important and deserves to be treated fairly with consideration and respect. Hall County Appraisal District believes in providing good working conditions, a safe, clean, and friendly work place to help each employee do his or her job effectively. We also believe that every employee has an obligation to develop his or her talents to the fullest.

The Hall County Appraisal District exists for the purpose of providing services to the property owners and taxing units within our jurisdiction. It is important that we recognize our responsibility to provide quality services on a cost-effective basis. Every property owner should be approached in a respectful, positive, and friendly manner. Property owners should be assisted in a timely and courteous fashion. Hall County Appraisal District employees have an obligation as public servants to promote goodwill toward all property owners; not only in manner but also by example.

Because of the nature of our work, not every property owner will be pleased with the outcome of his or her contact with Hall County Appraisal District. What is important is that everyone who comes in contact with our office should have reason to feel that a knowledgeable and qualified person handled his or her matter in a fair and equitable manner.

Assumptions and Limiting Conditions

1. Title to the property is assumed to be good and marketable and the legal description correct.
2. No responsibility for legal matters is assumed. All existing liens, mortgages, or other encumbrances have been disregarded and the property is appraised as though free and clear, under responsible ownership and competent management.
3. The appraisers developing these appraisals are not required to give testimony or attendance in court by reason of the appraisals, unless directed by, employed by, and provided legal counsel by the Hall County Appraisal District.
4. All properties are appraised in fee simple interest in accordance with Texas Property Tax Code Section 25.06. (Jurisdictional Exception to Standards Rule 6-4 (c) and 6-5 (c) of USPAP.
5. All sketches in the appraisal records are intended to be visual aids with rounded measurements and should not be construed as surveys or engineering reports, etc.
6. Members of the appraisal district's staff or other reliable sources have obtained all information in the appraisal records.
7. The appraisal staff or Pritchard & Abbott, Inc. staff have inspected, as permitted, by observation, the land and the improvements thereon; however, it is not possible to

personally observe conditions beneath the soil or hidden structural components within the improvements. Therefore, no representations are made as to these matters, unless specifically considered in an individual appraisal.

8. All interior inspections are performed at the property owner's request by appointment. All other inspections performed are external and assume the quality; condition and desirability of the interior are approximately equal to that of the exterior, unless otherwise known.
9. Agricultural land is appraised at market value using a market data model based on market sales information. However, it may also be subject to appraisal using an income model specified in Section 23, Sub-chapters C, D, and E of the Property Tax Code. (Jurisdictional Exception to 6-4 (b) of USPAP)
10. Subsurface rights (oil, gas, and other minerals) are not considered in making these appraisals.
11. Due to the lack of zoning the highest and best use for property is normally considered to be its current use.

The following summary reports are presented to be more specific about the appraisal of various property types within Hall County Appraisal District.

Single-Family Residences 2019 Summary Report

Overview

Single-family residences consist of all land and real property improvements, which by the nature of their design and/or construction are suitable for single-family use only. This includes manufactured homes, which are classified as real property when the owner of the land is also the owner of the manufactured home and personal property when the owner of the manufactured home does not own the land.

Assumptions and Limiting Conditions

The appraisals completed by Hall County Appraisal District for single-family residences are subject to the following assumptions and limiting conditions:

1. The Hall County Appraisal District's staff and appraisers with Pritchard & Abbott, Inc. have physically inspected all single-family residences within its jurisdiction and normally re-inspects and/or conducts statistical studies on these properties annually. Interior inspections have not been done on a majority of the properties in the jurisdiction because (1) most residential owners are not at their residence during regular business hours, (2) permission to inspect is not always granted, (3) the safety of the appraiser may be in question, and (4) respect for privacy rights of the property owner should be exercised.
2. The opinion of value for each single-family property applies to land and improvements only. The value of personal property of an owner has not been included with the value of the real estate. The only personal property that is valued as an improvement is a manufactured home where the owner of the home does not own the land. See Sec 11.14 (a) of the Texas Property Tax Code.
3. Residential real property inventory as defined by the Texas Property Tax code in Section 23.12 shall be considered as inventory and the market value shall be the price for which it would sell as a unit to a purchaser who would continue the business. (Jurisdictional Exception to Standard Rule 6-4 (b) of USPAP)
4. Single-family qualified properties used to provide affordable housing are appraised in compliance with Section 23.22 of the Texas Property Tax Code. (Jurisdiction Exception to Standards Rule 6-4 (b) of USPAP)

Data Collection and Validation

Two basic types of data are collected: data, which is specific to each property and data, which is indicative of a particular class of property that has been predefined by Hall County Appraisal District.

Property-specific data is collected as part of the inspection process and through submission by the property owner. As part of the inspection process, the improvements are measured and classified. The appraiser also estimates the effective age and condition of the improvements. Any additional or unusual features are also noted at the time of the inspection. Data on individual properties is maintained on the appraisal card(s) for that property. Data on individual properties is verified through previously existing records, published reports, building permits, analysis of comparable properties, and through submission by the property owner. Appraisal cards are available for review at the appraisal district office.

Data pertaining to a class of properties is grouped together according to the differing quality levels, and then used to develop valuation models for each property class. Such data is collected in a variety of ways. Cost information is obtained from nationally recognized sources, local contractors, new construction permits, mechanic's liens, reliable sources of new property sales, and from renditions submitted by owners. All local information is used to verify, supplement, or modify costs from these published sources. New models and cost tables are currently under construction and are being used in test areas. Renditions are confidential submissions by property owners and cannot be used for other properties. However, data from renditions may be compared with data obtained from cost manuals to test their accuracy. A comprehensive appraisal manual for residential property is currently maintained by Hall County Appraisal District.

Market sales information is collected from a variety of sources including surveys of buyers and sellers, deed records, and from local real estate professionals.

Valuation Approach and Analysis

Improvements are appraised using replacement cost new less depreciation models. Replacement costs are estimated from published sources, other publicly available information, and comparable properties. Depreciation is calculated on the age/life method using typical economic lives and depreciation rates based on published sources, market evidence, and the experience of knowledgeable appraisers. Adjustments for functional and economic obsolescence may be made if diminished utility and comparable sales are found to justify such. The following equation is the model used by the district:

$$MV = (RCNLD) MA + LV$$

In the formula above, the replacement cost new less depreciation (RCNLD) of the improvements are multiplied by the appropriate neighborhood market adjustment factor (MA) to arrive at a current improvement value. The current improvement value is added to the land value (LV) to arrive at an estimate of market value (MV). Market adjustments will be applied uniformly within neighborhoods to account for market preferences affecting value in each location throughout the district. A market data model based on typical selling prices per unit of area is also used when appropriate sales information is available. Hall County Appraisal District recognizes 2 market areas in its jurisdiction: Memphis- Lakeview ISD and Turkey-Quitauque ISD.

Land values are based on selling prices for the appropriate highest and best use of the site, and as though it was vacant. Highest and best use analysis of the improvements is based on the likelihood

of the continued use of the improvements in their current and/or intended use and is essential to an accurate appraisal. Identification of a highest and best use different from the current or intended use has a significant effect on the cost and market data models and is always a statement of opinion, not a statement of fact.

Review and Testing

Field review of appraisal is performed through the regular inspection of subject properties. Ratio studies are performed and are the preferred method for measuring performance. The results of the performance measures used indicate the validity of the appraisal models used. Appraisers with Pritchard and Abbott Inc., perform ratio studies for their assigned areas.

Performance is also measured through comparison with valid single-property appraisals submitted for staff review. Appraisal results are also tested bi-annually by the Property Tax Assistance Division (PTAD) of the Texas Comptroller's Office. Appraisal methods and procedures are also reviewed by the PTAD with the MAP review.

Ratio Studies Procedures

- I. Collect and Post Sales Data
 - A. Solicit sales information from all new property owners through sales letters and/or personal contact
 - B. Collect sales information from outside appraisers and from fee appraisals presented
 - C. Utilize sales information from Comptroller's office.
 - D. Post sales information to the sales database
 1. Record actual sale price
 2. Note unusual financing
 3. Note non-arm length participants
 4. Adjust sales price for inclusion of personal property or intangible value
 5. Initiate frozen characteristics/partial sale codes if necessary
 - a) Imminent construction/renovation can bias any later analysis by including values not part of the original transaction
 - b) Sale including only a portion of the property described can also produce skewed results

II. Preliminary Analysis

- A. Run sales analysis (by type, group, or class) which includes any and all sales collected to date
- B. Note median result and COD
- C. Examine each sale included
 1. Compare sale ratio to median result
 2. Ratios substantially higher or lower than the median result (outliers) are singled out for further, in-depth analysis
 - a. Note seller-financial institutions, known real estate opportunists, probates, known persons who finance their own transactions
 - b. Note buyer-financial institutions, known real estate opportunists, and relocation companies
 - c. Examine deed records to confirm “arm’s length” violations not evident from examination of buyer and seller
 - i. contract for deed
 - ii. assumption of previous note
 - iii. a typical financing
 - d. Re-inspect properties to rule out any physical differences from the current property records
 - e. Outlier sales that cannot be excluded or adjusted due to the reasons given above are nonetheless included in the subsequent analysis
- D. Adjust original data set
 1. Omit sales that are not arm’s length
 2. Adjust sales values for time or financing if necessary and possible
 3. Adjust appraisal values for physical differences if applicable

III. Secondary Analysis

- A. Run sales analysis (by type, group, or class) utilizing information from preliminary analysis
- B. Note median result and COD
 1. Median value may or may not change significantly

2. COD value should improve
 - C. Note sample size
 1. Compare number of sales within the class to the perceived number of total properties within the class
 2. From experience and discussion among the appraisal staff, determine whether any median result different from 1.00 is significant
 - D. Attempt to increase sample size—if necessary
 1. Utilize time adjustments if determinable
 2. Keep in mind marketing time for local market and any trends
 3. Be careful to not include more sales just for sales sake
 4. Changing markets and trends cannot be reflected in sales that are too old without accurate time adjustments.
 - E. Apply results of analysis to current records
 1. Any class whose median value is NOT SIGNIFICANTLY different from 1.00 does not require adjustment.
 2. Any class whose median value indicates that an adjustment is necessary should be analyzed
 - a) Look at typical depreciation (age/condition) for that class as reflected in the sales analysis
 - b) Calculate increase necessary to raise the individual ratios to produce a median result of 1.00 (keeping in mind that because of depreciation, the percentage increase required is going to be necessarily larger than the difference in percentage points needed to reach a 1.00 result)
 - c) Apply the calculated increase to the database
 3. Repeat procedure for all classes determined to need adjustment
 - F. Run analysis again to test results
- IV. Examine results to identify neighborhoods that need adjustment
- A. As individual sales are examined, note any areas/neighborhoods/sub-divisions that consistently show ratios significantly different from the median result
 - B. Run analysis excluding the area in question
 - C. Run analysis including only the neighborhood in question

- D. Check for significant variance between the two results
- E. Apply neighborhood factor to correct variance

Multi-Family Properties 2019 Summary Report

Overview

Multi-family properties with situs in this district are appraised at market value as previously defined.

Assumptions and Limiting Conditions

The appraisal value derived is subject to the following assumptions and limiting conditions:

1. For multi-family properties only, the market value stated is for land, improvements, and the personal property common to the classification and economic area. The business personal property value is insignificant to the overall value.
2. The field appraiser's with Pritchard & Abbott, Inc. has physically inspected all apartment complexes and duplex properties within its jurisdiction.
3. For a multi-family property that is used to provide affordable housing the property is appraised to comply with the Texas Property Tax Code Section 23.22. (Jurisdictional Exception to Standard 6-2(d) of USPAP)

Data Collection and Validation

Two basic types of data are collected: data, which is specific to each property, and data, which is indicative of a particular property class that has been predefined by Hall County Appraisal District.

The property appraised has multi-family use. This classification of properties includes apartment complexes and duplex properties. Properties of this classification are discovered and their characteristics recorded during field inspections, investigation of building permits issued through political entities, and investigation of mechanic's liens recorded with the county clerk. Geographically, these properties are located throughout the county.

Specific property data is collected at the time of inspection or re-inspection and through submissions by property owners. Characteristics of a specific property's physical improvements and amenities are recorded and stored electronically and may be printed on an appraisal card(s). Appraisal cards are available for review at the district office.

Sales data is taken from deed records, local real estate professionals, written appraisal reports, and telephone contact with principles. Sales are validated with the principles when possible. Sales data from properties is account-specific and retained electronically.

General market data is gathered from multiple sources. Environmental, economic, political, and social influences vary geographically and by property use. Neighborhoods have been delineated

to reflect competing properties within a use and the influences on that use. Apartment properties were assigned a comparative classification in the inspection process. Duplexes are classed in compliance with predefined classing criteria.

Valuation Approach and Analysis

Based on the principal of substitution, land values are determined by selling prices for similarly positioned functional tracts. Sites are analyzed for highest and best use as though they were vacant. Highest and best use of the improvements is based on the likelihood of the continued use of the improvements in their current and/or intended use and is essential to an accurate appraisal. Identification of a highest and best use different from the current or intended use has a significant effect on the cost and market data models and is always a statement of opinion, not a statement of fact.

A value per unit is charted and stratified by neighborhood and comparative class. A sales value per unit is also charted by neighborhood and comparative class for recent sales. Acceptable ranges of value are established for these comparative units. Preliminary property values are adjusted to meet with agreed ranges and then unique property considerations are addressed.

Review and Testing

Field reviewer of appraisals, performed through the regular inspection of subject properties. Ratio studies are reviewed for level of appraisal (measurements of central tendency and dispersion), bias, and appropriateness of neighborhood boundaries. Results of the performance measures used indicate the validity of the appraisal models.

Preliminary values are reviewed in consideration of classification and neighborhood. Value indications are compared to renditions and valid single property appraisals submitted for staff review. The appraiser reviews the submitted appraisal report to confirm and verifying data as would be done with a sale. Final value recommendations are tested for reasonableness by performing a sales ratio study and, individually, during the appeal process. During the appeal process, property specific income and expenses are reviewed for reasonableness and values are adjusted as necessary.

Appraisal results are tested bi-annually by the PTAD of the Comptroller of Public Accounts for the State of Texas. Appraisal methods and procedures are also reviewed by the PTAD through the MAP review.

Commercial Property 2019 Summary Report

Overview

This type of property consists of all land and improvements in Hall County that are classed “commercial” according to the properties highest and best use.

Assumptions and Limiting Conditions

The appraisals completed by Hall County Appraisal District are subject to the following assumptions and limiting conditions:

1. The opinion of value for each property applies to land and improvements only. The value of trade fixtures, furnishings and other equipment has not been included with the value of the real estate.
2. Field appraisers with Pritchard & Abbott, Inc. has physically inspected all properties within its jurisdiction and normally re-inspects and/or conducts statistical studies on these properties annually. Complete interior inspections have not been done on a majority of the properties.

Data Collection and Validation

Two basic types of data are collected: data, which is specific to each property and data, which is indicative of a particular class of property that has been predefined by Hall County Appraisal District.

Property-specific data is collected as part of the inspection process and through submission by the property owner. As part of the inspection process, the improvements are measured and classified. Properties are classified according to construction type and quality. The appraiser also estimates the effective age and condition of the improvements. Any additional or unusual features are also noted at the time of the inspection. Data on individual properties is maintained on the appraisal card(s) for that property. The data includes legal description, situs, owner address, parcel number, and the property-specific information such as class, quality, measurements, condition, etc. Data on individual properties is verified through previously existing records, published articles, and reports, building permits, mechanic’s liens, analysis of comparable properties, and through information obtained from the property owner. Appraisal cards are available for review at the appraisal office.

Data pertaining to a class of properties is used to develop valuation models for that property class. Such data is collected in a variety of ways. Cost information is obtained from nationally recognized sources, as well as from new construction permits, mechanics liens, local contractors, reliable sources of sales on new property, and renditions submitted by the property owners. Cost information on newly constructed improvements is also used to verify and/or modify costs from

published sources. A comprehensive appraisal manual for commercial property is currently under construction for Hall County Appraisal District. Renditions are confidential submissions by property owners and cannot be used for other properties. However, data from renditions may be compared with data obtained from cost manuals to test their accuracy.

Market sales information is collected through surveys of buyers and sellers in addition to public records.

Valuation Approach and Analysis

Land values are based on selling prices for the appropriate highest and best use of the site analyzed as though vacant. Highest and best use analysis of the improvements is based on the likelihood of the continued use of the improvements in their current and/or intended use and is essential to an accurate appraisal. Identification of a highest and best use different from the current or intended use has a significant effect on the cost and market data models and is always a statement of opinion, not a statement of fact.

Improvements are valued using replacement/reproduction cost new less depreciation. Cost tables are constructed using published sources as a guide and adjustments are applied using local market information. Adjustments are also applied for functional and economic obsolescence if utilization, sales, and income information warrant. An income approach is also used when economic and/or subject property income information is available. A market data model based on typical selling prices per unit of similar properties is used when sufficient information is available.

The cost approach to value is most accurate and reliable when appraising new construction. In older areas or areas of transition, cost is calculated and considered. However, due to the difficulty of measuring accrued depreciation, more weight is applied to the market and income approaches.

Review and Testing

Field review of appraisals is performed through the regular inspection of subject properties. A computer generated statistical review is also conducted. The statistical report includes appraisal to sales ratio, coefficient of dispersion, and other statistical measures. The performance measures used validate the results of the appraisal model.

Although the ratio study is the preferred method of measuring performance, single property appraisals submitted to the appraisal staff are also reviewed for appraisal accuracy. Appraisal results are tested by the Property Tax Division of the Texas Comptroller's Office. Appraisal methods and procedures are also reviewed by the Property Tax Division.

Hall County Appraisal District contracts with Pritchard & Abbott, Inc. for annual reappraisal of real property in the commercial and industrial property types.

Hall County Appraisal District also contracts with Pritchard & Abbott, Inc. for appraisal of all mineral properties within the Hall County Appraisal District.

The summary reports of Appraisal Records Services, Inc. for compliance with Standards 6-7 of USPAP are attachments to this document.

Business Personal Property 2019 Summary Report

Overview

Business personal property is the tangible personal property owned by a business or by an individual for the purpose of producing income. Other tangible personal property is exempt according to Sec. 11.14 (a) of the Texas Property Tax Code.

Assumptions and Limiting Conditions

The appraisals completed by the Hall County Appraisal District are subject to the following assumptions and limiting conditions:

The Hall County Appraisal District's staff and Pritchard & Abbott Inc. field appraisers have physically inspected all properties within its jurisdiction and normally reinspects and/or compares renditions and the Comptroller's list of active businesses report on these properties annually.

Data Collections and Validation

Data on new and existing businesses is collected through personal inspection, newspaper articles, government reports, comparisons to like businesses, renditions, and other confidential information supplied by the owner. Due to the multitude of personal property types, there is no standard data collections form or manual.

Valuation Approach and Analysis

Personal property as defined by the Uniform Standards of Professional Appraisal Practice is "identifiable, portable and tangible objects which are considered by the general public to be 'personal', e.g. furnishings, artwork, antiques, gems, jewelry, collectibles, machinery and equipment: all property that is not classified as real estate"... personal property that can be seen, weighed, measured, felt, or otherwise perceived by the senses but does not include a document or other perceptible object that constitutes evidence of a valuable interest, claim, or right and has negligible or no intrinsic value." The Texas Property Tax Code Section 1.04(4) defines personal property as "...property that is not real property."

The purpose of the appraisals of business personal property is to estimate market value on January 1 of each year as previously defined in the introduction. A separate definition of market value for inventory is found in the Texas Property Tax Code Sec.23.12 (a), "...the market value of an inventory is the price for which it would sell as a unit to a purchaser who would continue the business." The Texas Property Tax Code sets forth three ways in which inventory may be valued if the requirements are met:

1. Sec.23.12 (f) allows some inventories to qualify for appraisal as of September 1 of the year before January 1 of the taxable year.

2. Sec.23.121, 23.127, 23.1241, and 23.12D dictate that dealers in new and used vehicles, vessels, outboard motors and trailers, manufactured housing, and heavy equipment be valued differently. (Jurisdictional Exception to Standard Rule 6-3 (b) & (c))
3. Sec.23.12 (a) covers the inventories of remaining businesses.

Personal property is appraised using original cost less depreciation models. Depreciation is calculated on the age/life method using typical economic lives and depreciation rates based on published sources, market evidence, and the experience of knowledgeable appraisers. Adjustments for functional and economic obsolescence may be made if utilization for the subject property justifies such. In the case of some personal property types such as licensed vehicles and aircraft, market data from published pricing guides is used to construct a market value model. In other cases, models are based on quality and density information available through published sources or through private sources. These models are cost based.

Review and Testing

Field review of appraisals is performed through the inspection of subject properties.

Sales for most types of personal property are infrequent. Furthermore, many market transactions occur for multiple sites and include real and personal property, tangible and intangible, thereby making analysis difficult, subjective, and inadequate to develop a statistical analysis. Performance is measured through comparison of like businesses as well as applying quality and density models to units of comparison. Performance is also measured through comparison with valid single-property appraisals submitted for staff review. The appraiser considers the submitted appraisal report by confirming and verifying data as would be done with a sale. Hall County Appraisal District's appraisal methods and procedures and values are subject to review by the Property Tax Division of the Texas Comptroller's Office. The results of this review indicate the validity of the models and calibration techniques employed by Hall County Appraisal District.

Hall County Appraisal District contracts with Pritchard and Abbott, Inc. for the appraisal of business personal property. Pritchard and Abbott, Inc. uses Marshall Swift valuation information for most of the personal property values. Their appraisals are reviewed by Hall County Appraisal District.

Certification

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

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and is the appraisal staff's personal, unbiased professional analyses, opinions, and conclusions.
- I have no present or prospective interest in the property that is the subject of this report, save, and except the ownership of my personal residence and personal auto, and I have no personal interest or bias with respect to the parties involved.
- My compensation is not contingent on the reporting of a predetermined value, or direction in value, that favors the cause of the client, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.
- My analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice.
- Personal inspections are made by me, my staff, and outside appraisal firms.
- Persons providing significant professional assistance to the person signing this report are listed below:

Gina Chavira, Chief Appraiser
Anna Duran, Bookkeeper
Carol Tarrant, Clerk
Marty Seeley, Pritchard & Abbott, Inc.
Larry Womble, Pritchard & Abbott, Inc.
Dean McDaniel, Pritchard & Abbott, Inc.
Debbie Stribling, Pritchard & Abbott, Inc.
Richard Taylor, Pritchard & Abbott, Inc.



Gina Chavira, Chief Appraiser, RPA, RTA, CCA, CTA

Staff Providing Mass Appraisal Assistance

Name	Title	TDLR Number
Gina Chavira	Chief Appraiser	70511
Dean McDaniel	P&A Appraiser	69108
Larry Womble	P&A Appraiser	71931
Marty Seeley	P&A Appraiser	71643
Richard Taylor	P&A Appraiser	72414
John Elias	P&A Appraiser	74392
Danny Hamby	P&A Appraiser	73029
Debbie Stribling	P&A Appraiser	16645
Mark Stewart	P&A Appraiser	68585
Josh Roeder	P&A Appraiser	72097
Brant Ballard	P&A Appraiser	74393

Run Date: 4/1/2019
1:15:09PM

Sales Ratio Report Current Year 2019
Selection Page

Description:

Order:
Jurisdiction: 01 - HALL COUNTY

INCLUDE "Multi Parcel Sales"
Omit "(NOT PARCEL.Prop_Type = 'M')"
Select "(PARCEL.Cat_Code_Pri = 'A1')"
Select "(Sale_Date BETWEEN Cast('10/01/2018' as DateTime) AND Cast('04/0

Sale Ratio Recap

Ratio	Current Median	Deviation	Ratio	Sale Median	Deviation	Account Number	Parcel ID
0.93	0.93	0.01	0.93	0.90	0.03	10100-00004-00002-00000	203669
0.94	0.93	0.01	0.87	0.90	0.03	10230-00006-00712-00000	204249

Sale Ratio Recap Summary

Description	Current	Sale	
Sum of Current Ratio	1.87	1.80	Sum of Sale Ratio
Total Number Sales	2	2	
Low Ratio	0.93	0.87	
Highest Ratio	0.94	0.93	
Range	0.01	0.06	
Mean	0.93	0.90	
Median	0.93	0.90	
Absolute Deviation	0.01	0.06	
Average Deviation	0.01	0.03	
Standard Deviation	0.01	0.04	
Coefficient of Dispersion	1	3	
Total Sale Prices	85,000	85,000	
Total Mkt Value	79,140	77,410	
Weighted Mean	0.93	0.91	

Run Date: 4/1/2019
1:15:25PM

Selection Page

Description:

Order:

Jurisdiction:

INCLUDE "Multi Parcel Sales"

Omit "(NOT PARCEL.Prop_Type = 'M')"

Select "(PARCEL.Cat_Code_Pri = 'A1')"

Select "(Sale_Date BETWEEN Cast('10/01/2018' as DateTime) AND Cast('04/0

Sales Ratio Report

Parcel Id	Sale #	Acct Number	Legal 1	Cat Code	Loc	Address								
203669	2	10100-00004-00002-000002	ANSLEY ADDITION, MEMPHIS	A1	82	221 N 9TH								
Land ---->	Seq	Class	Acres	Sqft	Front_Ft_Avg	Depth Per	Real Value	Ag Value	Total Value					
	1	FF20	0.12	5,400.00	60.00	0.82	980	0	980					
Total Land Taxable Value:								980						
Building ----->	Seq	Year	Effyr	Type	Class	Area	Wall	Perm	Cond	%GD	%FC	%EC	%CP	Total Value
	1	1975	1997	RES	BR3+	1,694	1.00	1.00	RESA	0.74	1.00	1.00	1.00	48,510
	2	1975	1997	CP	REF	84	1.00	1.00	RESA	0.74	1.00	1.00	1.00	670
	3	1975	1997	CP	REF	68	1.00	1.00	RESA	0.74	1.00	1.00	1.00	540
	4	1975	1997	ATT GAR	REF	240	1.00	1.00	RESA	0.74	1.00	1.00	1.00	2,220
	5	0	0	STG	2	100	1.00	1.00		0.70	1.00	1.00	1.00	280
	6	0	0	STG	3	300	1.00	1.00		0.90	1.00	1.00	1.00	1,620
	7	0	0	CRPT	PF2	200	1.00	1.00		0.90	1.00	1.00	1.00	360
	8	0	0	CDECK	1	140	1.00	1.00		0.90	1.00	1.00	1.00	500
Total Building Value:								54,700						
Sale Date	Sale Price	Appraised Value	Sale Mkt Value	Ratio at Sale	Current Ratio	Partial Sale	Neighborhood	Sale Source	Sqft@ Sale	Acres@ Sale	Real Value			
12/21/2018	60,000	55,680	55,680	0.9280	0.9280			WD	2,086	0.124	54,700			

Buyer: PEREZ JORGE & CLAUDIA

Seller: GURLEY WALDON & FRANKIE

Volume 392

Page 286

Deed Date 12/21/2018

Parcel Id	Sale #	Acct Number	Legal 1	Cat Code	Loc	Address								
204249	4	10230-00006-00712-000000	DURHAM ADDITION, MEMPH	A1	82	1814 W MONTGOMERY								
Land ---->	Seq	Class	Acres	Sqft	Front_Ft_Avg	Depth Per	Real Value	Ag Value	Total Value					
	1	FF5	0.48	21,000.00	150.00	1.00	750	0	750					
Total Land Taxable Value:								750						
Building ----->	Seq	Year	Effyr	Type	Class	Area	Wall	Perm	Cond	%GD	%FC	%EC	%CP	Total Value
	1	0	1985	RES	FR2	1,386	1.00	1.00	RESF	0.50	1.00	1.00	1.00	17,720
	2	0	1985	CP	REF	146	1.00	1.00	RESF	0.50	1.00	1.00	1.00	420
	3	0	0	STG	2	64	1.00	1.00		0.40	1.00	1.00	1.00	100
	4	0	0	CRPT	3	1,008	1.00	1.00		0.60	1.00	1.00	1.00	1,810
	5	0	2013	UTILITY	USG	400	1.00	1.00	C30G	0.80	1.00	1.00	1.00	2,660
Total Building Value:								22,710						
Sale Date	Sale Price	Appraised Value	Sale Mkt Value	Ratio at Sale	Current Ratio	Partial Sale	Neighborhood	Sale Source	Sqft@ Sale	Acres@ Sale	Real Value			
11/27/2018	25,000	23,460	21,730	0.8692	0.9384			GW	1,532	0.482	22,710			

Buyer: TRIBBLE AMI

Seller: SHIPP JOE DON

Volume 392

Page 157

Deed Date 11/27/2018

SALES RATIO ANALYSIS

4/1/2019

1:15:40PM

School Dist Category Code	PARCEL ID Subdivision	Legal Property Address	Type Class Living Area Sqft	Year Built Effective Year Percent Good	Land Value Land Sqft	Sale Date Sale Source	Sale Price Sale Price per Sqft	Current Value Current Value per Sqft	Ratio
MEM-LAKE ISD A1	203669 ANSLEY	ANSLEY ADDITION, MEMPHI 221 N 9TH	RES BR3+ 2,086	1975 1997 0.74	980 5,400	12/21/2018 WDV	60000 28.76	55,680 26.69	0.93
MEM-LAKE ISD A1	204249 DURHAM	DURHAM ADDITION, MEMPH 1814 W MONTGOMERY	RES FR2 1,532	0 1985 0.50	750 21,000	11/27/2018 GWD	25000 16.32	23,460 15.31	0.94

Run Date: 4/1/2019
1:16:22PM

Sales Ratio Report Current Year 2019
Selection Page

Description:

Order:
Jurisdiction: 12 - CITY OF MEMPHIS

INCLUDE "Multi Parcel Sales"
Omit "(NOT PARCEL.Prop_Type = 'M')"
Select "(PARCEL.Cat_Code_Pri = 'A1')"
Select "(Sale_Date BETWEEN Cast('10/01/2018' as DateTime) AND Cast('04/0

Sale Ratio Recap

Ratio	Current Median	Deviation	Ratio	Sale Median	Deviation	Account Number	Parcel ID
0.93	0.93	0.01	0.93	0.90	0.03	10100-00004-00002-00000	203669
0.94	0.93	0.01	0.87	0.90	0.03	10230-00006-00712-00000	204249

Sale Ratio Recap Summary

Description	Current	Sale	
Sum of Current Ratio	1.87	1.80	Sum of Sale Ratio
Total Number Sales	2	2	
Low Ratio	0.93	0.87	
Highest Ratio	0.94	0.93	
Range	0.01	0.06	
Mean	0.93	0.90	
Median	0.93	0.90	
Absolute Deviation	0.01	0.06	
Average Deviation	0.01	0.03	
Standard Deviation	0.01	0.04	
Coefficient of Dispersion	1	3	
Total Sale Prices	85,000	85,000	
Total Mkt Value	79,140	77,410	
Weighted Mean	0.93	0.91	

Run Date: 4/1/2019
1:16:38PM

Selection Page

Description:

Order:

Jurisdiction:

INCLUDE "Multi Parcel Sales"

Omit "(NOT PARCEL.Prop_Type = 'M')"

Select "(PARCEL.Cat_Code_Pri = 'A1')"

Select "(Sale_Date BETWEEN Cast('10/01/2018' as DateTime) AND Cast('04/0

Sales Ratio Report

Parcel Id	Sale #	Acct Number	Legal 1	Cat Code	Loc	Address								
203669	2	10100-00004-00002-000002	ANSLEY ADDITION, MEMPHIS	A1	82	221 N 9TH								
Land ---->	Seq	Class	Acres	Sqft	Front_Ft_Avg	Depth Per	Real Value	Ag Value	Total Value					
	1	FF20	0.12	5,400.00	60.00	0.82	980	0	980					
Total Land Taxable Value:								980						
Building ----->	Seq	Year	Effyr	Type	Class	Area	Wall	Perm	Cond	%GD	%FC	%EC	%CP	Total Value
	1	1975	1997	RES	BR3+	1,694	1.00	1.00	RESA	0.74	1.00	1.00	1.00	48,510
	2	1975	1997	CP	REF	84	1.00	1.00	RESA	0.74	1.00	1.00	1.00	670
	3	1975	1997	CP	REF	68	1.00	1.00	RESA	0.74	1.00	1.00	1.00	540
	4	1975	1997	ATT GAR	REF	240	1.00	1.00	RESA	0.74	1.00	1.00	1.00	2,220
	5	0	0	STG	2	100	1.00	1.00		0.70	1.00	1.00	1.00	280
	6	0	0	STG	3	300	1.00	1.00		0.90	1.00	1.00	1.00	1,620
	7	0	0	CRPT	PF2	200	1.00	1.00		0.90	1.00	1.00	1.00	360
	8	0	0	CDECK	1	140	1.00	1.00		0.90	1.00	1.00	1.00	500
Total Building Value:								54,700						
Sale Date	Sale Price	Appraised Value	Sale Mkt Value	Ratio at Sale	Current Ratio	Partial Sale	Neighborhood	Sale Source	Sqft@ Sale	Acres@ Sale	Real Value			
12/21/2018	60,000	55,680	55,680	0.9280	0.9280			WD	2,086	0.124	54,700			
Buyer: PEREZ JORGE & CLAUDIA				Volume 392		Page 286		Deed Date 12/21/2018						
Seller: GURLEY WALDON & FRANKIE														

Parcel Id	Sale #	Acct Number	Legal 1	Cat Code	Loc	Address								
204249	4	10230-00006-00712-000000	DURHAM ADDITION, MEMPH	A1	82	1814 W MONTGOMERY								
Land ---->	Seq	Class	Acres	Sqft	Front_Ft_Avg	Depth Per	Real Value	Ag Value	Total Value					
	1	FF5	0.48	21,000.00	150.00	1.00	750	0	750					
Total Land Taxable Value:								750						
Building ----->	Seq	Year	Effyr	Type	Class	Area	Wall	Perm	Cond	%GD	%FC	%EC	%CP	Total Value
	1	0	1985	RES	FR2	1,386	1.00	1.00	RESF	0.50	1.00	1.00	1.00	17,720
	2	0	1985	CP	REF	146	1.00	1.00	RESF	0.50	1.00	1.00	1.00	420
	3	0	0	STG	2	64	1.00	1.00		0.40	1.00	1.00	1.00	100
	4	0	0	CRPT	3	1,008	1.00	1.00		0.60	1.00	1.00	1.00	1,810
	5	0	2013	UTILITY	USG	400	1.00	1.00	C30G	0.80	1.00	1.00	1.00	2,660
Total Building Value:								22,710						
Sale Date	Sale Price	Appraised Value	Sale Mkt Value	Ratio at Sale	Current Ratio	Partial Sale	Neighborhood	Sale Source	Sqft@ Sale	Acres@ Sale	Real Value			
11/27/2018	25,000	23,460	21,730	0.8692	0.9384			GW	1,532	0.482	22,710			
Buyer: TRIBBLE AMI				Volume 392		Page 157		Deed Date 11/27/2018						
Seller: SHIPP JOE DON														

SALES RATIO ANALYSIS

4/1/2019

1:16:54PM

School Dist Category Code	PARCEL ID Subdivision	Legal Property Address	Type Class Living Area Sqft	Year Built Effective Year Percent Good	Land Value Land Sqft	Sale Date Sale Source	Sale Price Sale Price per Sqft	Current Value Current Value per Sqft	Ratio
MEM-LAKE ISD A1	203669 ANSLEY	ANSLEY ADDITION, MEMPHI 221 N 9TH	RES BR3+ 2,086	1975 1997 0.74	980 5,400	12/21/2018 WDV	60000 28.76	55,680 26.69	0.93
MEM-LAKE ISD A1	204249 DURHAM	DURHAM ADDITION, MEMPH 1814 W MONTGOMERY	RES FR2 1,532	0 1985 0.50	750 21,000	11/27/2018 GWD	25000 16.32	23,460 15.31	0.94

Run Date: 4/1/2019
1:17:31PM

Sales Ratio Report Current Year 2019
Selection Page

Description:

Order:
Jurisdiction: 31 - MEMPHIS-LAKEVIEW ISD

INCLUDE "Multi Parcel Sales"

Omit "(NOT PARCEL.Prop_Type = 'M')"

Select "(PARCEL.Cat_Code_Pri = 'A1')"

Select "(Sale_Date BETWEEN Cast('10/01/2018' as DateTime) AND Cast('04/0

Sale Ratio Recap

Ratio	Current Median	Deviation	Ratio	Sale Median	Deviation	Account Number	Parcel ID
0.93	0.93	0.01	0.93	0.90	0.03	10100-00004-00002-00000	203669
0.94	0.93	0.01	0.87	0.90	0.03	10230-00006-00712-00000	204249

Sale Ratio Recap Summary

Description	Current	Sale	
Sum of Current Ratio	1.87	1.80	Sum of Sale Ratio
Total Number Sales	2	2	
Low Ratio	0.93	0.87	
Highest Ratio	0.94	0.93	
Range	0.01	0.06	
Mean	0.93	0.90	
Median	0.93	0.90	
Absolute Deviation	0.01	0.06	
Average Deviation	0.01	0.03	
Standard Deviation	0.01	0.04	
Coefficient of Dispersion	1	3	
Total Sale Prices	85,000	85,000	
Total Mkt Value	79,140	77,410	
Weighted Mean	0.93	0.91	

Run Date: 4/1/2019
1:17:57PM

Selection Page

Description:

Order:

Jurisdiction:

INCLUDE "Multi Parcel Sales"

Omit "(NOT PARCEL.Prop_Type = 'M')"

Select "(PARCEL.Cat_Code_Pri = 'A1')"

Select "(Sale_Date BETWEEN Cast('10/01/2018' as DateTime) AND Cast('04/0

Sales Ratio Report

Parcel Id	Sale #	Acct Number	Legal 1				Cat Code	Loc	Address						
203669	2	10100-00004-00002-000002	ANSLEY ADDITION, MEMPHIS				A1	82	221 N 9TH						
Land ---->		Seq	Class	Acres	Sqft	Front_Ft_Avg	Depth Per	Real Value	Ag Value	Total Value					
		1	FF20	0.12	5,400.00	60.00	0.82	980	0	980					
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Building ----->		Seq	Year	Effyr	Type	Class	Area	Wall	Perm	Cond	%GD	%FC	%EC	%CP	Total Value
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		4	1975	1997	ATT GAR	REF	240	1.00	1.00	RESA	0.74	1.00	1.00	1.00	2,220
		5	0	0	STG	2	100	1.00	1.00		0.70	1.00	1.00	1.00	280
		6	0	0	STG	3	300	1.00	1.00		0.90	1.00	1.00	1.00	1,620
		7	0	0	CRPT	PF2	200	1.00	1.00		0.90	1.00	1.00	1.00	360
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12/21/2018	60,000	55,680	55,680	0.9280	0.9280			WD	2,086	0.124	54,700				
Buyer: PEREZ JORGE & CLAUDIA				Volume 392				Page 286		Deed Date 12/21/2018					
Seller: GURLEY WALDON & FRANKIE															

Parcel Id	Sale #	Acct Number	Legal 1				Cat Code	Loc	Address						
204249	4	10230-00006-00712-000000	DURHAM ADDITION, MEMPH				A1	82	1814 W MONTGOMERY						
Land ---->		Seq	Class	Acres	Sqft	Front_Ft_Avg	Depth Per	Real Value	Ag Value	Total Value					
		1	FF5	0.48	21,000.00	150.00	1.00	750	0	750					
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Building ----->		Seq	Year	Effyr	Type	Class	Area	Wall	Perm	Cond	%GD	%FC	%EC	%CP	Total Value
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		2	0	1985	CP	REF	146	1.00	1.00	RESF	0.50	1.00	1.00	1.00	420
		3	0	0	STG	2	64	1.00	1.00		0.40	1.00	1.00	1.00	100
		4	0	0	CRPT	3	1,008	1.00	1.00		0.60	1.00	1.00	1.00	1,810
		5	0	2013	UTILITY	USG	400	1.00	1.00	C30G	0.80	1.00	1.00	1.00	2,660
Total Building Value:										22,710					
Sale Date	Sale Price	Appraised Value	Sale Mkt Value	Ratio at Sale	Current Ratio	Partial Sale	Neighborhood	Sale Source	Sqft@ Sale	Acres@ Sale	Real Value				
11/27/2018	25,000	23,460	21,730	0.8692	0.9384			GW	1,532	0.482	22,710				
Buyer: TRIBBLE AMI				Volume 392				Page 157		Deed Date 11/27/2018					
Seller: SHIPP JOE DON															

School Dist Category Code	PARCEL ID Subdivision	Legal Property Address	Type Class Living Area Sqft	Year Built Effective Year Percent Good	Land Value Land Sqft	Sale Date Sale Source	Sale Price Sale Price per Sqft	Current Value Current Value per Sqft	Ratio
MEM-LAKE ISD A1	203669 ANSLEY	ANSLEY ADDITION, MEMPHI 221 N 9TH	RES BR3+ 2,086	1975 1997 0.74	980 5,400	12/21/2018 WDV	60000 28.76	55,680 26.69	0.93
MEM-LAKE ISD A1	204249 DURHAM	DURHAM ADDITION, MEMPH 1814 W MONTGOMERY	RES FR2 1,532	0 1985 0.50	750 21,000	11/27/2018 GWD	25000 16.32	23,460 15.31	0.94



PRITCHARD & ABBOTT, INC.
VALUATION CONSULTANTS

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:

2017 and 2018

Originally Printed: June 1, 2016

*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."

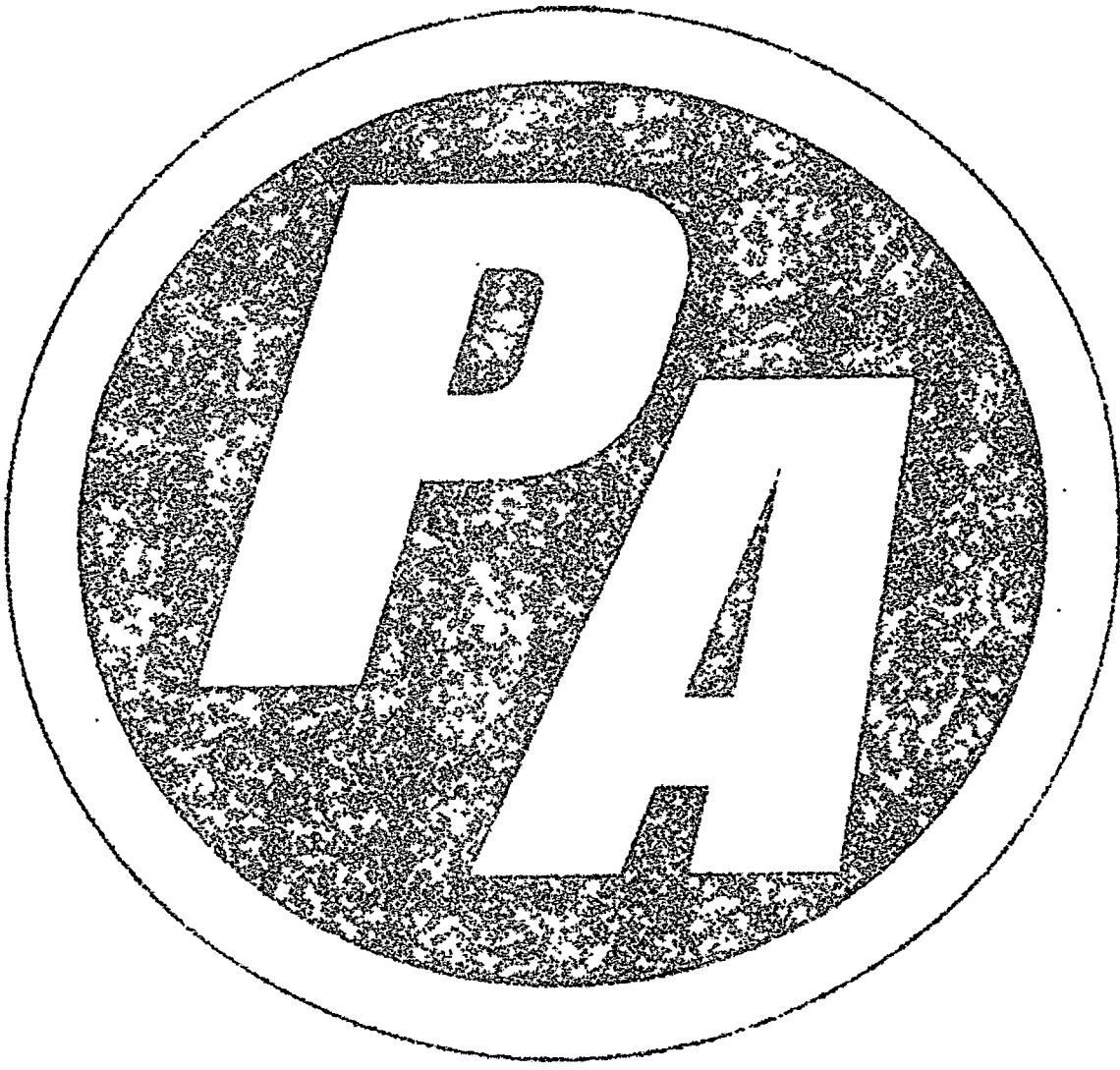


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REAPPRAISAL OF MINERAL PROPERTY	15
REAPPRAISAL OF INDUSTRIAL, UTILITY AND RELATED PERSONAL PROPERTY	20

POLICY STATEMENT OF PRITCHARD & ABBOTT, INC., ON THE
REAPPRAISAL OF MINERAL, INDUSTRIAL, UTILITY AND RELATED PERSONAL PROPERTY

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 Standard 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 mandates (Standard 6), 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).

P&A will clearly state or otherwise make known all extraordinary assumptions, limiting conditions, hypothetical assumptions, and/or jurisdictional exceptions in its appraisals as they are conveyed to our clients. 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). 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 is understood that: a) all mass appraisals and mass appraisal reports deal with real and personal property; 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 privileged and/or proprietary in nature. The use of "limited" appraisals in conjunction with "restricted" reports in no way implies non-compliance with USPAP. P&A believes, with its vast experience and expertise in these areas of appraisal, that all values rendered are credible, competent, uniform and consistent; and most importantly for ad valorem tax purposes, achieved 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."

**REAPPRAISAL PLAN OF MINERAL, INDUSTRIAL, UTILITY AND RELATED PERSONAL PROPERTY
PRITCHARD & ABBOTT, INC.
TAX YEARS 2017 AND 2018**

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.

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. 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 Rule 3: establishes requirements for the development and communication of an appraisal review.
- Standards Rules 4 and 5: retired in 2015.
- Standards Rule 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 Rule 6 is 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 Standard 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.

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 perform ethically and competently in accordance with USPAP and not engage in conduct that is unlawful, unethical, or improper. An appraiser who could reasonably be perceived to act as a disinterested third party in rendering an unbiased appraisal, review, or consulting service must perform assignments with impartiality, objectivity, and independence and without accommodation of personal interests; in short, the appraiser must not perform an assignment with bias.

An appraiser must not advocate the cause or interest of any party or issue, or accept an assignment that includes the reporting of predetermined opinions and conclusions.

An appraiser must not misrepresent his or her role when providing valuation services that are outside of appraisal practice, must not engage in criminal conduct, and must not perform an appraisal assignment in a grossly negligent manner.

An appraiser is required to avoid any action that could be considered misleading or fraudulent. In particular, it is unethical for an appraiser to use or communicate a misleading or fraudulent report or to knowingly permit an employee or other person to communicate a misleading or fraudulent report.

An appraiser 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.

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

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- 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.

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;

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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 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.

CHANGES FROM 2014-2015 USPAP:

1. *Physical characteristics of the subject property were removed from the items considered as assignment results so that these physical characteristics, to the extent they were not identified by the client as confidential and the appraiser could have obtained them from a non-confidential source, could be shared with all parties involved with the appraisal assignment in order to facilitate higher quality appraisals.*
2. *Additional clarification was added to ensure all parties be made aware of the importance of maintaining confidentiality in all its forms.*

RECORD KEEPING RULE

An appraiser must prepare a workfile for each appraisal or appraisal review assignment. The workfile must include the identity, by name and type, of any intended users; true copies (replica of the report, which can include photocopies or electronic copies) of *all* written reports (emphasis added), summaries of any oral reports or testimony, and all other data, information, and documentation, or references to this data's location, necessary to support the appraiser's opinions and conclusions and to show compliance with this rule and all other applicable USPAP Standards.

A workfile preserves evidence of the appraiser's consideration of all applicable data and statements required by USPAP and other information as may be required to support the findings and conclusions of the appraiser.

A photocopy or an electronic copy of the entire actual written appraisal, review, or consulting report sent or delivered to a property owner or review committee satisfies the requirements of a true copy. Care should be exercised in the selection of the form, style, and type of medium for written records, which may be handwritten and informal, to ensure they are retrievable by the appraiser throughout the applicable retention period.

A workfile must be in existence prior to and contemporaneous with the issuance of a written or oral report. A written summary of an oral report must be added to the workfile within a reasonable time after the issuance of the oral report.

A workfile must be made available by the appraiser when required by due process of law. An appraiser must have custody of his or her workfile, or make appropriate workfile retention, access, and retrieval arrangements with the party having custody of the workfile. 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.

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

CHANGES FROM 2014-2015 USPAP:

1. The word "any" has been replaced with the word "all" to clarify that the appraiser must retain true copies of all written reports.
2. Language has been added to make it more clear that some data and information (in addition to documentation) may be included in the workfiles by referring to its location elsewhere.

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.

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.

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.

Standard 6 applies 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. Mass appraisals can be prepared with or without computer assistance. The Jurisdictional Exception Rule may apply to several sections of Standard 6 because ad valorem tax administration is subject to various state, county, and municipal laws. 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 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 Standard 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 6 are briefly summarized below:

- **Standard 6-1:** 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.
- **Standard 6-2:** Defines the introductory framework requirements of developing a mass appraisal, focusing on the identification and/or definition of: client(s), intended users, effective date, scope of work, extraordinary assumptions,

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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 6-3:** 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 6-4:** 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 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. Model calibration refers to the process of analyzing sets of property and market data to determine the specific parameters of a model.
- **Standard 6-5:** 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 an appraiser, in developing income and expense statement 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 6-6:** 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 the 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 6-7:** 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.
- **Standard 6-8:** Defines requirements of a mass appraisal written report (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 6-9:** Defines requirements for appraiser certification of the mass appraisal written report.

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The following sections of this report discuss in detail the various elements of the mass appraisal written report as required by USPAP Standard 6-8, with regards to P&A appraisal of Mineral Interests, Industrial-Utility-Personal Property, and Real Estate.

REAPPRAISAL 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 6-8. USPAP Standards Rule 6-9 (certification) can be found at the end of this report. USPAP Standards Rules 6-1 through 6-7 (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, etal.) 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 and taxpayers or their agents who own and/or represent the subject property being appraised. 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.

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:

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- 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

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

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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 reasonably 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 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.

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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.

CHANGES FROM 2014-2015 USPAP:

1. *The ASB recognized that identifying the client in an appraisal report may violate confidentiality provisions; therefore, USPAP now provides for an exception should the client request anonymity (see assumption stated above whereby P&A does not believe an ad valorem tax client will not or cannot ever request anonymity).*

REAPPRAISAL 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 6-8. USPAP Standards Rule 6-9 (certification) can be found at the end of this report. USPAP Standards Rules 6-1 through 6-7 (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 and taxpayers or their agents who own and/or represent the subject property being appraised. 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:

1. the expectations of participants in the market for the same or similar appraisal services; and
2. 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.

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. 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:

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- 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.

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

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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, etal.). 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 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.

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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.

CHANGES FROM 2014-2015 USPAP:

1. *The ASB recognized that identifying the client in an appraisal report may violate confidentiality provisions; therefore, USPAP now provides for an exception should the client request anonymity (see assumption stated above whereby P&A does not believe an ad valorem tax client will not or cannot ever request anonymity).*



**PRITCHARD & ABBOTT, INC.
VALUATION CONSULTANTS**

**THE APPRAISAL OF
MINERAL, INDUSTRIAL, UTILITY, PERSONAL PROPERTY
AND
RESIDENTIAL REAL ESTATE
AS PER
UNIFORM STANDARDS OF
PROFESSIONAL APPRAISAL PRACTICE
(USPAP)**

**Effective January 1, 2018
(Applicable for Tax Years 2018 and 2019)**

Includes, in part, the Written Mass Appraisal Report and Certification as promulgated by USPAP Standards Rule 6-1 and Rule 6-2. This report was assembled in part with direct reference to the 2018-2019 Edition of USPAP as published by the Appraisal Standards Board of The Appraisal Foundation, authorized by United States Congress as the Source of Appraisal Standards and Appraiser Qualifications.

This report is intended to satisfy the requirements of S.B. 841, enacted by Acts 1997, 75th Leg., ch. 1039, § 22, effective January 1, 1998; amended by Acts 1999, 76th Leg., ch. 1295 (S.B. 1641), § 1, effective January 1, 2000, when performing mass appraisals for ad valorem (property) tax purposes. This report is a work product of Pritchard & Abbott, Inc., Valuation Consultants (P&A), developed on behalf of, and for exclusive use by, P&A's valuation clients. Written permission must be obtained before reproduction of these contents or distribution to outside parties.

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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 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.

CHANGES FROM 2016-17 EDITION OF USPAP

The Appraisal Foundation, through its Appraisal Standards Board, constantly seeks to clarify and improve where possible the previously published edition of USPAP. Below is a summary of the changes applicable to the current edition as they apply to P&A's mass appraisal assignments and reports:

Definition of Report and Edits to the ETHICS RULE and the RECORD KEEPING RULE

The ASB has revised the definition of Report, including associated edits to the ETHICS RULE and RECORD KEEPING RULE, to clarify that the client may authorize other parties to receive a report. The Board has revised the RECORD KEEPING RULE to clarify that the workfile for a Restricted Appraisal Report or Oral Report must be sufficient for the appraiser to produce an Appraisal Report.

Definitions of Assignment, Assignment Conditions, Intended Use, and Intended User, and related edits to the COMPETENCY RULE

The Board has revised the definition of Assignment to remove the portion of the definition involving the agreement to provide services, so that the term now refers only to the valuation services themselves (clarification of the former phrase "at the time of assignment"). In addition, the ASB has added a definition of Assignment Conditions, a term that was formerly referenced only in the SCOPE OF WORK RULE. Lastly, the Board has revised the COMPETENCY RULE to address the appraiser's obligations prior to accepting an assignment. These changes confirm that the appraiser must meet the requirements of the COMPETENCY RULE, yet still have flexibility to modify the scope of work based upon information or conditions discovered during a valuation service. USPAP requires that the appraiser take responsibility to ensure that the scope of work for each assignment is sufficient to produce credible assignment results for the intended use and intended users.

Definitions of Assumption and Extraordinary Assumption

The Board has deleted the definition of the term Assumption. The Board has revised the definition of Extraordinary Assumption, to clarify that it is assignment-specific, and that an extraordinary assumption may be used despite signals that it may be false.

Dividing STANDARD 6, Mass Appraisal, into STANDARD 5, Mass Appraisal, Development and STANDARD 6, Mass Appraisal, Reporting

The Board has revised the existing STANDARD 6, including dividing it into two standards for improved consistency in USPAP. The Board has also changed the current mass appraisal reporting standard to reflect changes previously made to the other reporting standards when the Self-Contained Appraisal Report option was eliminated.

Edits to Advisory Opinion 32, Ad Valorem Property Tax Appraisal and Mass Appraisal Assignments

The ASB has revised AO-32 to reflect the proposed changes to STANDARDS 5 and 6.

DEFINITIONS

For the purpose of *Uniform Standards of Professional Appraisal Practice*, the following definitions apply:

APPRAISAL: (noun) an estimate of value; the act or process of estimating value; (adjective) of or pertaining to appraising and related functions, e.g. appraisal practice, appraisal services.

Comment: An appraisal must be numerically expressed as a specific amount, as a range of numbers, or as a relationship (e.g., not more than, not less than) to a previous value opinion or numerical benchmark (e.g., assessed value, collateral value).

APPRAISAL PRACTICE: valuation services performed by an individual acting as an appraiser, including but not limited to appraisal or appraisal review.

Comment: Appraisal practice is provided only by appraisers, while valuation services are provided by a variety of professionals and others. The terms appraisal, appraisal review, and appraisal consulting are intentionally generic and are not mutually exclusive.

APPRAISAL REVIEW: the act or process of developing and communicating an opinion about the quality of another appraiser's work.

Comment: The subject of an appraisal review assignment may be all or part of an appraisal report, workfile, or a combination of these.

APPRAISER: one who is expected to perform valuation services competently and in a manner that is independent, impartial, and objective.

Comment: Such expectation occurs when individuals, either by choice or by requirement placed upon them or upon the service they provide by law, regulation, or agreement with the client or intended users, represent that they comply.

APPRAISER'S PEERS: other appraisers who have expertise and competency in a similar type of assignment.

ASSIGNMENT: a valuation service that is provided by an appraiser as a consequence of an agreement with a client.

ASSIGNMENT CONDITIONS: Assumptions, extraordinary assumptions, hypothetical conditions, laws and regulations, jurisdictional exceptions, and other conditions that affect the scope of work.

Comment: Laws include constitutions, legislative and court-made law, administrative rules, and ordinances. Regulations include rules or orders, having legal force, issued by an administrative agency.

ASSIGNMENT RESULTS: an appraiser's opinions or conclusions developed specific to an assignment.

Comment: Assignment results include an appraiser's: a) opinions or conclusions developed in an appraisal assignment, not limited to value; b) opinions or conclusions developed in an appraisal review assignment, not limited to an opinion about the quality of another appraiser's work; or c) opinions or conclusions developed when performing a valuation service other than an appraisal or appraisal review assignment. Physical characteristics are not ASSIGNMENT RESULTS.

BIAS: a preference or inclination that precludes an appraiser's impartiality, independence, or objectivity in an assignment.

BUSINESS ENTERPRISE: an entity pursuing an economic activity.

BUSINESS EQUITY: the interests, benefits, and rights inherent in the ownership of a business enterprise or a part thereof in any form (including but not limited to capital stock, partnership interests co-operatives, sole proprietorships, options, and warrants).

CLIENT: the party or parties who engage, by employment or contract, an appraiser in a specific assignment.

Comment: The client may be an individual, group, or entity, and may engage and communicate with the appraiser directly or through an agent.

CONFIDENTIAL INFORMATION: information that is either: (a) identified by the client as confidential when providing it to an appraiser and that is not available from any other source; or (b) classified as confidential or private by applicable law or regulation.*

*Notice: For example, pursuant to the passage of the Gramm-Leach-Bliley Act in November 1999, some public agencies have adopted privacy regulations that affect appraisers. The Federal Trade Commission issued two rules. The first rule (16 CFR 313) focused on the protection of “non-public personal information” provided by consumers to those involved in financial activities “found to be closely related to banking or usual in connection with the transaction of banking.” These activities include “appraising real or personal property.” The second rule (16 CFR 314) required appraisers to safeguard customer non-public personal information. Significant liability exists for appraisers should they fail to comply with these FTC rules.

COST: the amount required to create, produce, or obtain a property.

Comment: Cost is either a fact or an estimate of fact.

CREDIBLE: worthy of belief.

Comment: Credible assignment results require support, by relevant evidence and logic, to the degree necessary for the intended use.

EXPOSURE TIME: estimated length of time that the property interest being appraised would have been offered on the market prior to the hypothetical consummation of a sale at market value on the effective date of the appraisal.

Comment: Exposure time is a retrospective opinion based on an analysis of past events assuming a competitive and open market.

EXTRAORDINARY ASSUMPTION: an assignment-specific assumption as of the effective date that is used in an analysis despite indications that the assumption could be false, and which, if found to be false, could alter the appraiser’s opinions or conclusions.

Comment: Extraordinary assumptions presume as fact otherwise uncertain information about physical, legal, or economic characteristics of the subject property; or about conditions external to the property, such as market conditions or trends; or about the integrity of data used in an analysis.

FEASIBILITY ANALYSIS: a study of the cost-benefit relationship of an economic endeavor.

HYPOTHETICAL CONDITION: a condition, directly related to a specific assignment, which is contrary to what is known by the appraiser to exist on the effective date of the appraisal results, but is used for the purpose of analysis.

Comment: Hypothetical conditions assume conditions contrary to known facts about physical, legal, or economic characteristics of the subject property; or about conditions external to the property, such as market conditions or trends, or about the integrity of data used in an analysis.

INTANGIBLE PROPERTY (INTANGIBLE ASSETS): non-physical assets, including but not limited to franchises, trademarks, patents, copyrights, goodwill, equities, mineral rights, securities, and contracts, as distinguished from physical assets such as facilities and equipment.

INTENDED USE: the anticipated use(s) of assignment results as identified by the appraiser based on communication with the client.

INTENDED USER: the client and any other party as identified, by name or type, as users of the appraisal or appraisal review report by the appraiser based on communication with the client.

Per Advisory Opinion 32: In ad valorem taxation assignments, the client is typically the government or taxing authority that engages the appraiser. As defined in USPAP, the client is an intended user. Through communication with the client, the appraiser may identify other intended users. A party [such as a taxpayer] 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 identifies such party as an intended user.

JURISDICTIONAL EXCEPTION: an assignment condition established by applicable law or regulation, which precludes an appraiser from complying with a part of USPAP.

MARKET VALUE: a type of value, stated as an opinion, that presumes the transfer of a property (a right of ownership or a bundle of such rights), as of a certain date, under specific conditions set forth in the definition of the term identified by the appraiser as applicable in an appraisal.

Comment: The conditions included in market value definitions establish market perspectives for development of the opinion. These conditions may vary from definition to definition by generally fall into three categories: 1) the relationship, knowledge, and motivation of the parties (i.e., sellers and buyers); 2) the terms of sale (e.g., cash, cash equivalent, or other terms); and 3) the conditions of sale (e.g., exposure in a competitive market for a reasonable time prior to sale).

Appraisers are cautioned to identify the exact definition of market value, and its authority, applicable in each appraisal completed for the purpose of market value.

MASS APPRAISAL: the process of valuing a universe of properties as of a given date utilizing standard methodology, employing common data, and allowing for statistical testing.

MASS APPRAISAL MODEL: a mathematical expression, tool, or formula that describes how supply and demand factors interact in a market.

PERSONAL PROPERTY: identifiable portable and tangible objects, which are considered by the general public as being "personal" - for example, furnishings, artwork, antiques, gems, collectibles, machinery, equipment; all property not classified as real estate.

PRICE: the amount asked, offered, or paid for a property.

Comment: Once stated, price is a fact, whether it is publicly disclosed or retained in private. Because of the financial capabilities, motivations, or special interests of a given buyer or seller, the price paid for a property may or may not have any relation to the value that might be ascribed to that property by others.

REAL ESTATE: an identified parcel or tract of land, including improvements, if any.

REAL PROPERTY: the interests, benefits, and rights inherent in the ownership of real estate.

Comment: In some jurisdictions, the terms real estate and real property have the same legal meaning. The separate definitions recognize the traditional distinction between the two concepts in appraisal theory.

REPORT: any communication, written or oral, of an appraisal or appraisal review that is transmitted to the client or a party authorized by the client upon completion of an assignment.

SCOPE OF WORK: the type and extent of research and analysis in an appraisal or appraisal review assignment.

SIGNATURE: personalized evidence indicating authentication of the work performed by the appraiser and the acceptance of the responsibility for content, analyses, and the conclusions in the report.

VALUATION SERVICES: services pertaining to aspects of property value.

Comment: Valuation services pertain to all aspects of property value and can be performed by appraisers and by others.

VALUE: the monetary relationship between properties and those who buy, sell, or use those properties.

Comment: Value expresses an economic concept. As such, it is never a fact but always an opinion of the worth of a property at a given time in accordance with a specific definition of value. In appraisal practice, value must always be qualified - for example, market value, liquidation value, or investment value.

WORKFILE: documentation necessary to support an appraiser's analysis, opinions, and conclusions.

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.

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.

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 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.

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.

COMPETENCY RULE

An appraiser must: (1) be competent to perform the assignment; (2) acquire the necessary competency to perform the assignment; or (3) decline or withdraw from the assignment. In all cases, the appraiser must perform competently when completing the assignment.

BEING COMPETENT

The appraiser must determine, prior to agreeing to perform an assignment, that he or she can perform the assignment competently. Competency requires:

- the ability to properly identify the problem to be addressed;
- the knowledge and experience to complete the assignment competently; and
- the recognition and compliance with all laws and regulations that apply to the appraiser or the assignment.

Competency applies to factors such as, but not limited to, an appraiser's familiarity with a specific type of property, a market, a geographic area, or an analytical method. The background and experience of appraisers varies widely, and a lack of knowledge or experience can lead to inaccurate or inappropriate appraisal practice. The Competency Rule requires an appraiser to have both the knowledge and the experience required to perform a specific appraisal service competently. If an appraiser has been deemed to not have the required competency, the following steps must be taken in acquiring competency in order for that appraiser to perform the assignment under USPAP requirements.

For assignments with retrospective opinions and conclusions (which are allowed under certain prescribed circumstances in property tax work), the appraiser must meet the requirements of this Competency Rule at the time the assignment is performed, rather than the effective date of the appraisal.

ACQUIRING COMPETENCY

If an appraiser determines he or she is not competent prior to accepting an assignment, the appraiser must:

- disclose the lack of knowledge and/or experience to the client before accepting the assignment;
- take all steps necessary or appropriate to complete the assignment competently; and
- describe, in the report, the lack of knowledge and/or experience and the steps taken to complete the assignment competently.

Competency can be acquired in various ways, including, but not limited to, personal study by the appraiser, association with an appraiser reasonably believed to have the necessary knowledge and/or experience, or retention of others who possess the necessary knowledge and/or experience.

In an assignment where geographic competency is required (certainly useful if not outright necessary in property tax appraisal assignments), an appraiser who is not familiar with the relevant market characteristics must acquire an understanding necessary to produce credible assignment results for the specific property type and market involved. Pritchard & Abbott, Inc., takes great pride in assigning and retaining appraisers who gain and then employ local knowledge and geographic competency in their appraisal assignments.

When an appraiser determines in the course of the assignment that he or she lacks the required knowledge and/or experience to complete the assignment competently, the appraiser must:

- notify the client;
- take all steps necessary or appropriate under the circumstances to complete the assignment competently; and
- describe, in the report, the lack of knowledge and/or experience and the steps taken to complete the assignment competently.

LACK OF COMPETENCY

If the appraiser cannot complete the assignment competently, the appraiser must decline or withdraw from the assignment.

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.

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.

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.

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.

- **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.

- **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.

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.

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

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 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 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.

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.

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.

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.

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 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.

USPAP STANDARDS RULE 6-1: MASS APPRAISAL OF RESIDENTIAL REAL ESTATE

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 Residential Division of Pritchard & Abbott, Inc. ("P&A" hereinafter), is responsible for developing fair and uniform market values for real estate parcels within certain Appraisal Districts. P&A contractually provides a wide degree of professional services depending upon each contract requirement.

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 real estate 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.

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 an extension of 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. 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 the standards of the International Association of Assessing Officers (IAAO) regarding its appraisal practices and procedures. P&A 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 proposals to the Office of the Chief Appraiser and is bound to produce mass appraisal estimates on real estate properties within the cost constraints of said proposals. 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 or at the specific request or direction of the Office of the Chief Appraiser.

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.

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.

Appraisal Resources

Personnel: The Real Estate staff consists of licensed Registered Professional Appraisers through the Texas Department of Licensing and Regulation (TDLR), and are qualified to provide the complete range of professional appraisal services required.

Data: Common data characteristics (within each county) for each property are collected in the field and entered into each respective district's computer data base. This property data drives the computer-assisted mass appraisal (CAMA) approach to valuation.

Information Systems: The mainframe systems are augmented by the 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. The appraiser supervising any given contract fields many of the public's questions or redirects them to the proper division.

VALUATION APPROACH (MODEL SPECIFICATION)

Area Analysis: Data involving economic forces such as demographic, patterns, employment and income patterns, trends in real estate property prices and rents, interest rates, availability of property, economic and climatic factors that may affect production of rural lands, are collected from various sources. Any information particular to a given region or appraisal district helps the appraisal staff determine market conditions or trends that may affect market value.

Neighborhood and Market Analysis: Neighborhood analysis involves the examination of how physical, economic, governmental and social forces and other influences affect property values. The effect 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. A neighborhood is defined by natural, man-made, or political boundaries and is established by a commonality based on land users, types and age of buildings or population, the desire for homogeneity, or similar factors.

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. In the period of stability, or equilibrium, the forces of supply and demand are about equal. The period of decline reflects diminishing demand or desirability. During decline general property use may change.

Declining neighborhoods may become economically desirable again and experience renewal, reorganization, rebuilding, or restoration, marked by modernization and increasing demand. The appraisal staff must analyze whether a particular neighborhood is in a period of growth, stability, or decline and predict changes that will affect future use and value. In mass appraisal applications the information can be useful for comparing or combining neighborhoods or for developing neighborhood ratings, which are introduced as adjustments in mass appraisal models.

Site descriptions and analysis provide a description of the subject property and an analysis of factors that affect the market value of the site. Site analysis also provides a basis for allocating values to land and improvements, for analyzing comparable sales to determine the highest and best use of the site, and for estimating locational obsolescence. A description of the subject building and other improvements provides a basis for analysis of comparable sales and rents; for the development of capitalization rates or multipliers; for highest and best use analysis of the site as improved; and for estimation of reproduction or replacement cost new and physical and functional depreciation. The analysis should show how the factors relate to the utility and marketability of the subject property, and, ultimately, its market value. The improvement analysis and the neighborhood analysis focus on similar considerations; for example, whether the improvements represent highest and best use and conform to the neighborhood.

The improvement analysis describes relationships among items and compares them to those in competing properties and to neighborhood standards. Items that will be treated as functional obsolescence in the cost approach need through analysis. The condition of building components is particularly important because it provides the basis for estimates of effective age and remaining economic life.

Currently P&A provides most of its real estate appraisal services in primarily rural areas. The ability to perform detailed neighborhood and market analysis is somewhat limited in these areas where the necessary data is sometimes nonexistent.

Highest and Best Use Analysis: Highest and best use analysis is the culmination of regional, neighborhood, and site analysis. All three are used to help the appraisal staff understand the factors affecting property values in the market being analyzed and the most probable use of the site in long-run economic equilibrium. Highest and best use 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 the maximum, that is, highest and best use. The analysis should be done as of the date of appraisal. Just as real estate values change, the highest and best use of a property may change over time.

DATA COLLECTION/VALIDATION

Data Collection Manuals: Appraisal manuals are developed and distributed to all appraisers involved in the appraisal and valuation of real estate properties. The appraisal manual is reviewed and revised to meet the changing requirements of field data collection.

Sources of Data: Each District's appraisal manual and schedules are adopted and maintained by the P&A appraisal staff. Data used to perform appraisals are generally collected with a joint effort among appraisers and Appraisal District staff. Physical inspections are performed by the appraisers for various situations whether it be a normal reappraisal, a reinspection requested by the District, working building permits, etc.

Data Collection Procedures: Field data collection is coordinated and organized by the field appraisers to insure uniformity in appraisal technique. The staff conducts field inspections and record information on a particular property field worksheet. This data is entered into the respective computer database and serves as the basis for the valuation.

VALUATION ANALYSIS

Cost Schedules: P&A generally adopts existing cost schedules within each Appraisal District in which we provide appraisal services. These schedules are maintained and adjusted as needed to reflect the current market value conditions that are present in each respective district.

Sales Information: Sales are generally collected by the Appraisal District staff and provided to P&A appraisal personnel for sales ratio analysis.

Statistical Analysis: Appraisers perform statistical analysis annually to evaluate whether values are equitable and consistent with market conditions. Appraisal statistics, central tendency and dispersion generated from sales are available for each class of property. These summary statistics include mean and median ratios, standard deviation, and coefficient of dispersion. They provide the analysis information to determine both the level and uniformity of the appraised values involved in the study.

Market Adjustment: Depending upon the data provided by the sales ratio analysis, market value tables may be adjusted accordingly to reflect accurate market values within a particular class of property.

INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review: P&A provides field inspections depending upon the contractual arrangement with the appraisal district. In most cases field inspections are done within the outline of the respective Appraisal District's Reappraisal Plan.

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 real estate 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 the Comptroller considers appropriate.

USPAP STANDARDS RULE 6-2: CERTIFICATION

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

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

		Inspected Property?	Provided Significant Appraisal Assistance?
_____ <i>Appraiser (a)</i>	_____ <i>Date</i>	_____ <i>Yes / No</i>	_____ <i>Yes / No</i>
_____ <i>Appraiser (b)</i>	_____ <i>Date</i>	_____ <i>Yes / No</i>	_____ <i>Yes / No</i>
_____ <i>Supervising Appraiser / Dept. Manager</i>	_____ <i>Date</i>	_____ <i>Yes / No</i>	_____ <i>Yes / No</i>
_____ <i>District Manager</i>	_____ <i>Date</i>	_____ <i>Yes / No</i>	_____ <i>Yes / No</i>

List of other individuals who provided significant mass appraisal assistance in this assignment:

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

- When a signing appraiser has relied on work done by appraisers and others who do not sign the certification, the signing appraiser is responsible for the decision to rely on their work. The signing appraiser is required to have a reasonable basis for believing that those individuals performing the work are competent and that the work of those individuals is credible.
- An appraiser who signs any part of the mass appraisal report, including a letter of transmittal, must also sign this certification. This certification applies to all assignment results and well as all contents of the appraisal report(s).
- The names of individuals providing significant mass appraisal assistance who do not sign a certification must be stated in the certification. It is not required that the description of this assistance be contained in the certification, but disclosure of their assistance is required in accordance with Standards Rule 6-2(g).
- The above certification is not intended to disturb an elected or appointed assessor's work plans or oaths of office.