



2018 Mass Appraisal Report

Bud Black, RPA/CTA

Chief Appraiser



**Freestone Central
Appraisal District**
218 N Mount Street
Fairfield TX 75840

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May 30, 2018

Members of the Freestone County Appraisal Review Board
218 N Mount Street
Fairfield TX

In accordance with the laws of the State of Texas and Uniform Standards of Professional Appraisal Practices (USPAP), I, with the assistance of my staff, have performed a diligent inquiry to ascertain all property subject to appraisal by the Freestone Central Appraisal District. Those properties have been appraised and listed on the appraisal rolls for each of the taxing jurisdictions within the district.

This report summarizes the appraisal considerations and opinions of me and my staff.

The market and taxable values presented in this report are representative of the values included on the Notices of Appraised Values delivered to property owners in May 2018.

Final values will be certified to all taxing jurisdictions once you have heard substantially all property owner protests and taxing unit challenges on or before July 25, 2018.

A handwritten signature in black ink that reads 'Bud Black'.

Bud Black, CTA/RPA
Chief Appraiser

1.00 Introduction

The purpose of this report is to summarize the methods and techniques utilized by the Freestone Central Appraisal District (here after referred to as FCAD) in the valuation and revaluation of taxable property within Freestone County. This report is prepared in accordance with Standard 5 of the Uniform Standards of Professional Appraisal Practice, effective as of January 1, 2018.

The values reported herein have not been challenged or adjusted as the result of taxpayer filed protests before the Appraisal Review Board. Final values will be certified by the Chief Appraiser by July 25, 2018 and after the Appraisal Review Board has made final determinations on protested properties that comprise at least ninety-five percent (95%) of the appraisal roll.

FCAD is a central appraisal district formed by the Texas Legislature in 1979 and is charged with the appraisal of all taxable property within the taxing entities within the district's boundaries. It is responsible for providing appraised values for portions of taxing jurisdictions which are situated in Freestone County.

The district appraises all taxable property for the following taxing authorities:

- Freestone County,
- City of Fairfield,
- City of Teague,
- City of Wortham,
- Dew I. S. D.,
- Teague I. S. D., and
- Teague Hospital District

Additionally, the district provides appraisals of taxable property within Freestone County for the following entities whose territory extends into more one county.

- City of Streetman,
- Buffalo I. S. D.,
- Fairfield I. S. D.,
- Oakwood I. S. D.,
- Corsicana I. S. D.,
- Wortham I. S. D.,
- Mexia I. S. D., and
- Fairfield Hospital District

The Texas Property Tax Code governs the legal, statutory, and administrative requirements of the appraisal district. It is governed by a board of directors appointed by the taxing units within its boundaries. The chief appraiser, appointed by the board of directors, is the chief administrator and chief executive officer of the appraisal district.

The appraisal district is responsible for local property tax appraisal and exemption administration for the fifteen taxing units situated in whole or in part within the county. Each taxing unit adopts 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. The CAD also determines eligibility for various types of property tax exemptions such as those for homeowners, the elderly, disabled veterans, and charitable and religious organizations.

Section 23.01(b) requires the appraisal district to determine market value of property according to generally accepted appraisal methods and techniques. Mass appraisal standards must comply with the Uniform Standards

of Professional Appraisal Practice (USPAP).

The definition of market value as established by the State Property Tax code differs from the definition established by USPAP, therefore, a ***jurisdictional exception*** applies.

The following definition of market value, Section 1.04 of the Texas Property Tax Code, means the price at which a property would transfer for cash or its equivalent under prevailing market conditions if:

- exposed for sale in the open market with a reasonable time for the seller to find a purchaser;
- both the seller and the purchaser know all of 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.

All taxable property is appraised at its market value as of January 1st unless it qualifies for a special valuation (i.e. open space agricultural, timber, or wildlife management). Inventory owners may request to have their property valued as of September 1 if the taxpayer files an application by July 31.

The purpose of and intended use of the appraisal performed by the Freestone Central Appraisal District is to estimate the market value for ad valorem tax purposes for the taxing entities located within the boundaries of FCAD as of January 1, 2018, which is the effective date of this appraisal.

FCAD's goal is to provide professional service to the tax paying public and the taxing entities. Thru its Chief Appraiser, the district promotes and adheres to the professional standards and ethics as set forth by:

- The Texas Department of Licensing (TDLR),
- The Property Tax Assistance Division of the Texas State Comptroller's Office (PTAD),
- The Uniform Standards of Professional Practices (USPAP), and
- The International Association of Assessing Officers (IAAO).

2.00 Area Analysis

The universe of properties appraised by the Freestone Central Appraisal District falls within the physical boundaries of Freestone County's 873 square miles.

The county is situated in east central Texas with its seat of Fairfield being situated approximately 90 miles south of Dallas, 150 miles north of Houston, and 60 miles east of Waco.

Minerals including natural gas and lignite, and the industries associated with them, along with other industrial facilities in the county contribute most of the economic wealth to the county.

Primary employers include those companies that produce oil and gas, as well as local government and the school districts.

Even though the Big Brown Power Generating Facility closed in February 2018, there are still some people employed by or contracted to continue the reclamation process after the closing of the associated mine.

The majority of the land is rural with agricultural production the main use, making farming/ranching a notable occupation in the county. (*Source: Fairfield Industrial Development Corp.*)

Improvements can generally be classified as:

- Single family residences,
- Mobile homes,
- Commercial buildings and personal property,
- Industrial buildings and personal property, and
- Farm/ranch associated buildings (sheds, barns, etc.).

Most areas of the county are un-zoned with the exception of areas where developers have established minimum and maximum building type and size requirements. The City of Fairfield has ordinances for the future placement of mobile homes relating to the quality and age of mobile homes permitted within the city limits.

The district's topography is mostly comprised of low rolling hills in the south and eastern portion of the county turning to mostly flat land in the northern and western parts of the county. The land in Freestone County is located in three dominant eco-regions:

- The Blackland Prairie in the western section,
- The Post Oak Savannah in the central section, and
- The East Texas Timberlands in the eastern section.

The district is responsible for establishing and maintaining appraisal records for 238,413 real, personal, mineral, and industrial property records within the district. A total of \$28,152,351 was added to the appraisal roll for new improvements during the 2018 reappraisal cycle.

The 2018 appraisal roll as of this report date has a total market value of \$3,928,772,774, an increase of \$105,366,858 over the certified value of \$3,823,355,916 for 2017.

Following is breakdown by property group:

Property Group	Market Value	Parcel Count
Land	1,480,105,080	28,580
Improvements	886,734,762	10,367

Property Group	Market Value	Parcel Count
Personal Property	84,715,682	3,302
Minerals/Utilities/Industrial	1,477,217,250	196,164
Total	3,928,772,774	238,413

The table that follows effects the total market and taxable values for each jurisdiction within the district as of the May 30, 2018.

Jurisdiction	Market	Exemption & Special Valuation Adjustments	Taxable	Parcels
County	3,928,772,774	1,756,401,544	2,172,371,230	238,413
Fairfield City	293,940,714	96,409,891	197,530,823	5,367
Streetman City	7,350,839	698,863	6,651,976	414
Teague City	163,032,690	43,150,085	119,882,605	9,686
Wortham City	40,905,566	13,387,469	27,518,097	977
Buffalo ISD	140,460,498	81,254,619	59,205,879	5,824
Fairfield ISD	2,023,971,344	1,073,617,700	950,353,644	56,474
Oakwood ISD	140,912,620	62,557,233	78,355,387	1,834
Corsicana ISD	11,751,267	5,047,076	6,704,191	48
Dew ISD	258,015,182	103,554,681	154,460,501	43,070
Teague ISD	1,106,870,943	423,590,941	683,280,002	141,314
Wortham ISD	244,379,450	121,404,863	122,974,587	3,542
Mexia ISD	2,393,370	243,533	2,149,837	15
Fairfield Hospital	2,023,971,344	936,353,668	1,087,617,676	56,474
Teague Hospital	1,106,870,943	350,878,228	755,992,715	141,314

3.00 Reappraisal Plan

While reappraising property, the Chief Appraiser, with the approval of the Board of Directors, is required to develop policy and procedure necessary to guide his staff in the performance of their duties in a manner that is compliant with state laws and adopted appraisal standards.

3.10 Plan Requirements

Section 6.05(i) of the Property Tax Code requires the board of directors to adopt a reappraisal plan outlining the district's planned activities biennial appraisal activities by September 15 of even numbered years.

The Chief Appraiser submitted a proposed reappraisal plan to the board for consideration and, after conducting a public hearing on August 10, 2016, the plan was adopted for the 2017 and 2018 appraisal years.

Generally, the plan requires the Chief Appraiser to:

- Reappraise approximately one-third of the county each year in order to meet the statutory reappraisal requirements,
- Calibrate appraisal models (cost schedules) annually using available sales data so to achieve an acceptable appraisal level according to the requirements of the Standard on Ratio Studies adopted by the International Association of Assessing Officers (IAAO) and the Property Tax Assistance Division of the Texas Comptroller of Public Accounts (PTAD),
- Administer the application and granting of state approved special valuations and exemptions, and
- Maintain and enhance the district's mapping system.

3.20 Plan Performance

The Chief Appraiser and his staff were able to complete the majority of the appraisal assignment as required by the reappraisal plan as adopted and amended by the board of directors.

Extended illness and reassignment of personnel resulted in the failure to perform site inspection on approximately 600 parcels. Although these parcels were slated for 2018 review, those parcels were inspected within the 3 year mandated appraisal cycle and will be physically inspected before the 2019 cycle commences.

During the scheduled reappraisals and on-site property inspections, appraisers validated all information and property characteristics listed on the property record cards and made updates as necessary.

Following is an example of the field record utilized by staff real estate appraisers in their on-site inspections:

CONFIDENTIAL APPRAISAL CARD FOR FREESTONE CAD Appraisal Year: 2018

ACCT: 33060-00082-00000-000000	PARCEL TYPE: 20165 / R	LOC CODE: 11	JUN CODE: 00 01 31 60	CAT CODE: A1	MTG: ASENT
OWNER: R48045	OWNER INT: R48045/1	LEGAL 1: LAKEWOOD ADDN	LEGAL 2: LOT B2	NEIGHBOR: LWOOD	APPR YEAR: 2018
SMALL JOHN G & MARY	HS CODE: 0	LEGAL 3:	LEGAL 4:	RD TYPE: PAVED	APPR DATE: 10/04/2017
185 SUSAN CIRCLE	DISABLED VET:	PROP ADDR: 177 SUSAN CIRCLE		UTIL TYPE: ESW	APPR NAME: JASON
FAIRFIELD TX 75840	CEILING TAX:			ECONOMIC:	MAP: B0035/1008
				ROUTING:	GPS:
				ROUTE CODE/ORDER: BLW0DZ55	

SEQ	ACRES	SQ FT	FRONT FT	REAR FT	FRONT FT AVG	DEPTH	DEP %	CLASS	COST	REAL				MKT VAL	CLASSCD	COST	AG				VALUE	CAT
										% RD	% GO	% AGR	% UNCL				% GO	% AG	% UNCL	% UNCL		
1	0.6327	27558.77	80.90	148.90	114.90	239.85	1.00	FFLW61	80.00	0.00	1.00	1.00	0	8.894	/	0.00	0	1.00	1.00	0	0	A1

SEQ	TYPE	CLASS	HS	YR BLT	EFF YR	AGE	CONDN	NOTES	TTL AREA	COST	% GO	% FD	% EC	% CP	% EX1	% EX2	EXTRA	TOTAL VAL	CAT CODE
1	RB04	LA	Y	1978	1980	38	A		1,053	97.10	0.550	1.000	0.920	1.000	1.000	1.000	0	51,737	A
2	PORCH04	OPEN	Y	1978	1980	38	A		103	24.85	0.550	1.000	0.920	1.000	1.000	0	1,241	A	
3	PORCH04	OPEN	Y	1978	1980	38	A		70	25.75	0.550	1.000	0.920	1.000	1.000	0	912	A	
4	RB04	AG	Y	1978	1980	38	A		464	3,168	0.550	1.000	0.920	1.000	1.000	0	7,842	A	
5	RB04	ST	Y	1978	1980	38	A		80	42.00	0.550	1.000	0.920	1.000	1.000	0	1,737	A	
6	REPLAC04	MET	Y	1978	1980	38	A		1	1,930.00	0.550	1.000	0.920	1.000	1.000	0	308	A	

SEQ	DESCRIPTION 1	DESCRIPTION 2	CONTACT	ORIG COST	TREND	SERVICE	DEP	AGE	SVC LIFE	EXP LIFE	TOTAL VALUE

ACRES: 0.6327	OWNERS ACRES: 0.6327	LARGER TRACT: 2.23	LAND HS: 0	IMP HS: 64,395	TOTAL MKT: 71,289
ABST NUM: PL	SIC CODE: 0.00	IR WELLS: 0.00	LAND NIS: 6,894	IMP NEW HS: 0	TOTAL TAXABLE: 71,289
TRACTILOT: 3259	IR ACRES: 0.00	CAPACITY: 0.00	PROD MKT: 0	IMP NIS: 0	TOTAL OWNER INT: 1,000,000
			PROD IN/TIME: 0	IMP NEW NIS: 0	OWNER VALUE: 71,289
			TOTAL LAND MKT: 6,894	IMP TOTAL: 64,395	

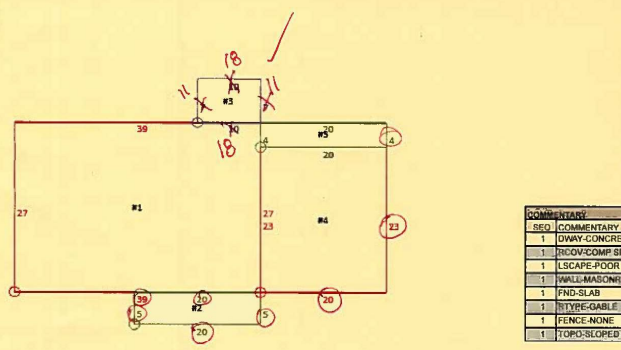
YEAR	CHG SEQ	OWNER ID	NAME	HOMESTEAD CODE	LAND MKT	LAND TAXABLE	TOTAL IMPSPERS	TOTAL MKT	MKT TAXABLE	CAPPED TAXABLE
2017	1.00	R48045	SMALL JOHN G & MARY		5,460	5,460	66,735	72,196	72,196	0.00
2016	1.00	R48045	SMALL JOHN G & MARY		3,822	3,822	86,574	84,346	84,346	0.00
2015	1.00	R48045	SMALL JOHN G & MARY		3,822	3,822	85,813	89,635	89,635	0.00
2014	1.00	R48045	SMALL JOHN G & MARY		3,822	3,822	83,828	87,700	87,700	0.00
2013	1.00	R48045	SMALL JOHN G & MARY		3,820	3,820	84,940	88,760	88,760	0.00

for Mary's house

CONFIDENTIAL APPRAISAL CARD FOR FREESTONE CAD Appraisal Year: 2018

User Cd 1: User Cd 2: User Cd 3: User Cd 4: User Cd 5: User Cd 6: Photo on File: No

- #1 RB04
- #2 PORCH04
- #3 PORCH04
- #4 RB04
- #5 RB04



SEQ	COMMENTARY	VALUE	UNIT
1	DWAY-CONCRETE	0.00	
1	ROOV-COMP SHING	0.00	
1	LSCAPE-POOR	0.00	
1	BWLL-MASONRY	0.00	
1	FND-SLAB	0.00	
1	STYBE-GABLE	0.00	
1	FENCE-NONE	0.00	
1	TOPO-SLOPED	0.00	

Observed cracks in brick on West side of home Not enough to adjust at this time RB

SEQ	CALLS
6	
2	USFR000SL20
3	UTR100D7L10
4	USFR000SL20
5	USFR000SL20
1	USFR000SL20

SEQ	PREVIOUS OWNER	DEED DATE	VOLUME	PAGE	FILE #	PRICE	ADJ PRICE	MKT AT SALE
3		11/11/1911	0	0		10	10	0
4	RICHIERSON CLYDE		0	0		10	10	0
5	RICHIERSON IRENE	04/18/2003	0	0		10	10	51,340
6	RICHIERSON IRENE EST	09/17/2003	1239	752		89,600	0.500	56,400

CONFIDENTIAL APPRAISAL CARD FOR FREESTONE CAD		Existing Improvement Data Collection Sheet		Appraisal Year: 2018
Parcel: 20165	Physical Address: 177 SUSAN CIRCLE			
Name: SMALL JOHN G & MARY	Pictures: (14) 15-16-17			
Road Type <input type="checkbox"/> Asphalt/Concrete <input type="checkbox"/> Gravel <input type="checkbox"/> Oil Sand <input type="checkbox"/> Dirt <input type="checkbox"/> Trail	Foundation <input type="checkbox"/> Slab on grade <input type="checkbox"/> Pier/concrete block <input type="checkbox"/> Pier/concrete footing <input type="checkbox"/> Wood Block <input type="checkbox"/> Mobile Home <input type="checkbox"/> None Other:	Fireplaces <input type="checkbox"/> Masonry <input type="checkbox"/> Metal	Pools <input type="checkbox"/> Gunite <input type="checkbox"/> Vinyl <input type="checkbox"/> Above Ground	Mobile Homes Label # _____ Serial Number: _____
Utilities Available <input type="checkbox"/> Electricity <input type="checkbox"/> Gas <input type="checkbox"/> Sewer <input type="checkbox"/> Water	Exterior Wall <input type="checkbox"/> Masonry <input type="checkbox"/> Wood/Stucco <input type="checkbox"/> Steel <input type="checkbox"/> Log <input type="checkbox"/> Vinyl or Alum Siding <input type="checkbox"/> Plyboard panel Other:	Additional Sketch Area Use this area to sketch any structures that you have discovered that cannot be sketched on the CAMA printout legibly.		
Driveway <input type="checkbox"/> Dirt <input type="checkbox"/> Gravel <input type="checkbox"/> Asphalt <input type="checkbox"/> Concrete	Roof Type <input type="checkbox"/> Gable <input type="checkbox"/> Hip <input type="checkbox"/> Flat <input type="checkbox"/> Shed Other:			
Landscaping <input type="checkbox"/> None <input type="checkbox"/> Poor <input type="checkbox"/> Average <input type="checkbox"/> Good	Roof Cover <input type="checkbox"/> Composition Shingle <input type="checkbox"/> Metal - Standing Seam <input type="checkbox"/> Metal - Pre-formed seams <input type="checkbox"/> Metal - Corrugated/fin <input type="checkbox"/> Metal - Heavy <input type="checkbox"/> Wood Shingle <input type="checkbox"/> Slate <input type="checkbox"/> Clay Tile <input type="checkbox"/> Mobile Home Other:			
Topography <input type="checkbox"/> Level <input type="checkbox"/> Sloped <input type="checkbox"/> Eroded <input type="checkbox"/> Rough <input type="checkbox"/> Low	Air Conditioning <input type="checkbox"/> Central AC/H <input type="checkbox"/> Central Heat only <input type="checkbox"/> Window Units <input type="checkbox"/> None			
Fencing <input type="checkbox"/> None <input type="checkbox"/> Barbed Wire <input type="checkbox"/> Chain Link <input type="checkbox"/> Wood Privacy <input type="checkbox"/> Plank <input type="checkbox"/> Pipe <input type="checkbox"/> Field <input type="checkbox"/> Wood Rail <input type="checkbox"/> Brick/Masonry	Other Observations Correct measurement of porch			Reviewed by: <i>JB</i> Date: 2-26-2018
2/19/2018 2:51:50PM		PARCEL: 20165	ACCT: 33080-00082-00000-000000	Parcel Page: 1 of 1 Page 169 of 328

After completion of the inspection pictures are taken (and appended to the worksheet prior to its archival) to document the observations of the appraiser. Pictures include a representation of the front view, back view, and any other buildings. Pictures are also taken of characteristics for which an appraiser may make an adjustment.





New properties were discovered from:

- City building permits,
- Material and Mechanic Liens filed in the County Clerk's Official Records,
- Mobile home installation reports (from Texas Department of Transportation),
- Utility connection reports,
- 911 address assignments,
- Septic system permits,
- Advertisements, and
- Renditions.

A copy of the completed *On-Site Improvement Inspection Schedule* is attached as *Addendum 1*.

Land records of properties in the scheduled reappraisal area were reviewed by utilization of the most recent versions of aerial photography available from the United States Department of Agriculture (USDA) and Google Earth. During this review, land records were updated to include:

- Soil classification (according to the Natural Resource Conservation Service (NRCS));
- Calculated acreages for ground cover;
- Calculated acreages affected by gas well pads and pipeline/electric transmission rights of way.

A copy of the *Land Inspection Schedule* is attached as *Addendum 2*.

All business personal property (personal property used for the production of income) was scheduled for an on-site inspection. During these inspections, ownership of all property located at a business location and its ownership were verified and/or listed in the appraisal records. Inspections included the classification of inventories, furniture, and fixtures according to their quality and density so that the accuracy of owner rendition statements could be verified when received. A copy of the *Business Personal Property Inspection Schedule* is attached as Addendum 3.

Final appraisal model calibration was performed in March and April prior to the preparation of notices of appraised values. Throughout the appraisal cycle, letters requesting sales information were sent to both buyers and sellers as ownership records were changed in the CAMA system. Additional sales information was obtained from the district's MLS subscription. Occasionally, sales information was received from closing statements and title policies provided by the property owners. This information was entered in to the district's sales database in its CAMA system where sales ratio reports were ran to identify areas and property classes that needed review and adjustment.

Exemption and special use valuation applications were mailed to taxpayers in January with explanations regarding the need to re-file applications. Throughout the year, parcels where the ownership or use had changed were flagged for the removal of the exemption/special valuation. Properties that had received an exemption for more than ten years were flagged for owners to file an updated application to verify the continued qualification for the exemption/special valuation.

Applications received by the district were reviewed for qualifications by staff appraisers. Taxpayers were notified by certified mail when the application was denied or was applied partially to the property for which the application was made.

Documents received from the Texas Commission on Environmental Quality (TCEQ) were reviewed as received. Exemptions were granted on these properties when application was filed with and approved by the commission.

Available resources and staffing are discussed under the heading of **Resources** later in this report.

The district's mapping system was updated weekly to reflect the most recent property ownership information in the district's CAMA system. The mapping department was responsible for obtaining necessary documents to make ownership changes to the mapping and appraisal records from the Freestone County Clerk's Office and from property owners.

4.00 Valuation Approach Requirements

The district must employ generally accepted appraisal techniques as recognized in the Uniform Standards of Professional Appraisal Practice (USPAP) (published by The Appraisal Foundation). As required by state law, policies and operational procedures must be developed and compliant with appraisal standards, theory, and methodology established by the International Association of Assessing Officers (IAAO) and the State Comptroller's Property Tax Assistance Division (PTAD).

All property should to be appraised at its highest and best use. For real estate, this is defined as the most reasonable and probable use of land that will generate the highest return to the property over a period of time. The use must be legal, physically possible, economically feasible and the most profitable of the potential uses. An appraiser's identification of a property's highest and best should be considered a statement of opinion and never a statement of fact.

In order to complete the highest and best use analysis of a property, an appraiser must estimate its highest and best use as if the land were vacant, ignoring the value and restrictions created by existing improvements and remembering that it is the highest value the land could have if it were available for any legal, physically possible and economically feasible kind of development.

State law requires the appraisal district to appraise the land and improvements of residence homestead parcels solely on the basis of their value as a residence homestead regardless of highest and best use. *A jurisdictional exception from the USPAP standard applies to the appraisal of residential homestead properties.*

In a mass appraisal system, values should most often be determined by the application of a series of schedules for replacement cost and depreciation that have been tested against current market data; however, the district's appraisers may consider the most appropriate of the three approaches to value when determining a property's value:

- Cost Approach,
- Market (or Sales Comparison) Approach, and
- Income Approach.

Generally, land in the district should be appraised by the Market Approach but may be appraised by the Income Approach if the property is marketable as an income producing investment (i.e. rv parks, etc.).

Improvements should be generally appraised using the district's cost schedules. (Determining a value in this method, creates a blending of the cost and market approaches to value.) Generally, the replacement cost new of a structure should be estimated and adjusted for:

- Age and condition of the property,
- Location (neighborhoods), and
- Observed functional or economic obsolescence.

However, the income approach to value may be the most appropriate approach considered for properties in which the most attractive reason for ownership is the production of income. This approach should be considered for properties such as hotels, motels, rv parks, self-storage units, warehouses, etc.

Business personal property should be appraised according to field observations and rendition reports filed by property owners. When original cost data is available, furniture, fixtures, machinery, and equipment should be

valued by indexing the original cost to a current replacement cost then applying appropriate accrued depreciation according to the remaining economic life of the items. Inventories may be valued as rendered if the rendered value is reasonable when compared to field observations of quality and density. When no rendition is filed, cost schedules should be used to estimate value per square foot of business area according to quality and density ratings. Section 23.12 (a) of the Property Tax Code defines the market value of an inventory as the price for which it (inventory) would sell as a unit to a purchaser who would continue the business.

Oil, gas, utilities, and industrial properties are valued by an outside appraisal firm contracted to perform such services. The firm is contractually responsible for appraising these properties according to generally accepted appraisal techniques.

In the valuation of these properties, general considerations include:

- Projected production life of wells,
- Historical average gas prices and operating expenses,
- Current division orders (for current ownership and interest information), and
- The Comptroller's Price Adjustment Factor

(NOTE: A jurisdictional exception from the USPAP standard is taken in the application of the Price Adjustment Factor which limits the appraiser's opinion of market value.)

5.00 Valuation Requirements Applied

In order to assign values to properties that were representative of the local market, the district employed generally accepted appraisal techniques as outlined in the **Valuation Requirements Section** of this report.

In a mass appraisal system, values are typically determined by the application of an appropriate value schedule to a property, based upon certain individual characteristics. In order for these value schedules to accurately represent the local market, they were tested and evaluated to validate their ability to generate values that meet the required standards.

FCAD land cost schedules were developed from local market data. Residential and commercial improvement schedules were based upon Marshall & Swift Valuation Service cost tables, modified to fit the local market. Business personal property schedules were based upon the schedules prepared by the Property Tax Division of the Texas Comptroller of Public Accounts. (Marshall & Swift Valuation Service is a national based cost manual and is generally accepted throughout the nation by the real estate industry.) Values were estimated on the local level by incorporating modifiers by neighborhood (as defined earlier in this report) to adjust the cost to the local market.

The district also collected information regarding rental rates for commercial properties to develop its appraisal modes for various income producing properties.

Primary steps involved in the reappraisal process included:

- The gathering of sales information,
- Sales ratio studies,
- Appraisal model calibration (testing of schedules),
- Field review of property,
- Administration of exemptions and special valuations,
- Notification of the taxpayer, and
- Certification of the appraisal roll to the taxing entities.

5.10 Performance Testing

In the calibration of the district's appraisal models, the Chief Appraiser and his staff performed a series of statistical tests in accordance with the Standard for Ratio Studies as adopted by the International Association of Assessing Officers (IAAO). The final report titled *FCAD Internal Appraisal Ratio Study For Values Appraised as of January 1, 2018* is attached as *Addendum 4* of this report.

Sales ratio studies were used to evaluate the district's mass appraisal performance. These studies not only provided a measure of performance but also were an excellent means of improving mass appraisal performance. FCAD used ratio studies not only to aid in the revaluation of properties, but also to test the results of the Property Tax Division's *Property Value Study*.

5.11 Independent Performance Tests

Under the authority of Chapter 5 of the Texas Property Tax Code and Section 403.302 of the Texas Government Code, the State Comptroller's Property Tax Division (PTD) conducts a property value study (PVS) of each Texas school district and each appraisal district bi-annually. As a part of this annual study, the Property Tax Division of the Texas State Comptroller's Office is required to:

- use sales and recognized auditing and sampling techniques;
- review each appraisal district's appraisal methods, standards and procedures to determine whether the district used recognized standards and practices (MAP Review);
- test the validity of school district taxable values in each appraisal district and presume the appraisal roll values are correct when values are valid; and,
- determine the level and uniformity of property tax appraisal in each appraisal district.

The methodology used in the property value study includes stratified samples to improve sample representativeness and techniques or procedures of measuring uniformity. This study utilizes statistical analysis of sold properties (sales ratio studies) and appraisals of unsold properties (appraisal ratio studies) as a basis for assessment ratio reporting. For appraisal districts, the reported measures include median level of appraisal, coefficient of dispersion (COD), the percentage of properties within 10% of the median, the percentage of properties within 25% of the median, and price-related differential (PRD) for properties overall and by state category (i.e. A, B, C, D, and F1 are directly applicable to real property).

Eight independent school districts are situated in whole or part in Freestone Central Appraisal District for which appraisal rolls are annually developed. The preliminary results of this study are released in January in the year following the year of appraisal. The final results of this study are certified to the Education Commissioner of the Texas Education Agency (TEA) in the following July of each year for the year of appraisal. This outside (third party) ratio study provides additional assistance to the CAD in determining areas of market activity or changing market conditions. The most recent Property Value Study was conducted by PTAD in the district in 2017. Final results of that study will be released in August 2018.

5.12 Pilot Studies

Pilot studies were utilized to test new or existing procedures or valuation modifications in a limited area (a sample of properties) of the district and were also considered whenever substantial changes were made. These studies, which included ratio studies, were performed to reveal whether the new system was producing accurate and reliable values or whether procedural modifications were required.

FCAD coordinated its discovery and valuation activities with adjoining appraisal districts. Numerous field trips, interviews and data exchanges with adjacent appraisal districts were conducted to ensure compliance with state statutes.

5.13 Valuation Analysis (Model Calibration)

Model calibration involves the process of periodically adjusting the mass appraisal formulas, tables and schedules to reflect current local market conditions. Once the models have undergone the specification process, adjustments can be made to reflect new construction procedures, materials and/or costs, which can vary from year to year. The basic structure of a mass appraisal model can be valid over an extended period of time, with trending factors utilized for updating the data to the current market conditions. However, at some point, if the adjustment process becomes too involved, the model calibration technique can mandate new model specifications or a revised model structure.

Sales ratio studies are conducted which record the appraisal summary statistics before and after schedule modification. These statistics, including but not limited to the median, mean, and weighted mean, standard deviation, and coefficient of dispersion, provide the district's appraisers a tool by which to determine both the level of and uniformity of appraised value on a stratified basis. The level of appraised values is determined by the weighted mean for individual properties within an area. Review of the standard deviation and coefficient of dispersion

discerns appraisal uniformity within and between stratified neighborhoods.

Each neighborhood is reviewed annually by the district through sales ratio analysis. The first phase involves neighborhood ratio studies that compare the recent sales prices of neighborhood properties to the appraised values of these sold properties. This set of ratio studies affords the district an excellent means of judging the present level of appraised value and uniformity of the sales. The appraisal staff, based on the sales ratio statistics and designated parameters for valuation update, makes a preliminary decision as to whether the value level in a neighborhood needs to be updated, or whether the level of market value in a neighborhood is at an acceptable level.

5.14 Market Adjustments or Trending Factors

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

Market, or location adjustments (neighborhood and/or economic) were applied uniformly within neighborhoods to account for location variances between market areas. Once the market-trend factors were applied, a second set of ratio studies were generated that compares recent sales prices with the proposed appraised values. From this set of ratio studies, the staff judged the appraisal level and uniformity for neighborhoods, school districts, and the appraisal district as a whole.

The cost approach to value was applied to all improved real property utilizing the comparative unit method. This methodology involves the utilization of national cost data reporting services as well as actual cost information on comparable properties whenever possible. Cost models were typically developed based on the Marshall Swift Valuation Service. Cost models included the derivation of replacement cost new (RCN) of all improvements. These included comparative base rates, per unit adjustments and lump sum adjustments. This approach also employs the sales comparison approach in the valuation of the underlying land value.

Appraisal models were modified by these factors utilizing the following formula:

$$MV = (LV * RF * OLA) + (AIV * NH)$$

where:

MV	Represents the market value of the whole property
LV	Represents the unadjusted value of the land as determined by applying the appropriate land appraisal model to the parcel's land area.
RF	Represents the modification factor (applied to land only) typically assigned for location or topography adjustments
OLA	Represents a modification factor (applied to land only) assigned at the appraiser's discretion to make further adjustments as a "cost to cure" the condition.
AIV	Represents adjusted improvement value as determined by the model formula for improvement valuation (discussed further in the valuation of improvements section below)
NH	Represents the neighborhood location factor that adjusts the value of the improvements only for location.

5.15 Final Valuation Schedules

Based on the market data analysis and review discussed previously, models are calibrated and finalized. The calibration results were keyed into the schedules and models on the CAMA system for utilization on all parcels in the district. Results of the internal property value study conducted by FCAD appraisal staff are attached to this report in *Addendum 4*.

5.20 Valuation of Real Estate

5.21 Land

Land pricing schedules were divided into neighborhoods according to geographic location based upon market sales analysis. FCAD has identified areas where the market indicated delineation from the otherwise typical price per acre. The county's three distinct eco-regions have definite characteristics that affect not only the soil productivity but also affect the element of "eye appeal" to potential buyers. Sales of property in the Post Oak Savannah and East Texas Timberland portions of the county are more plentiful than those in the Blackland Prairie section. It appears that the sections of the county where varieties of pine, and oak and other evergreen and hardwood trees either scatter or cover tracts are more desirable to the non-resident property owners (usually from metropolitan areas of the state) for recreational purposes such as hunting or hobby farming.

Schedules for the valuation of land were divided into classifications according to geographic location. Land was priced according to this schedule unless it fell into another pricing area that was more specific to that geographic location, i.e. a pricing table for a specific subdivision. FCAD maintained and published its land pricing schedules on its local intranet. Color keyed maps provided definitions of general area and specific neighborhood price codes and costs.

Home-site property that was situated outside of city boundaries had an additional flat cost of \$2,500 added to the land value for contributory value added for the presence of utilities including water, telephone, and septic systems.

Special consideration was given to land that has outside influences that affect it. For example, property that was located inside or near one of the towns usually was given a higher price per acre because of its highest and best use consideration.

Appraisers sometimes determined that the market value of land was not best estimated by using a pricing schedule. Land that had physical characteristics that affected from its usefulness, such as severe erosion, lack of public access, and other outside physical or economic factors, were adjusted for such. The district maintained schedules for deviation from its typical land schedules in its in-house local intranet. Other variations from the pricing schedules were made via "flat value". Calculations for estimating the flat value and proper notation supporting the deviation from the schedule were attached by appraisers to the property record as maintained in the district's CAMA system.

The mathematical function of interpolation (the process of estimating the outcomes in between sampled data points) in the valuation of "typical land" was used in the CAMA system to determine unique costs based upon exact tract sizes. In using this function, parcels would only use the posted schedule cost when the acreage (or larger tract acreage) was



an exact match to the acreage stored in the cost table. In all other instances, the CAMA system calculated exactly what the estimated cost was based upon the acreage ranges and costs stored in the table. For example, if a land cost for 10 acres was \$2,000/acre and the land cost for 20 acres was \$1,000, then the appraised cost for a 15 acre tract was estimated at the interpolated cost of \$1,500/acre (because it was exactly half way between the two data points).

5.22 Improvements

FCAD valued improvements (buildings and other improvements on and to land) via a series of appraisal models that categorized structures according to construction type, quality, and intended use. These appraisal models were developed and modified for local markets (neighborhoods) using various sources.

General categories include schedules for:

- Site Built Single Family Homes
- Mobile Homes
- Multi-Purpose Storage Buildings
- Commercial Buildings
- Miscellaneous Improvement schedules
- Business Personal Property

In the valuation of these properties, appraisers must consider the effects of

- Construction Quality
- Accrued Depreciation (based upon effective age and condition ratings)
- Economic Neighborhoods
- Functional Obsolescence, and
- Other observed deviations from the appraisal model.

The district also maintained percent good tables to estimate depreciation on structures based on their age (or effective age) and condition as rated by physical inspection by reviewing staff appraisers.

Additional consideration was sometimes given for a loss of value due to external economic factors which have an adverse effect on the property (i.e. garbage dump next door). These allowances for economic or functional obsolescence were made on a case by case basis and were the expressed professional opinion of the reviewing appraiser. Likewise, additional consideration was sometimes given to structures that were incomplete. The district developed a schedule that estimates the degree of completion based upon the presence/absence of various building components. Reasons for the extra allowances were noted on the parcel record in the district's CAMA system.

The basic formula for estimating market value that was used is:

$$MV = LV + (SF * C * WH * \%GD * \%FC * \%EC * NH)$$

Where:

- MV represents market value,
- LV is the cost of land, valued as if vacant and at its highest and best use,
- SF is the square footage of the area type,
- C indicates the area cost from the district's pricing schedules,
- WH represents a factor to be applied when the wall height exceeds that which is typical for the construction type. %GD represents an age and condition rating from field evaluation,
- %FC represents any functional obsolescence found in the property, making it less physically desirable by

design, and,

- %EC is the appraiser's estimate of value lost due to economic conditions that may exist outside the property. Market or location adjustments (neighborhood factors) are applied uniformly within neighborhoods to account for location variances between market areas in the NH field.

Following are summaries of some of the significant considerations in the valuation of the cited appraisal models.

5.23 Single Family Homes

Residential Valuation Schedules are divided into six dominate construction types:

- Frame,
- Brick,
- Plywood,
- Synthetic Plaster,
- Steal, and
- Log.

Each of these construction types was further divided into nine different quality types with Type 1 being the lowest quality and Type 9 being the highest quality. These cost schedules were used universally throughout the district. An extensive review and revision of the residential cost schedules was performed for 2016. Data characteristics of newly constructed and recently sold residential properties were compared to the cost schedules of *Marshall & Swift*. The results of this comparison were analyzed using statistical measures, including stratification by quality and construction type as well as review of estimated building costs plus land to sales prices. As a result of the analysis, appraisal models for these properties were adjusted.

To further refine the appraisal mode for these properties, *market area (or neighborhood) factors* were reviewed and adjusted to more accurately reflect the effect of property location in regard to the appraisal mode. These codes were statistically reviewed in the district's 2016 internal ratio study and adjusted in compliance with the state legislative mandates determining market value as well as uniformity of appraisal while remaining within the required confidence interval.

The mathematical function of interpolation (the process of estimating the outcomes in between sampled data points) was implemented in the valuation of site built residential property. In using this function, building records would only use the posted schedule cost per unit when the total square footage for the building class was an exact match to the footage stored in the cost table. In all other instances, the CAMA system calculated exactly what the estimated cost should be based upon the square footage ranges and costs stored in the table. For example, if the total living area (LA) of a type 3 brick house (RB03) was 1350 square feet and the district's cost tables record cost for 1300 square feet living area at \$53.81 and 1400 square feet at \$53.01, then the appraised cost for 1350 square feet of living area was estimated at the interpolated cost of \$53.41 (because it was exactly half way between the two data points).

Residential valuation schedules were cost-based tables modified by actual data from the county. The cost reflected actual replacement cost new of the subject. Market research indicated that the common unit of comparison for new residential construction as well as sales of existing housing was the price paid per square foot. The value of extra items (fireplaces, swimming pools, etc.) was based upon its contributory value to the property. This value was estimated by the price per square foot or a value of the item as a whole. This data was extracted from the market by paired sales analysis when data was available, and through conversations with local appraisers and

brokers.

FCAD depreciation tables were divided into eight different condition ratings with a percentage loss of value assigned according to the “effective age” of the structure. (Effective age differs from the chronological age in that effective age considers the additional life that a structure has gained from remodeling or extensive repair. For example, a house that was built in 1922 may have an effective age of 1990 after extensive repair has been done to the foundation, roof repair, and the addition of a modern kitchen and bathrooms and central heat and air.) The eight condition ratings range from *excellent condition* where all items that can normally be repaired or refinished have recently been corrected to *unsound* where the building is definitely unsound and practically unfit for use. The interior condition of a structure was assumed to be similar to the exterior. When requested by a property owner, an interior inspection was made by appointment.

Foundation failure occurs in varying degrees and values were adjusted (by schedule) after an appraiser’s inspection. Allowances were made, based upon the cost to cure, for foundation problems that adversely affect the property.

Incomplete improvements were listed on the appraisal records according to their degree of completion, according to the district’s schedule for such.

Other allowances for economic or functional obsolescence were made on a case by case basis.

5.24 Treatment of Residence Homesteads

Texas law mandates limits of taxable value increases on property that receives a residence homestead exemption. While the market value may be increased according to the local real estate market, the taxable value of the property is subject to limitation (*homestead cap*) beginning in the second year a property receives the exemption. The value for tax purposes (appraised value) of a qualified residence homestead will be the lesser of:

- the market value; or,
- the preceding years appraised value:
 - plus ten percent for each year since the property was re-appraised;
 - plus the value of any improvements added since the last appraisal.

Values of capped properties were recomputed. When a capped property sold, the cap automatically expired on January 1st and was removed from the parcel. The home was reappraised at its market value for 2017 to bring its appraisal into uniformity with other properties.

As required by state law, the appraisal district appraised the land and improvements of residence homestead parcels solely upon the basis of their value as a residence homestead regardless of highest and best use.

When rendered as such, contiguous properties owned by developers that were unoccupied and never produced income for the owner were appraised as residential inventory. Properties receiving this special valuation in 2016 that were sold prior to January 1, 2017 were appraised at market value without the benefit of the special valuation.

FCAD maintains cost schedules and age/condition/depreciation tables for single-family homes in its appraisal manual, via its local intranet.

5.25 Mobile Homes

FCAD mobile home pricing schedules were based upon *Marshall & Swift* cost schedules and were set to

reflect the values reported by this source as of January 1, 2017. As a means of testing accuracy of the values, the district also used *NADA Mobile Home Cost Guide* as a reference.

Mobile homes were divided into three dominate construction classes with Class 1 being the lowest quality and Class 3 being the highest quality. Appraisal models include costs for both the mobile home main (living) areas and tag along units.

The mathematical function of interpolation was applied to these appraisal models in the same manner is that of single family homes discussed above, allowing for an adjusted cost based upon the total living area of these properties.

Depreciation schedules based upon the three construction quality ratings were applied to the estimated replacement costs for these properties. Appraisers assigned a condition rating ranging from good to poor, to adjust values for exceptional or deferred maintenance. In some cases, the effect of depreciation was speed up or slowed down by the adjustment of the effective age of the structure.

Other allowances for economic or functional obsolescence were made on a case by case basis.

Mobile home owners that qualified the structure as a residence homestead were allowed the same value increase limitation as site-built single family homestead properties.

5.26 Multi-Purpose Buildings

The district restructured its appraisal model to include cost schedules for pre-fabricated and site-built multi-purposed buildings as multiple appraisal models could be selected by appraisers to classify like properties. To eliminate duplication of appraisal models and the possibility of misclassification of these structures, the district eliminated its appraisal models for sheds, barns, and storage buildings.

Multi-purpose utility buildings were defined as structures whose primary purpose is for storage of miscellaneous items, such as equipment, hay, or other items.

FCAD classified multi-purpose utility buildings on three dominant factors:

- **Construction orientation** – considering whether the structure is site-built or constructed from a prefabricated building kit;
- **Construction material quality** – considering the quality of the type of material used in the construction of the structure (ranging from cheap or economy to good materials); and,
- **Quality of workmanship** – considering whether the structure was constructed in an amateur or professional grade manner.

These structures range from amateur constructed pole barns and sheds with one (or no) wall of low quality material to professionally constructed metal buildings with 26 gauge metal siding on all walls. In determining the market value of multi-purpose utility buildings, FCAD developed and maintained an appraisal model based upon the conditions of the local market.

Value was estimated on these properties by appraiser through:

- Classification of the property according to its relationship to the defined appraisal model (i.e. quality of construction),
- Consideration of any size factors (i.e. square footage and height),
- Adjustments for any deviation from the defined appraisal model:
 - missing or added components,
 - accrued depreciation (based upon age and observed condition ratings),
 - any functional obsolescence,
 - identification of neighborhood location and influences.

5.27 Commercial (Generally)

Unless the income approach to value was deemed the most appropriate indicator of market value of a property, FCAD estimated market value of commercial improvements within its jurisdiction according to the type and quality of the improvement's construction. FCAD divided commercial buildings into three dominate construction types - masonry, steel frame, and wood frame. Classes were further refined by identifying the exterior finish of the structure as masonry, steel, or wood. Each of these construction types was divided further according to quality of construction:

- Cheep
- Low
- Average, or
- Good

5.28 Income Producing Commercial Property

FCAD estimated the whole market value of properties by the income approach to value when sufficient data was available for consideration. Use of the income approach in property valuation allowed the district to consider the effects of the local economy and the economic benefits (or liabilities) of owning a property whose primary purpose was to generate income.

Generally, the basic formula for determining a value by the income approach is:

$$\frac{\text{Net Income}}{\text{Rate}} = \text{Value}$$

Where:

- Net Income is the gross potential income that has been adjusted for vacancy and collection losses as well as other acceptable operating expenses.
- Rate is the capitalization rate (of return) on the real estate investment based upon the income that the property is expected to generate. This rate can either be developed using the local market (when adequate sales of property type are available for analysis) or from subscription services that have been deemed as reliable.

5.29 Miscellaneous Improvements

FCAD miscellaneous cost schedules included value tables for structures such as decks, retaining walls (bulkheads), piers, boat slips, pools, greenhouses, sheds, barns, parking areas, and other assorted improvements that are typical to the area.

While these items are subject to loss of value due to age and condition, the reviewing field appraiser typically was allowed the discretion of assigning a percent of value lost due to physical wear and tear.

Cost schedules were based upon professional labor supervised by a contractor or job foreman. For non-professional workmanship, the value was typically reduced by 15 to 30 percent.

When no schedule exists in the FCAD cost tables for an improvement, the district typically relied upon *Marshall & Swift Valuation Guide*. Costs from the guide were modified to reflect the local market via the applicable neighborhood code. When this manual method of estimating value was used, appraisers attached their calculations to the parcel record, clearly discussing in detail the assumptions and modifications used to estimate the value. Values of this nature are "flat values" in the district's CAMA system.

5.30 Valuation of Business Personal Property

The business personal property appraiser reviewed all renditions as they were filed and performed field reviews of new and un-rendered businesses.

In establishing values for business personal property, the appraiser considered the intended use of the property (held for resale or used in the operation of the business). Additionally, the appraiser considered the level of trade in which the property was held. Level of trade is determined prior to the appraisal of inventory because the value of the inventory varies depending on the level of trade:

- primary producer,
- manufacturer,
- wholesaler,
- retailer.

5.31 Machinery, Equipment, Furniture & Fixtures

When original cost information was available for machinery, equipment, furniture and fixtures used in connection with businesses, the original cost was indexed forward to reflect the current replacement cost for the items, using the following formula:

$$(Present\ Index/Former\ Index) * Known\ Cost = Present\ Cost$$

Once the current replacement cost new was estimated, the appraiser estimated the appropriate depreciation to the item according to its age and expected service life. The district's life expectancy guidelines are those adopted by the PTAD. These tables are maintained along with the cost index factors in its CAMA system and in the district's cost manuals.

In instances where no value was rendered or the rendered value was clearly lower than field observed quality and density ratings, the appraiser used the district's cost schedules to estimate values for these items based upon those ratings. These schedules were adapted by the district from the PTAD Field Appraiser's Guide and have had local modifiers applied to them to make them representative of the local market.

5.32 Inventory

Inventories were appraised according to rendered values when those values were reasonable when compared to field observations of appraisers for quality and density of the inventory. In instances where the rendered value was clearly lower than field observed quality and density ratings, the appraiser used the district's cost schedules to estimate values for inventories based upon those ratings. These schedules were adapted by the district from the PTAD Field Appraiser's Guide and have had local modifiers applied to them to make them representative of the local market.

5.33 Dealer's Special Inventory Property

Dealer's inventories that qualify for valuation as a special inventory were appraised based upon the monthly

sales reports submitted and certified by the County Tax Assessor.

As provided by law, the market value of such an inventory on January 1 is the average of monthly sales for the preceding year.

5.40 Valuation of Mineral, Utilities, & Industrial Real & Personal Property

The district has a contract with Pritchard & Abbott, Inc. for the appraisal and valuation of all mineral, utility, and industrial parcels. The company's 2017-2018 Reappraisal Plan, attached as *Addendum 5*, outlines its work plan and approach for determining values in accordance with USPAP Standard 6.

6.00 Resources

In order to accomplish the requirements of the laws of the state and the district's adopted reappraisal plan, adequate resources that meet the profession's professional standards must be provided by the district.

Generally, those resources are classified as:

- Staffing,
- CAMA system,
- GIS mapping system, and
- Other miscellaneous resources including
 - National Automobile Dealers Association (NADA) Mobile Home Cost Guide,
 - Marshall & Swift Valuation Guides (Commercial & Residential),
 - Realty Rates.Com, and
 - LexisNexis.

6.10 Staffing

In order to accomplish the requirements of the laws of the state and the district's adopted reappraisal plan, an adequate staff with appropriate tools is necessary.

Staff resources are generally categorized as:

- Administrative,
- Appraisal,
- Taxpayer Assistance,
- Mapping, and
- Records Management.

6.11 Administrative Staff

The administrative staff of the appraisal district was responsible for oversight and supervision of all aspects of the daily operation.

Bud Black, RPA/RTA/CTA, served as the district's Chief Appraiser. Mr. Black is certified by the Texas Department of Licensing (TDLR) as a Registered Professional Appraiser and a Registered Texas Assessor. Additionally, he is designated as a Certified Tax Administrator by the Institute of Certified Tax Administrators, an entity of the Texas Association of Assessing Officers. Mr. Black employed and directed the district's staff, oversaw all aspects of the appraisal district's operations and performed either directly or through the district's staff a variety of operations.

The Chief Appraiser's responsibilities include:

- discovering, listing and appraising;
- determining exemption and special use requests;
- organizing periodic reappraisals; and,
- notifying taxpayers, taxing units and the public about matters that affect property values.

Additionally, Mr. Black was responsible for adherence to appraisal standards adopted by the Property Tax Assistance Division (PTAD), the International Association of Assessing Officers (IAAO) and the Uniform Standard Professional Appraisal Practices (USPAP) as well as the laws of the State of Texas as codified in the Property Tax Code and the Texas Constitution.

Don Awalt, RPA/CTA, in his capacity of Deputy Chief Appraiser, assisted the Chief Appraiser in the administration of the district. Mr. Awalt was responsible for model analysis and calibration (cost schedules, neighborhoods, etc.) and was the author of the district's annual ratio study report for 2017.

Mr. Awalt was assisted by **Dan Ralstin** in the maintenance and verification of property sales data received

by the district for model calibration.

Don also served as the district's Mapping Coordinator.

Bobbi Shepherd, RPA, in her capacity of the district's Quality Control Officer performed audits of appraiser inspection worksheets and exemption/special use valuation applications to ensure that staff members were properly applying and adjusting appraisal models and that exemption and special use applications were being handled (approved, denied, or modified) in accordance with state laws.

Ms. Shepherd also made approved changes in CAMA to correct appraisal records for errors, omissions, and late exemption applications and assisted with the appraisal and review of business personal property

Carol Clark, as the Chief Appraiser's Administrative Assistant was responsible for the maintenance of the district's:

- financial records,
- personnel records, and
- Board of Director's records,
- Appraisal Review Board records,
- Ag Advisory Records, and
- All other administrative records.

6.12 Appraisal Staff

FCAD staff appraisers were responsible for the valuation of all real and personal property accounts. The property types appraised included commercial, residential, agricultural, and business personal property. All appraisers, including those whose services were contracted to the district, were required to designate (or working toward designation) as Registered Professional Appraisers with the Texas Department of Licensing.

Dan Ralstin, RPA/CTA, the district's Senior Appraiser, was also responsible for ensuring that staff appraisers followed the on-site inspection schedule and completed assigned tasks according to the inspection schedule included in the district's adopted reappraisal plan.

He also performed on-site property inspections and reviewed all real property inspection data for proper application of the district's appraisal model to each property inspected.

Additionally, Mr. Ralstin assisted Mr. Awalt in appraisal model calibration by reviewing and analyzing sales information received by the district.

Sherry Nichols, RPA, was responsible for the appraisal of all business personal property located in the district. Titled as the Business Personal Property Appraiser, her duties included on-site inspections and review of all rendition reports filed with the district by owners of personal property used for the production of income.

Brandon Glass assisted Ms. Nichols during on-site property inspections.

Tina Gilley assisted her in the review of all exemption applications for qualification.

Jason Moore, a Class II appraiser and as the district's Land/Agricultural Appraiser, was responsible for the scheduled review and inspection of all land and agricultural/timber/wildlife management properties. He utilized the district's GIS system to correctly classify land according to its eco-region and ground cover type

Debbie Bowden, a Class II Appraiser, was responsible for on-site inspections of improved real properties as assigned in the reappraisal plan as well as those added by Mr. Ralstin.

Joe Barrow, in his capacity of Data Collector, accompanied and assisted Mr. Ralstin, Ms. Nichols, Mr. Moore, and Ms. Bowden in the performance of on-site property inspections.

Brandon Glass, the Appraiser's Assistant, performed data entry from property inspections performed by Mr. Ralstin and Ms. Bowden in CAMA data entry and property owner correspondence as needed.

The appraisal and valuation of minerals, utilities, and industrial properties is performed under the contracted services of the ***Pritchard & Abbott, Inc***, a firm specializing in the appraisal of complex properties.

6.13 Taxpayer Assistance Staff

Tina Gilley was the first person the public met when contacting the district either in person or by telephone. She provided general information to the public, guided them in access to the district's public records, and assisted them in the filing of various applications and reports required by the district.

Ms. Gilley was responsible for applying exemptions in the CAMA system once approved by Ms. Nichols. She was also responsible for notifying applicants when an application had been denied or modified (approved on less property than listed on the application).

6.14 Mapping Staff

The Mapping Department is not only responsible for creating and maintaining the district's GIS mapping database, it is also responsible for making ownership changes to the district's appraisal records.

In addition to his responsibilities as the Deputy Chief Appraiser, ***Don Awalt, RPA/CTA***, served as the district's Mapping Coordinator, the head of the Mapping Department. He was responsible for monitoring the activities of the Mapper in the maintenance and enhancement projects of the district's mapping system.

Melissa Marberry is the district's mapper. She is responsible for all cadastral mapping functions and maintenance of the district's digital mapping system. Additionally, Ms. Marberry is responsible for maintenance of ownership records in the CAMA system and the mapping system.

6.15 Records Management

Chief Appraiser Bud Black is the district's designated custodian of records and is responsible for the preservation of the district's records according to its adopted Records Management Plan.

Bobbi Shepherd serves as the Records Management Coordinator and is responsible for the daily supervision of the electronic preservation of the district's records.

Desiree' Huggins assisted Ms. Shepherd in the preservation of the district's records by creating Adobe Acrobat copies of all documents and records and archiving them electronically in accordance with the district's records management plan and records control schedules.

6.20 Computer Resources

Each employee's workstation has a networked personal computer for access to the district's appraisal database (CAMA), and geographic database (GIS). Forms received (and generated) by the district are maintained in an electronic format on the district's computer server as the district is moving toward a paperless environment.

6.21 Computer Assisted Mass Appraisal System (CAMA)

The district is currently licensing Pritchard & Abbott's PC Appraisal Software to aid in its computer assisted appraisal system (CAMA). The software allows the district to perform mathematical value calculations based upon used defined property classifications. Age and condition tables allow for automated uniform depreciation of improvements based upon appraiser field observations. In addition, the software stores all current cost schedules, photographs, and documents relating to a parcel.

6.22 Geographic Information Systems (GIS)

The district is currently maintaining its digital mapping data in ESRI mapping software, which provides viewing capabilities for the staff and public. Mapping data includes NRCS soil capability maps for:

- Pasturelands,
- Timberlands, and
- Croplands/Orchards.

6.23 Other Resources

The district' website (freestonecad.org) makes information available to the public via the internet including detail property characteristic data, various district forms, general information about the district, and a link to the Property Tax Division' pamphlet *Taxpayer's Rights, Remedies, and Responsibilities*.

Appraisal manual and schedules developed and utilized by the district are maintained and published on a local intranet hosted by the personal computer network.

7.00 Limiting Conditions & Certification

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

- The appraisals were prepared exclusively for ad valorem tax purposes;
- The property characteristic data upon which the appraisals are based is assumed to be correct: Exterior inspections of the property appraised were performed by staff resources as time allowed.
- Validation of sales transactions were attempted through questionnaires to the sellers and buyers, realtors, fee appraisers, and personal interviews with buyers and sellers;
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses, opinions, and conclusions;
- I have no present or prospective interest in the properties that are subject of this report other than my interests in my residence (parcel 7665) and four other residential properties that I own (parcels 5591, 5879, 19130 and 19196). I also own a vacant lot identified as parcel 19519.
- My compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the taxing jurisdiction, the amount of the value estimate, 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 (USPAP), Property Tax Assistance Division of the Texas State Comptroller of Public Accounts (PTAD), the Texas Department of Licensing (TDLR), and the International Association of Assessing Officers (IAAO);
- My staff appraisers have made a physical inspection of each property located in the county according to the district's plan for periodic reappraisal as well as those parcels for which a property owner has requested an inspection or which reflect a new improvement value;
- I have attached a list of staff providing significant mass appraisal assistance to me in Addendum 6.

I, Bud Black, Chief Appraiser for the Freestone Central Appraisal District, solemnly swear that I have made or caused to be made a diligent inquiry to ascertain all property in the district subject to appraisal by me, and that I have included in the records all property of which I am aware of at an appraised value which, to the best of my knowledge and belief, was determined as required by the laws of the State of Texas.



Bud Black, RPA/CTA
TDLR # 63029
Chief Appraiser
Freestone Central Appraisal District

May 30, 2018

Date

Addendum Index

- 1 On-Site Improvement Inspection Schedule
- 2 Land Inspection Schedule
- 3 Business Personal Property Inspection Schedule
- 4 FCAD Internal Ratio Study
- 5 Pritchard & Abbott Reappraisal Plan
- 6 List of Individuals Providing Significant Mass Appraisal Assistance to Preparer

2018 Reappraisal Progress - Improvements

Addendum 1

Route	Description	Parcel Count	Sch Appr	Target Date	Actual Appr	Complete Date	PostCard Date
B2E05	Fm 833, FM 2547	32	DR	09/01/17	dr	08/30/17	08/17/17
B2H01	FM 489, CR 261, 280, 290	113	DB	09/01/17	BG	08/31/17	08/17/17
BF75N	fairfield downtown	51	DR	09/01/17	dr	09/07/17	08/17/17
B2E06	fm 488	99	DR	09/08/17	dr	09/13/17	09/05/17
B2H02	HWY 84 PR 433 PR 434	71	DB	09/08/17	DB	09/12/17	09/05/17
B2E07	CR 101	10	DR	09/15/17	dr	09/19/17	09/11/17
B2E08	hwy 75	36	DR	09/15/17	dr	09/20/17	09/11/17
B2E10	fcr 1161,1158	6	DR	09/15/17	dr	09/19/17	09/11/17
B2H03	FCR 275, 273, 272	46	DB	09/15/17	DB	09/28/17	09/11/17
B2H04	HWY 84 PR 515	33	DB	09/15/17	DB	10/24/17	09/11/17
B2F02	Tanglewood	53	DR	09/22/17	dr	09/25/17	09/19/17
B2F05	FCR 240	34	DR	09/22/17	dr	10/02/17	09/19/17
B2H05	FM1364 FCR 255, 253, 258 PR259	33	DB	09/29/17	DB	11/06/17	09/27/17
B3C06	fm 489, fcr 300	63	DR	09/29/17	dr	10/11/17	09/27/17
B2H07	FM489, FCR257, FCR252, FCR243, FCR24	90	DB	10/06/17	DB	12/11/17	10/26/17
B2G03	Commerce, FCR 236,FCR 508, PR 205&50	61	DB	10/13/17	DB	01/11/18	11/15/17
B3C07	hwy 84/79	151	DR	10/13/17	dr	10/24/17	09/27/17
B3A02	S Post Oak Rd/FM 1580, FCR 490, PR 479	44	DB	10/20/17	DB	01/24/18	01/10/18
B3C08	fcr 301	103	DR	10/20/17	dr	11/20/17	10/20/17
BMLPO	Post Oak RD - Moody Land Co	58	DB	10/20/17	DB	02/13/18	01/22/18
B3A01	Post Oak Rd to S Hwy 75	55	DB	10/27/17			02/09/18
B3A04	E 84 - past Cuckleburr's	117	DB	10/27/17			02/09/18
B3A05	E 84 - Sugar Hill Area	87	DB	11/03/17			02/09/18
B3C09	fcr 301,341	57	DR	11/03/17	dr	12/13/17	11/15/17
BBURL	Burleson Lake	45	DR	11/03/17	dr	12/04/17	11/15/17
BRDLK	Reds Lake	70	DR	11/03/17	dr	11/30/17	11/15/17
B3A06	Butler Area	73	DB	11/10/17			02/09/18
BF488	fm 488	82	DR	11/10/17	dr	12/21/17	11/22/17
BFLOT	lot village	31	DR	11/17/17	dr	01/09/18	12/14/17
BFMB	Childs	97	DR	11/17/17	dr	01/08/18	12/14/17
BELLC	ellis	9	DR	12/01/17	dr	01/23/18	12/14/17
BF84W	hwy 84 w	84	DR	12/01/17	dr	01/18/18	12/14/17

2018 Reappraisal Progress - Improvements

Route	Description	Parcel Count	Sch Appr	Target Date	Actual Appr	Complete Date	PostCard Date
BWLD1	Wildwood	129	DB	12/08/17	DB	03/27/18	02/09/18
BWLD2	Wildwood	117	DB	12/08/17	DB	03/13/18	02/09/18
BF75N	west main	232	DR	12/29/17	dr	02/08/18	01/11/18
B3A03	West Side 145 South to W84	122	DB	01/05/18			02/09/18
B3B01	Dew Area	23	DB	01/05/18	DB	02/01/18	01/24/18
B3B08	Dew Area	17	DB	01/05/18	DB	02/01/18	01/24/18
BFEV	Eastview	94	DR	01/05/18	dr	02/13/18	01/10/18
BF75S	Hwy 75 south of Commerce	163	DB	01/19/18			02/09/18
BFBRs	Bateman Rd South of Reunion St	183	DB	01/19/18			02/09/18
BFOTS	fairfield downtown	221	DR	01/19/18	dr	02/26/18	02/06/18
BFOPR	Old Palestine Rd, FAIRCREST, FCR 236	16	DB	02/02/18	DB	01/30/18	01/24/18
BFREU	Reunion St	119	DR	02/02/18	dr	03/14/18	02/06/18
BLWOD	Lakewood	106	DB	02/02/18	DB	02/28/18	02/09/18
BF84E	E Hwy 84 Fairfield	40	DB	02/09/18			02/09/18
BFAPK	Airpark Subdivision - E of FF on Hwy 84	29	DB	02/09/18	DB	01/30/18	01/24/18
BF27W	Hwy 27 (Commerce St)	40	DB	02/16/18			02/09/18
BF145	Interstate 45 - Fairfield	57	DB	02/16/18			02/09/18
BFTOA	Thousand Oaks	141	DR	02/16/18	dr	03/05/18	02/06/18

2018 Reappraisal Progress - Land

Route	Description	Parcel Count	Sch Appr	Target Date	Actual Appr	Complete Date	PostCard Date
B0010	Abst 24	61	JM	06/30/17	JASON	09/20/17	
B0015	Abst 14	157	JM	07/07/17	JASON	09/25/17	
B0020	TANGLEWOOD	54	JM	07/14/17	JASON	09/26/17	
B0025	FAIRFIELD LAND COMPANY	13	JM	07/14/17	JASON	09/26/17	
B0030	Abst 15	124	JM	07/14/17	JASON	09/28/17	
B0035	LAKEWOOD	127	JM	07/21/17	JASON	10/05/17	
B0040	WILDWOOD	301	JM	08/04/17	JASON	10/17/17	
B0045	ALLISON PARK A-15	16	JM	08/11/17	JASON	10/18/17	
B0050	CHRISTENSEN ESTATE SUBD	4	JM	08/11/17	JASON	10/18/17	
B0055	Abst 17	26	JM	08/11/17	JASON	10/18/17	
B0060	Abst 34	215	JM	08/18/17	JASON	10/31/17	
B0065	DEER RUN	14	JM	08/25/17	JASON	11/01/17	
B0070	WESTWOOD	511	JM	09/08/17	JASON	11/13/17	
B0075	OAK FOREST 1	43	JM	09/15/17	JASON	11/14/17	
B0080	OAK FOREST 2	16	JM	09/15/17	JASON	11/14/17	
B0085	WILLOW CREEK FARMS	21	JM	09/15/17	JASON	11/14/17	
B0090	Abst 143	14	JM	09/15/17	JASON	11/16/18	
B0095	Abst 142	19	JM	09/15/17	JASON	11/16/17	
B0100	Abst 330	15	JM	09/15/17	JASON	11/16/17	
B0105	Abst 517	4	JM	09/15/17	JASON	11/16/17	
B0110	Abst 57	17	JM	09/15/17	JASON	11/16/17	
B0115	Abst 23	842	JM	10/13/17	JASON	01/11/18	
B0120	ELLIS LAND CO	33	JM	10/13/17			
B0125	Abst 12	487	JM	10/27/17	JASON	02/07/18	
B0340	AIRPARK SUBD FAIRFIELD	27	JM	11/03/17	JASON	02/07/18	
B0345	MOODY LAND CO I	32	JM	11/03/17			
B0350	MOODY LAND CO II	24	JM	11/03/17			
B0355	MOODY LAND CO III	38	JM	11/03/17	JASON	04/26/18	
B0360	MOODY LAND CO IV	31	JM	11/03/17			
B0365	Abst 190	4	JM	11/03/17			
B0370	Abst 436	10	JM	11/03/17			
B0375	Abst 266	19	JM	11/03/17			

2018 Reappraisal Progress - Land

Route	Description	Parcel Count	Sch Appr	Target Date	Actual Appr	Complete Date	PostCard Date
B0380	Abst 201	6	JM	11/03/17	JASON	03/27/18	
B0385	Abst 583	80	JM	11/10/17			
B0390	Abst 455	54	JM	11/10/17	JASON	03/27/18	
B0395	Abst 416	16	JM	11/17/17			
B0400	Abst 268	124	JM	11/17/17			
B0405	Abst 597	33	JM	11/17/17			
B0410	Abst 298	16	JM	11/22/17			
B0415	Abst 314	22	JM	11/22/17	JASON	04/26/18	
B0420	Abst 231	21	JM	11/22/17			
B0425	Abst 162	7	JM	12/01/17	JASON	04/12/18	
B0430	Abst 428	31	JM	12/01/17			
B0435	PEEVY LAND CO	22	JM	12/01/17			
B0440	Abst 107	9	JM	12/01/17	JASON	04/24/18	
B0445	Abst 100	14	JM	12/01/17			
B0450	Abst 101	3	JM	12/01/17			
B0455	Abst 625	36	JM	12/01/17			
B0460	Abst 8	73	JM	12/08/17			
B0465	Abst 472	29	JM	12/08/17			
B0470	Abst 873	3	JM	12/08/17			
B0475	Abst 369	27	JM	12/08/17			
B0480	Abst 191	18	JM	12/08/17			
B0485	Abst 1000	16	JM	12/08/17			
B0490	Abst 146	6	JM	12/08/17			
B0495	Abst 646	8	JM	12/08/17	JASON	04/13/18	
B0500	Abst 858	4	JM	12/08/17			
B0505	Abst 290	3	JM	12/08/17			
B0510	Abst 568	1	JM	12/08/17	JASON	03/26/18	
B0525	Abst 909	1	JM	12/08/17			
B0530	Abst 419	5	JM	12/08/17			
B0535	Abst 881	8	JM	12/08/17			
B0540	Abst 464	8	JM	12/08/17			
B0545	Abst 383	7	JM	12/15/17			

2018 Reappraisal Progress - Land

Route	Description	Parcel Count	Sch Appr	Target Date	Actual Appr	Complete Date	PostCard Date
B0550	Abst 654	5	JM	12/15/17			
B0555	Abst 125	3	JM	12/15/17			
B0560	Abst 613	33	JM	12/15/17			
B0565	Abst 615	27	JM	12/15/17			
B0570	Abst 181	53	JM	12/15/17	JASON	04/12/18	
B0575	Abst 524	15	JM	12/15/17			
B0580	Abst 651	7	JM	12/15/17			
B0585	Abst 19	59	JM	12/15/17	JASON	03/26/18	
B0590	Abst 27	11	JM	12/15/17			
B0595	Abst 544	1	JM	12/15/17			
B0600	Abst 242	2	JM	12/15/17			
B0605	Abst 514	1	JM	12/15/17			
B0610	Abst 669	6	JM	12/15/17			
B0615	Abst 175	6	JM	12/15/17			
B0620	Abst 772	5	JM	01/05/18			
B0625	Abst 658	10	JM	01/05/18			
B0630	Abst 771	6	JM	01/05/18			
B0635	Abst 449	13	JM	01/05/18			
B0640	Abst 792	8	JM	01/05/18			
B0645	Abst 310	3	JM	01/05/18			
B0650	Abst 471	2	JM	01/05/18			
B0655	Abst 211	5	JM	01/05/18			
B0660	Abst 736	1	JM	01/05/18			
B0665	Abst 458	17	JM	01/05/18	JASON	04/25/18	
B0670	Abst 839	1	JM	01/05/18			
B0675	Abst 567	10	JM	01/05/18			
B0680	Abst 69	30	JM	01/05/18			
B0685	Abst 342	18	JM	01/05/18			
B0690	Abst 372	31	JM	01/05/18			
B0695	Abst 273	8	JM	01/05/18			
B0700	Abst 775	4	JM	01/05/18			
B0705	Abst 626	5	JM	01/05/18			

2018 Reappraisal Progress - Land

Route	Description	Parcel Count	Sch Appr	Target Date	Actual Appr	Complete Date	PostCard Date
B0710	TORNO SUBDIV A-635	51	JM	01/05/18	JASON	04/24/18	
B0715	Abst 635	6	JM	01/05/18			
B0720	Abst 33	96	JM	01/05/18			
B0725	OAKWOOD LAND CO	10	JM	01/12/18			
B0730	Abst 32	52	JM	01/12/18	JASON	04/13/18	
B0735	CJT LAND CO I	16	JM	01/12/18			
B0740	CJT LAND CO II	10	JM	01/12/18			
B0745	Abst 35	43	JM	01/12/18	JASON	04/25/18	
B0750	PRUETT LAND CO	2	JM	01/12/18			
B0755	BAZEL LAND CO	10	JM	01/12/18			
B0760	Abst 31	117	JM	01/12/18			
B0765	Abst 30	173	JM	01/19/18			
B0770	Abst 29	157	JM	01/19/18			
B0775	Abst 28	199	JM	01/26/18			
B0780	BUTLER LAND CO	22	JM	01/26/18			
B0785	FORREST VIEW	27	JM	01/26/18			
B0790	Abst 2	549	JM	02/09/18			
B0795	BURLESON LAKE A-598/524	60	JM	02/16/18	JASON	03/19/18	
B0800	REDS LAKE FISHING & HUNTING	77	JM	02/16/18			
B0805	PRICE LAND CO	12	JM	02/16/18			
B0810	Abst 25	375	JM	03/02/18			
B0815	Abst 20	78	JM	03/09/18			
B0820	Abst 103	7	JM	03/09/18			
B0825	Abst 277	1	JM	03/09/18			
B0830	Abst 1	119	JM	03/09/18			
B0835	Abst 21	131	JM	03/16/18			
B0840	Abst 878	9	JM	03/16/18			
B0845	Abst 485	10	JM	03/16/18			
B0850	Abst 263	6	JM	03/16/18			
B0855	Abst 236	2	JM	03/16/18			
B0130	OTS FAIRFIELD	213	JM	06/15/18	JASON	02/16/18	
B0135	ANDERSON ADDN FAIRFIELD	22	JM	06/22/18	JASON	02/08/18	

2018 Reappraisal Progress - Land

Route	Description	Parcel Count	Sch Appr	Target Date	Actual Appr	Complete Date	PostCard Date
B0140	AWALT SUB FAIRFIELD	15	JM	06/22/18	JASON	02/08/18	
B0145	BATEMAN RD ADD FAIRFIELD	16	JM	06/22/18	JASON	02/08/18	
B0150	BOND ADDN FAIRFIELD	32	JM	06/22/18	JASON	02/12/18	
B0155	I CARDEN ADDN FAIRFIELD	8	JM	06/22/18	JASON	02/12/18	
B0160	DANIEL ADDN FAIRFIELD	13	JM	06/22/18	JASON	02/12/18	
B0165	DOGAN HEIGHTS FAIRFIELD	20	JM	06/22/18	JASON	02/20/18	
B0170	EASTRIDGE ADDN FAIRFIELD	3	JM	06/22/18	JASON	02/20/18	
B0175	EASTVIEW I FAIRFIELD	18	JM	06/22/18	JASON	02/20/18	
B0180	EASTVIEW II FAIRFIELD	18	JM	06/22/18	JASON	02/20/18	
B0185	EASTVIEW III FAIRFIELD	17	JM	06/22/18	JASON	02/20/18	
B0190	EASTVIEW IV FAIRFIELD	16	JM	06/22/18	JASON	02/21/18	
B0195	EASTVIEW V FAIRFIELD	14	JM	06/22/18	JASON	02/21/18	
B0200	EASTVIEW VI FAIRFIELD	14	JM	06/22/18	JASON	02/21/18	
B0205	FAIRCREST ADDN FAIRFIELD	22	JM	06/22/18	JASON	02/21/18	
B0210	FRIENDSWOOD SUB FAIRFIELD	24	JM	06/29/18	JASON	02/21/18	
B0215	GOLDEN CONDO DEV FAIRFIELD	13	JM	06/29/18	JASON	02/22/18	
B0220	GREEN ACRES SHELLY-GILPIN	32	JM	06/29/18	JASON	02/22/18	
B0225	HARPER SUBDIV FAIRFIELD	7	JM	06/29/18	JASON	02/22/18	
B0230	LITTLE OAKS ADDITION FAIRFIELD	11	JM	06/29/18	JASON	02/26/18	
B0235	LOTT VILLAGE ADDN I FAIRFIELD	35	JM	06/29/18	JASON	02/26/18	
B0240	LOTT VILLAGE ADDN II FAIRFIELD	26	JM	06/29/18	JASON	02/27/18	
B0245	LOVE ADDN FAIRFIELD	39	JM	06/29/18	JASON	02/27/18	
B0250	MEADOWBROOK FAIRFIELD	43	JM	07/20/18	JASON	03/01/18	
B0255	MOREHEAD ADDN FAIRFIELD	27	JM	07/20/18	JASON	03/01/18	
B0260	NORTHWOOD ADDN FAIRFIELD	54	JM	07/20/18	JASON	03/05/18	
B0265	OAKRIDGE ADDN FAIRFIELD	6	JM	07/20/18	JASON	03/06/18	
B0270	PECAN ACRES FAIRFIELD	11	JM	07/20/18	JASON	03/06/18	
B0275	SOUTH BATEMAN FAIRFIELD	12	JM	07/20/18	JASON	03/06/18	
B0280	SOUTHWEST SUBD FAIRFIELD	21	JM	07/20/18	JASON	03/06/18	
B0285	THOUSAND OAKS I FAIRFIELD	85	JM	07/20/18	JASON	03/08/18	
B0290	THOUSAND OAKS II FAIRFIELD	16	JM	07/27/18	JASON	03/13/18	
B0295	THOUSAND OAKS III FAIRFIELD	8	JM	07/27/18	JASON	03/13/18	

2018 Reappraisal Progress - Land

Route	Description	Parcel Count	Sch Appr	Target Date	Actual Appr	Complete Date	PostCard Date
B0300	THOUSAND OAKS IV FAIRFIELD	13	JM	07/27/18	JASON	03/13/18	
B0305	TYUS ADDN FAIRFIELD	59	JM	07/27/18	JASON	03/14/18	
B0310	WALNUT CREEK FAIRFIELD	21	JM	07/27/18	JASON	03/16/18	
B0315	W MAIN PLACE FAIRFIELD	54	JM	07/27/18	JASON	03/15/18	
B0320	STONE ADDITION FAIRFIELD	3	JM	07/27/18	JASON	03/16/18	
B0325	FAIRFIELD INDUSTRIAL PARK I	10	JM	07/27/18	JASON	03/16/18	
B0330	FAIRFIELD INDUSTRIAL PARK II	14	JM	07/27/18	JASON	03/16/18	
B0335	VILLA CRESTA DEL PINO PHASE I	5	JM	07/27/18	JASON	03/16/18	

2018 Reappraisal Progress - Bus Pers Prop

Route	Description	Parcel Count	Sch Appr	Target Date	Actual Appr	Complete Date	PostCard Date
P416	FM 416 LAKE	62	SN	09/08/17	SN	09/12/17	08/25/17
PBUFF	FM 489	16	SN	09/15/17	SN	09/13/17	08/25/17
PDEW1	HWY 179	53	SN	09/22/17	SN	09/14/17	08/25/17
PDONI	FM 80, FM 489	35	SN	09/29/17	SN	09/18/17	08/25/17
PMEX1	Not a route	1	SN	10/06/17	sn	09/11/17	
POISD	HWY 79, FM 1848, FM 489	12	SN	10/06/17	SN	09/19/17	09/15/17
PST01	Main, Lubbock, FM 3059	26	SN	10/13/17	SN	09/20/17	09/15/17
PTG84	HWY 84, FM 1367,FCR 930,FCR 933,PR 9	91	SN	10/27/17	SN	09/28/17	09/15/17
PTOT1	FM 533, E Loop 255	90	SN	11/10/17	SN	10/02/17	09/28/17
PTOT2	Main St	32	SN	11/17/17	SN	10/17/17	09/28/17
PTOT3	Main St	29	SN	12/01/17	SN	10/18/17	09/28/17
PTOT4	PINE,CRESTVIEW,CHINA,5TH, POPLAR,M	9	SN	12/08/17	SN	10/24/17	10/16/17
PTOT5	NORTHLINE,CYPRESS,8THMAGNOLIA,HU	38	SN	12/08/17	SN	10/26/17	10/16/17
PTSD1	FCR 941 & HWY 84	22	SN	12/15/17	SN	11/06/17	10/24/17
PTSD2	Deleted route Combined with PTG84	36	SN	12/15/17	sn	09/19/17	
PTSD3	HWY 179	10	SN	01/05/18	SN	11/07/17	10/24/17
PTSD4	FM 1451,FCR 781,FCR 764,	25	SN	01/05/18	SN	11/14/17	10/24/17
PWISD	FM 27, FM 80	29	SN	01/19/18	SN	11/20/17	11/07/17
P4E02	Not a route	1	SN	02/02/18	sn	09/15/17	
PWORT	TwinCircle,Hwy 14,Second, Main St,Color	75	SN	02/02/18	SN	12/05/17	11/07/17

FCAD Internal Ratio Study Analysis Report For Values Appraised as of January 1, 2018

The information which follows is based upon recaps of value as they appeared after all lawfully required Notices of Appraised Value were delivered to property owners by the Chief Appraiser.

“If the property tax is to be fair and provide adequate revenue for local government, mass appraisal must produce accurate appraisals and equitable assessments. The primary tool used to measure mass appraisal performance is the ratio study.”
IAAO, Property Appraisal and Assessment Administration.

FCAD has performed this internal ratio study to test and calibrate our mass appraisal models, and to ensure that the level of appraisal within the district meet acceptable standards of accuracy. This study is based on appraised values, sale price data, and other property data collected by the District. Sales data used in the study span the 15-month period, January 2017 through the 1st quarter of 2018.

"Local jurisdictions should use ratio studies as a primary mass appraisal testing procedure and their most important performance analysis tool. The ratio study can assist such jurisdictions in providing fair and equitable assessment of all property. Ratio studies provide a means for testing and evaluating mass appraisal valuation models to ensure that value estimates meet attainable standards of accuracy. Ratio study reports are typically included as part of the written documentation used to communicate results of a mass appraisal and to comply with Standard Rule 5-7(b.) of the Uniform Standards of Professional Appraisal Practice (USPAP). *IAAO, Standard on Ratio Studies – 2013, Part 1, Sec. 2.4*

*USPAP 2018-2019
Standards Rule 5-7*

In reconciling a mass appraisal an appraiser must:

- (a) Reconcile the quality and quantity of data available and analyzed within the approaches used and the applicability and relevance of the approaches, methods and techniques used; and*
- (b) Employ recognized mass appraisal testing procedures and techniques to ensure that standards of accuracy are maintained.*

Comment: It is implicit in mass appraisal that, even when properly specified and calibrated mass appraisal models are used, some individual value conclusions will not meet standards of reasonableness, consistency, and accuracy. However, appraisers engaged in mass appraisal have a professional responsibility to ensure that, on an overall basis, models produce value conclusions that meet attainable standards of accuracy. This responsibility requires appraisers to evaluate the performance of models, using techniques that may include but are not limited to, goodness-of-fit statistics, and model performance statistics such as appraisal-to-sale ratio studies, evaluation of hold-out samples, or analysis of residuals.

The overall level of appraisal of Freestone Central Appraisal District is stated as follows:

		95% Confidence Interval	
		Lower	Upper
Mean	0.99	0.97	1.01
Median	0.99	0.97	0.99
Weighted Mean	0.97		
Coefficient of Dispersion	13.25		
Price-related Differential	1.02		
Absolute Deviation	42.42		
Standard Deviation	0.18		
Number of Sales	323		
Overall Ratio taken form PA PC Ratio Recap Report			
All Classes of Property, current ratio between .5-1.5			
Confidence intervals are calculated			

Data Assembly

The chief appraiser and staff of FCAD continually collect and analyze sales data of properties that have sold within the district. Sales are screened as valid or invalid based upon the *IAAO Standard on the Verification and Adjustment of Sales* as guidance. Sales that do not meet the test of an “arms length” transaction are not marked as “valid”, and therefore are not included in the study. An exception being foreclosure sales of residential properties. Typically, foreclosure sales, where a bank or lending institution is the seller, are not considered to be “arms length” transactions. Pursuant to Texas Property Tax Code section 23.01(c), a Chief Appraiser, in appraising residence homesteads, may not exclude from consideration the value of neighboring properties simply because they were subject to a foreclosure sale.

Sources of sales information include;

- Sales letters to buyers and sellers of property.
- Owner's closing statements or other real estate transaction documentation
- Information from real estate brokers and agents and independent appraisers.
- The district also subscribes to and receives sales information from the Metrotex Association of Realtors Multiple Listing Service.

Methodology

Ratio studies are the primary means by which appraisal performance is measured. In a ratio study, appraised values are compared against indicators of market value, usually sales prices. If appraisal performance is good, appraised values should be closely related to sales prices.

$$\text{Ratio} = \text{Appraised Value} \div \text{Sale Price}$$

Ideally the middle (median) or average (mean) ratio should be near 1.00, and the individual ratios should be relatively uniform or consistent.

“In analyzing appraisal level, ratio studies attempt to measure statistically how close appraisals are to market value on an overall basis. While theoretically desired level of appraisal is 1.00, an appraisal level between 0.90 and 1.10 is considered acceptable for any class of property (* Appraisal level for each type of property shown should be between .90 and 1.10, unless stricter local standards are required). However, each class of property must be within 5 percent of the overall level of appraisal of the jurisdiction.” *IAAO Standard on Ratio Studies, Part 1, Sec. 9.1*

Price Trend Analysis

After all sales information has been entered into the district's database, the chief appraiser and staff analyzes the local market trends indicated by the sales to determine the need, if any, for time adjustments to the sales data. Price trends were developed using sales ratio trend analysis. In the method, sales prices over the time frame selected for analysis are compared against appraised values for the most recent appraisal year. Since the appraisal reflects a common, fixed date, and the sales prices reflect transaction dates, an upward trend in sale/appraisal (S/A) ratios indicates price appreciation and a downward trend indicates price deflation. The graphs in *exhibit 1* show the direction and magnitude of the trends for the property categories analyzed.

Treatment of Outliers

A common issue in ratio studies is the treatment of outliers, which are atypically low or high ratios that have the potential to distort a number of appraisal performance measures.

In addition to eliminating extremely low or high ratios, IAAO outlier trimming guidelines were used in determining ratio trim points based upon the inter-quartile range, which represents the difference between the 75th and 25th percentiles of a distribution. With these guidelines in mind, trim points for each property category with sufficient sales were determined by an examination of ratio distributions. The percentage of sales excluded as ratio outliers is discussed in conjunction with the ratio analysis in *exhibit 2*.

Stratification

Stratifying, or dividing properties within the scope of the study into two or more groups helps identify the level of appraisal between property groups. Properties are stratified based upon:

- Total value range;
- Neighborhood;
- Property use;
- Land cover type;
- Improvement quality of construction and construction type;

And any other grouping that would facilitate a more complete and detailed picture of appraisal performance.

Stratified analysis of appraisal performance is discussed in detail in *exhibit 3*.

Statistical Analyses

There are two primary aspects of appraisal performance: level and uniformity. Appraisal level or, central tendency, relates to how close overall appraisals are to market value. Uniformity or, variability, relates to the consistency or equity of appraised values.

Measures of Central Tendency

“Estimates of appraisal level are based on measures of central tendency. They should be calculated for each stratum and for such aggregations of strata as may be appropriate. Several common measures of appraisal level should be calculated in ratio studies, including the median ratio, mean ratio, and weighted mean ratio.” *IAAO Standard on Ratio Studies-2013 Part 1, Sec. 5.3*

Mean = average of the ratios. It is calculated by summing the ratios and dividing by the number of ratio.

Median = the middle ratio when the ratios are arrayed in order of magnitude. The median always divides the data into two equal parts and is less affected by extreme ratios than the other measures of central tendency. The median is the generally preferred measure of central tendency for evaluating overall appraisal level.

Weighted Mean = the value-weighted average of the ratios in which the weights are proportional to the sales prices. The weighted mean gives equal weight to each dollar of value in the sample, whereas the median and mean give equal weight to each parcel.

Confidence Interval = consists of two numbers (upper and lower limits) that bracket a calculated measure of central tendency for the sample. A 95 percent confidence interval would mean, for example, that one can be 95 percent confident that the population parameter (measure of central tendency) falls in the indicated range.

Measures of Variability

“Measures of dispersion or variability relate to the uniformity of the ratios and should be calculated for each stratum in the study. In general, the smaller the measure of variability, the better the uniformity.” *IAAO, Standard on Ratio Studies -2013, Part1, Sec.5.4*

Coefficient of Dispersion (COD) = the most generally useful measure of variability or uniformity is the COD. The COD measures the average percentage deviation of the ratios from the median ratio.

Price-related Differential (PRD) = a statistic for measuring regressively (high-value properties under appraised) or progressivity (high-value properties over appraised)

The International Association of Assessing Officers Standard on Ratio Studies – 2010, table 1-3, indicates the acceptable range of COD’s as follows:

Type of property – General	Type of property – Specific	COD Range
Single-family residential	Newer or more homogeneous areas	5.0 to 10.0
Single-family residential	Older or more heterogeneous areas	5.0 to 15.0
Other residential	Rural, seasonal, recreational, manufactured housing	5.0 to 20.0
Vacant Land	All types	5.0 to 25.0

FCAD is primarily a rural district with most single-family residential neighborhoods falling in the heterogeneous category due to differences in age and quality of construction. The standard also states that “PRD’s for each type of property should be between .98 and 1.03 to demonstrate vertical equity.

Final reconciliation of the data indicates that FCAD’s overall level of appraisal, indicated by the measures of central tendency, is acceptable and within the mandated 95% confidence interval. Also, the level of variability (uniformity) is acceptable as indicated by the measures of variability.

The following exhibits further document the testing and analysis of the level of appraisal performed by the Chief Appraiser and staff in conducting a ratio study of the appraised values of classes and categories of properties within the districts jurisdiction with sufficient data for reliable testing.

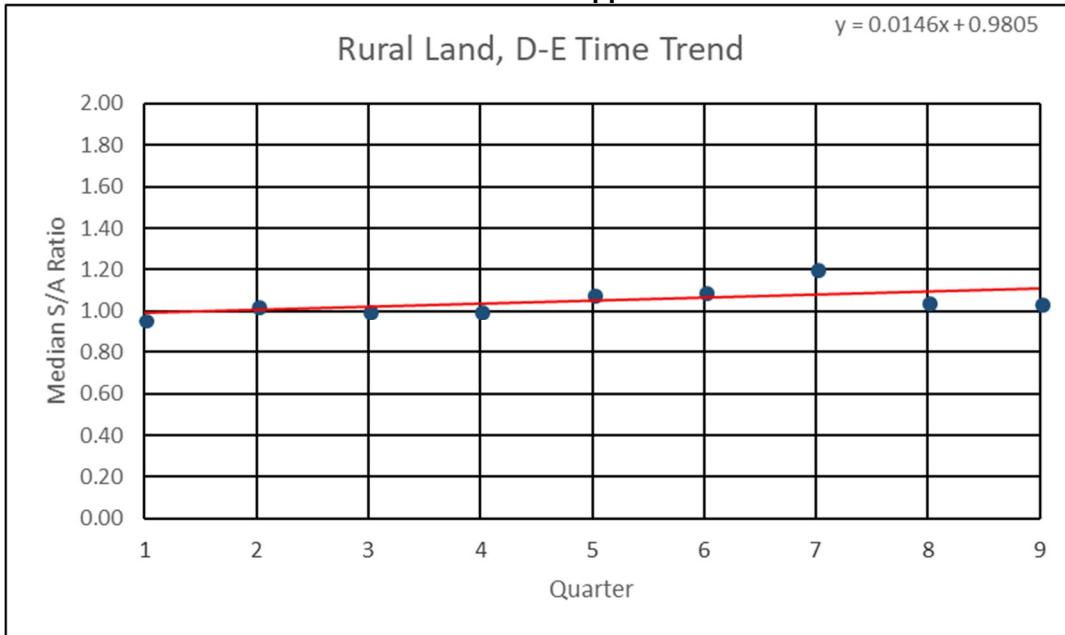
Exhibit Table of Contents

Exhibit 1	Time adjustment and sales trend analysis
Exhibit 2	Outlier analysis and trimming
Exhibit 3	Affect of foreclosure sales on ratios
Exhibit 4	Stratified Ratio Analyses
Exhibit 5	Overall Ratio Distribution

Exhibit 1

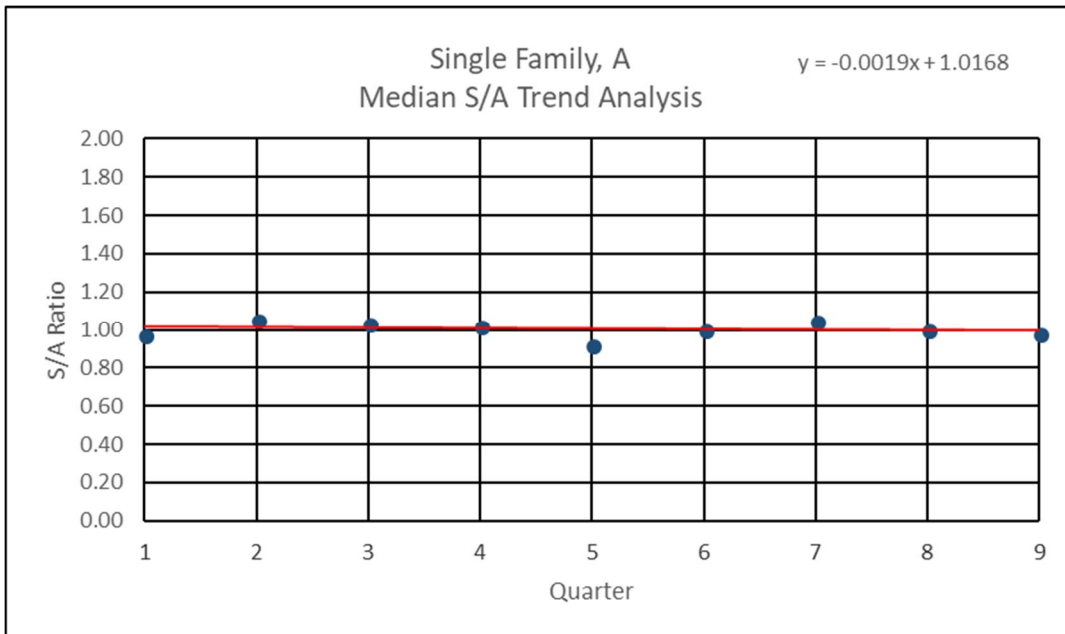
**Time Adjustment and Sales Trend Analysis
1st Quarter 2016 through 1st Quarter 2018**

**Rural Land
Trend of Median Sale/Appraisal Ratios**



Rate of change = ((slope (y)*100) *# of periods) = ((.0146*100) *9) = 13.14% increase over 27 months

**Category A Single Family Residential
Trend of Median Sale/Appraisal Ratios**



Rate of change = ((slope (y)100) * # of periods) = ((-.0019*100) *9) = -1.71% decrease over 27 months

Median ratios are the least affected by outliers when comparing ratios. This indicates a trend of increasing sale prices of approximately .49% per month for Farm & Ranch land. The trend for Single Family residential indicates a downward or decreasing trend of approximately -.0006% per month for the 27-month study period.

Exhibit 2

Outlier Analysis and Trimming

Rural Land - All Valid Sales

Outlier Calculation overall sales					
Mean	1.00	# of Sales	154		
Median	0.96	# of Outlier	16		
Wt Mean	0.97	% Trimmed	10%		
Standard Dev.	0.29				
Upper Quartile	1.01				
Lower Quartile	0.84				
Inter Quartile Range	0.17				
Lower Boundry	0.58	The lower quartile minus (1.5 times the IQR)			
Upper Boundry	1.27	(1.5 time the IQR) plus the upper quartile			

Sales with an appraisal to sale ratio less than .58 or more than 1.27 were identified as outliers in the study. To verify these results, another test was performed. Ratios where the (absolute value of the ratio – mean were 2X the standard deviation) were identified. This validated the above test, as the same sales were identified.

Category A, Single Family - All Valid Sales

Outlier Calculation overall sales					
Mean	1.09	# of Sales	155		
Median	0.99	# of Outlier	13.00		
Wt Mean	1.00	% Trimmed	8%		
Standard Dev.	0.59				
Upper Quartile	1.13				
Lower Quartile	0.90				
Inter Quartile Range	0.23				
Lower Boundry	0.56	The lower quartile minus (1.5 times the IQR)			
Upper Boundry	1.47	(1.5 time the IQR) plus the upper quartile			

Sales with an appraisal to sale ratio less than .56 or more than 1.47 were identified as outliers in the study. To verify these results, another test was performed. Ratios where the (absolute value of the ratio - mean were 2X the standard deviation) were identified. This validated the above test, as the same sales were identified.

Other category and groups of properties had insufficient samples to reliably test for outliers.

Exhibit 3

Affect of Foreclosure Sales

Foreclosure sales, or sales where a bank or lending institution is the seller, are identified and studied to determine their affect on the market. Typically, "REO" (Real Estate Owned) or "foreclosure" sales are not considered "arms length" sales, or sales between a willing buyer and a willing seller. But, in some instances when there is sufficient volume of foreclosure sales, these sales have great influence on defining the market in that area. Furthermore, pursuant to Texas Property Tax Code section 23.01(c)

"Notwithstanding Section 1.04(7) (C), in determining the market value of a residence homestead, the chief appraiser may not exclude from consideration the value of other residential property that is in the same neighborhood as the residence homestead being appraised and would otherwise be considered in appraising the residence homesteads because the other residential property:

- (1) was sold at a foreclosure sale conducted in any of the three years preceding the tax year in which the residence homestead is being appraised and was comparable at the time of sale based on relevant characteristics with other residence homesteads in the same neighborhood; or
- (2) has a market value that has declined because of a declining economy."

Freestone CAD has identified and studied the affect of these sales on the overall market, and to verify and document adherence to law.

FORECLOSURE COMPARISON		
	All Sales	Exclude Foreclosure Sales
Mean	1.00	1.00
Median	0.99	0.99
Weighted Mean	0.98	0.98
COD	11.0295	10.8848
# Observations	149	147

After statistical outliers were removed, foreclosure sales were included and studied. These sales do not appear to have significant affect on overall values.

Exhibit 4

Stratified Ratio Analyses

Stratified by Property Use Category Code

Property Use Category	Description	Observations	Mean	Median	Wt. Mean	PRD	Standard Deviation	COD	95% Confidence Lower & Upper Limits	
A	Single Family Residential	137	1.02	0.99	1.00	0.98	0.1695	11.6177	0.99	1.05
B	Multi Family	0								
C	Vacant Lots	31	1.07	1.08	0.99	0.93	0.3718	27.6195	0.94	1.20
D & E	Farm & Ranch Land and Improvements	136	1.00	0.97	0.97	0.97	0.2404	16.93	0.96	1.04
F	Commercial	7	1.11	0.97	0.98	0.89	0.1873	13.4217	0.97	1.25
L	Business Personal Property	0								

* Some classes of property with insufficient data for a reliable test

Stratified by Building Type

Only building types with sales shown

Bldg Type	Observations	CAD				
		Mean	Med	WM	COD	PRD
RB03	25	1.00	0.95	0.97	18.1069	1.03
RB04	29	1.04	1.01	1.01	10.3465	1.02
RB05	13	1.03	1.00	1.03	4.3891	1.00
RB06	6	0.95	0.94	0.94	8.271	1.02
RB07	3	0.99	0.94	0.97	9.7937	1.02
RF01	2	0.98	0.98	0.94	3.9126	0.00
RF02	16	1.02	1.09	0.99	14.6009	1.03
RF03	32	1.05	1.01	1.02	15.8832	1.03
RF04	5	1.01	0.96	1.03	14.4538	0.99
RF05	4	1.00	1.06	0.93	10.5355	1.07
RF09	1	0.99	0.99	0.99	0	1.00
RL03	1	0.97	0.97	0.97	0	1.00
RS02	1	1.55	1.55	1.55	0	
MH1	2	1.00	1.00	1.11	34.3015	0.90
MH2	10	1.03	0.98	1.05	19.6008	0.97
MH3	10	0.88	0.87	0.84	12.0552	1.04

Stratified by Value Range

Category A Stratification Detail

	Category A Stratification Detail											
	Value From	Value To	Number of Sales	Mean	Median	COD	Weighted Mean	PRD	Appraised Value	Indicated Value		
Fairfield ISD	Strata 1	0	38,931	5	1.02	0.93	27.21	0.98	1.03	14,764,331	14,996,781	
	Strata 2	38,932	98,833	38	0.99	1.00	16.93	0.94	1.05	70,179,954	74,414,117	
	Strata 3	98,834	179,490	17	1.00	1.02	8.16	1.01	1.01	70,102,759	69,656,954	
	Strata 4	179,491	355,539	21	1.02	0.99	12.00	1.00	1.02	70,095,801	70,341,998	
	Strata 5	355,540	1,581,012	3	0.96	0.99	4.44	0.97	0.99	70,471,468	72,748,496	
	All			84	1.00	1.00	13.94	0.98	1.02	295,614,313	302,158,347	
										Stratified Weighted Mean for All		0.98
									Price Related Differential		1.02	
Teague ISD	Strata 1	0	26,097	1	1.02	1.02	0.00	1.02	1.00	4,863,262	4,787,618	
	Strata 2	26,098	59,868	14	0.98	0.98	6.37	0.98	1.01	23,181,794	23,739,676	
	Strata 3	59,869	92,253	15	1.07	1.00	15.73	1.04	1.03	23,170,801	22,354,849	
	Strata 4	92,254	155,813	5	0.98	0.97	1.28	0.98	1.00	23,111,301	23,518,165	
	Strata 5	155,814	600,938	6	1.06	1.03	5.72	1.06	1.00	23,440,310	22,176,263	
	All			41	1.02	1.00	9.36	1.02	1.00	97,767,468	96,576,571	
										Stratified Weighted Mean for All		1.01
									Price Related Differential		1.01	
Wortham ISD	Strata 1	0	21,776	1	0.87	0.87	0.00	0.87	1.00	1,037,190	1,197,817	
	Strata 2	21,777	42,606	2	1.15	1.15	14.96	1.13	1.02	4,889,451	4,329,630	
	Strata 3	42,607	60,007	3	1.08	0.98	11.21	1.05	1.02	4,899,382	4,654,995	
	Strata 4	60,008	92,421	5	0.93	0.92	3.21	0.93	1.00	4,905,225	5,270,468	
	Strata 5	92,422	300,211	3	1.03	1.03	3.63	1.04	0.99	5,015,713	4,830,232	
	All			14	1.01	0.98	8.82	0.99	1.03	20,746,961	20,283,142	
										Stratified Weighted Mean for All		1.02
									Price Related Differential		0.99	
Dew, Buffalo, Oakwood ISD's (Combined)	Strata 1	0	20,751	0	0.00	0.00	0.00	0.00	1.00	369,479	369,479	
	Strata 2	20,752	52,690	0	0.00	0.00	0.00	0.00	1.00	1,774,159	1,774,159	
	Strata 3	52,691	90,282	1	1.16	1.16	0.00	1.16	1.00	1,731,199	1,495,507	
	Strata 4	90,283	143,086	1	1.00	1.00	0.00	1.00	1.00	1,770,955	1,776,284	
	Strata 5	143,087	204,856	1	0.84	0.84	0.00	0.84	1.00	2,124,353	2,517,006	
	All			3	1.00	1.00	10.48	0.94	1.06	7,770,145	7,932,435	
										Stratified Weighted Mean for All		0.98
									Price Related Differential		1.02	
					55							

Stratified by Neighborhood

Code	Type	Neighborhood	Observations	Mean	Median	Weighted Mean	COD	PRD
Rural Residential (All categories with HS Improvements)								
BISD	Residential/Farm & Ranch	RURAL BISD	6	0.99	1.04	0.97	11	1.03
DISD	Residential/Farm & Ranch	RURAL DISD	11	0.97	0.97	0.95	14	1.03
OISD	Residential/Farm & Ranch	RURAL OISD	5	0.96	1.02	1.00	14	0.96
DBO COM	Residential/Farm & Ranch	RURAL DISD,BISD,OISD COMBINED	22	0.98	1.00	0.99	14	0.99
FISD	Residential/Farm & Ranch HS IMPRO	RURAL FISD	67	0.97	0.99	0.95	14	1.03
TISD	Residential/Farm & Ranch A&E	RURAL TISD -INCLUDES MISD	43	1.00	0.97	0.95	15	1.06
WISD	Residential/Farm & Ranch	RURAL WISD- INCLUDES CISD	19	0.99	0.96	1.00	21	0.99
Fairfield Area Residential (Category A*)								
FRES	Residential	FAIRFIELD CITY RESIDENTIAL	19	1.06	1.03	1.03	16	1.03
TOAKS	Residential	THOUSAND OAKS SUBDIVISION	5	0.98	0.98	0.98	5	1.01
CHILD	Residential	CHILDS ADDN (MEADOWBROOK,NW,WC	3	1.04	1.01	1.02	5	1.02
EASTV	Residential	EASTVIEW ADDN	2	0.96	0.96	0.98	9	0.99
FWOOD	Residential	FRIENDSWOOD						
GAM	Residential	GREEN ACRES/MOREHEAD/GOLDEN CONDO	2	1.01	1.01	1.01	2	1.00
LWOOD	Residential	LAKEWOOD	4	1.04	1.03	0.99	17	1.06
LOTT	Residential	LOTT VILLAGE ADDN	1	0.97	0.97	0.97		1.00
OAK	Residential	OAKFOREST FAIRFIELD	4	1.02	0.99	1.02	6	1.00
WILLO	Residential	WILLOW CREAK FARMS	2	1.05	1.11	1.05	5	1.00
WILD	Residential	WILDWOOD	5	0.97	0.99	0.96	17	1.01
WESTR	Residential	WESTWOOD RESTRICTED	2	1.02	1.02	1.03	6	0.99
WESTU	Residential	WESTWOOD UNRESTRICTED	8	0.98	0.98	0.94	10	1.04
RLAKE	Residential	REDS LAKE	2	0.58	0.58	0.59	3	0.99
BLAKE	Residential	BURLESON LAKE						
Teague Area Residential								
TRES	Residential	TEAGUE CITY RESIDENTIAL	35	1.02	1.00	1.03	10	0.99
LOVPK	Residential	LOVERS LANE/PARKWOOD ADDN	2	1.00	1.00	1.00	0.4	1.00
CEAST	Residential	COUNTRY EAST ADDN	2	1.15	1.15	1.14	4	1.00
TLAKE	Residential	TEAGUE HUNTING & FISHING CLUB	0	0	0	0	0	
Wortham-Streetman Residential								
SRES	Residential	STREETMAN CITY RESIDENTIAL	2	1.00	1.00	0.99	2	1.01
WRES	Residential	WORTHAM CITY RESIDENTIAL	10	1.00	0.97	0.99	8	1.01
Richland Chambers Lake Area Residential								
RCRES	Residential	OFF WATER RESIDENTIAL RICHLAND AREA	25	0.97	0.92	1.05	26	0.92
WAT1	Residential	BEST WATERFRONT RICHLAND CHAMBERS	6	0.83	0.87	0.86	13	0.97
WAT2	Residential	GOOD WATERFRONT RICHLAND CHAMBERS	4	0.86	0.81	0.85	26	1.02
WAT3	Residential	CHANNELVIEW RICHLAND CHAMBERS	3	1.01	0.96	1.01	8	1.00
UWAT1	Residential	UNRESTRICTIVE BEST WATERFRONT						
UWAT2	Residential	UNRESTRICTIVE GOOD WATERFRONT						
UWAT3	Residential	UNRESTRICTIVE CHANNEL WATERFRONT						
RWAT1	Residential	RESTRICTED SUBDIVISION BEST WATERFRONT						
RWAT2	Residential	RESTRICTED SUBDIVISION GOOD WATERFRONT						
RWAT3	Residential	RESTRICTED SUBDIVISION CHANNEL WATERFRONT						
SS1	Residential	SEPT SOUND BEST WTR	1	1.02	1.02	1.02		1.00
SS2	Residential	SEPT SOUND GOOD WTR						
SS3	Residential	SEPT SOUND CHANNEL						
WNES1	Residential	WILDERNESS BEST WATERFRONT						
WNES2	Residential	WILDERNESS GOOD WATERFRONT	2	1.09	1.09	1.05	9	1.04
WNES3	Residential	WILDERNESS WATERVIEW	3	0.83	0.86	0.86	5	0.96
Commercial Neighborhoods (Category F Properties)								
FCOM	Commercial	FAIRFIELD COMMERCIAL						
RCCOM	Commercial	COMMERCIAL RICHLAND CHAMBERS AREA						
RRCOM	Commercial	RURAL COMMERCIAL						
SCOM	Commercial	STREETMAN COMMERCIALCOMMERCIAL						
TCOM	Commercial	TEAGUE COMMERCIAL						
TCOTS	Commercial	TEAGUE COMMERCIAL - OTS						
WCOM	Commercial	WORTHAM COMMERCIALCOMMERCIAL						

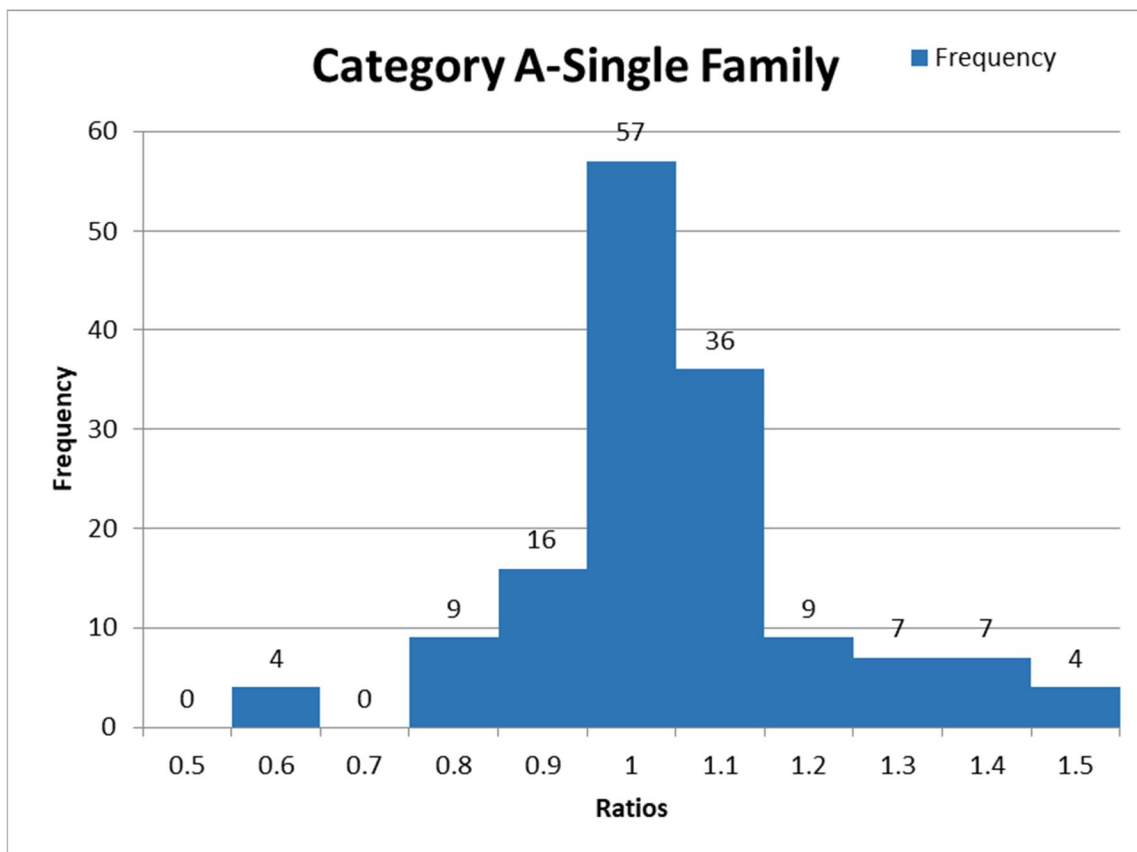
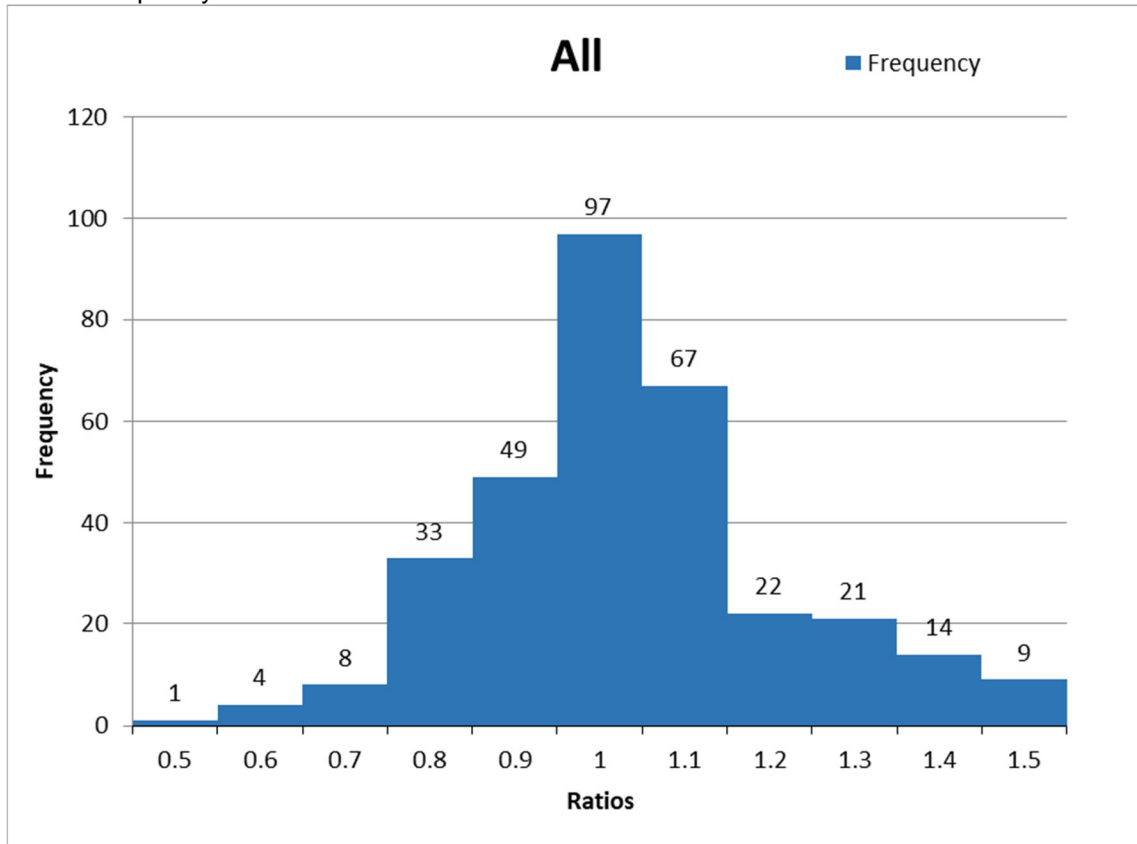
Category D – E, Farm and Ranch Land and Improvements

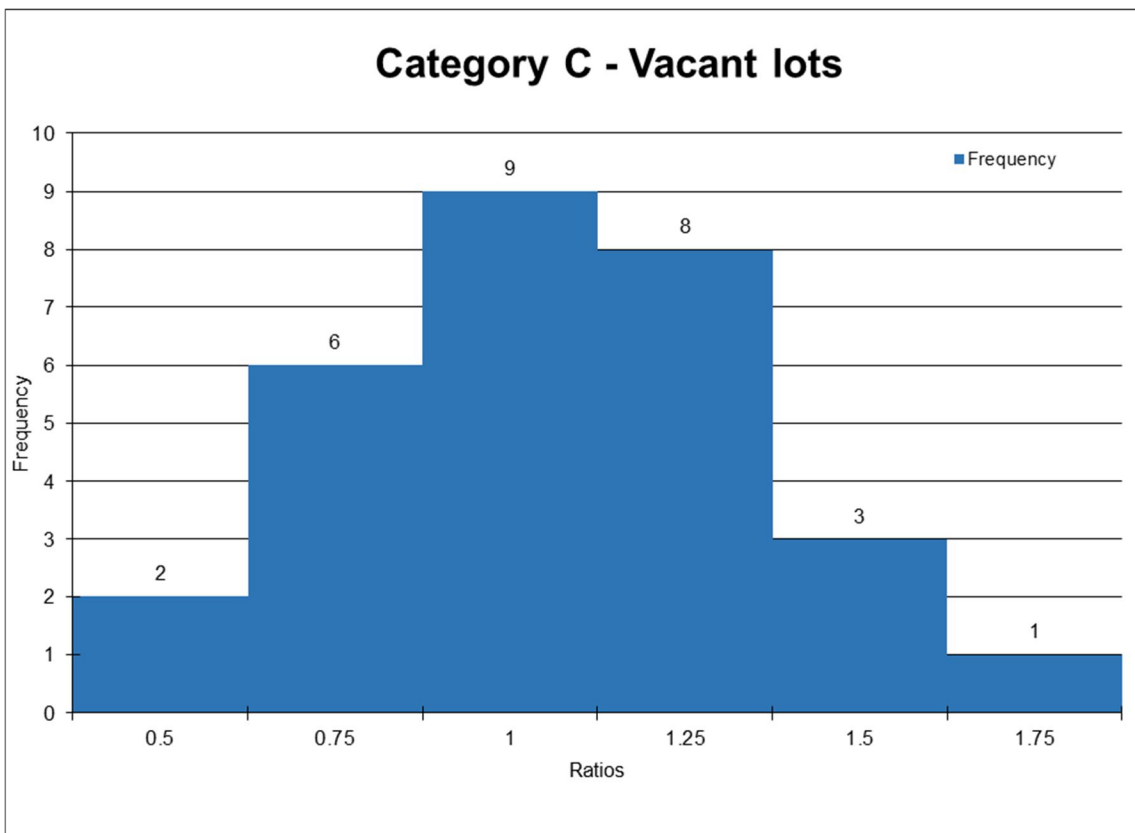
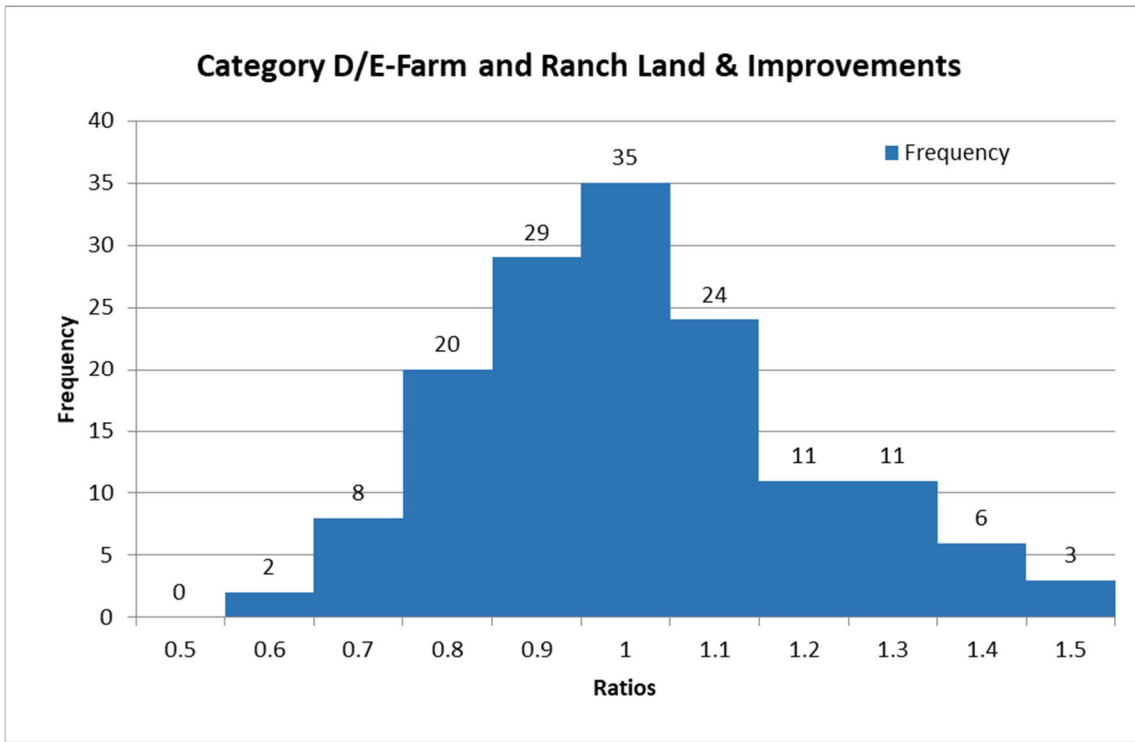
ISD Group	Observations	Mean	Median	Wt Mean	COD	Standard Deviation	95% Confidence	
							Upper	Lower
FISD	69	0.99	0.96	0.95	15.9649	0.21551	0.91	1.01
TISD	37	1.00	0.97	0.95	16.1622	0.2031	0.90	1.03
WISD	14	1.00	0.93	1.02	22.388	0.2913	0.78	1.08
D-B-O ISD	19	0.97	0.99	0.99	14.0252	0.1623	0.92	1.07

Exhibit 5

Ratio Distribution

A frequency distribution shows how often each different value in a set of data occurs. A histogram is the most commonly used graph to show frequency distributions.





All graphs indicate normal distributions of the Appraisal / Sale Ratios in the categories tested. Other categories, with limited sales for credible analysis, not displayed.



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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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.”

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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

- 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.

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.

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,

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 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:

- 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 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.

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:

- 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.

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).*

Individuals Providing Significant Mass Appraisal Assistance

Name	Type of Assistance
<p>Don Awalt RPA/CTA TDLR # 69620</p> <p>Deputy Chief Appraiser</p>	<ul style="list-style-type: none"> • Analyzed sales information in preparation for appraisal model calibration (cost schedules, neighborhoods, etc.) • Assisted staff in application of appraisal practices and laws governing exemptions and special valuations. • Performed appraisals on income producing properties when cost approach to value was considered. • Supervised GIS development and maintenance. • Assisted appraisers in providing explanations to property owners for proposed appraised values and made adjustments as needed based upon observations. • Reviewed appraisal adjustment reports generated from property owner inquiries as needed to ensure legitimacy of adjustments.
<p>Bobbi Shepherd, RPA TDLR# 69604</p> <p>Quality Control & Records Mgmt Coordinator</p>	<ul style="list-style-type: none"> • Performed random audits of properties included in inspection schedule for proper application of the appraisal model. • Performed random audits of exemption and special use applications to ensure proper application of exemptions and special valuations. • Made approved changes in CAMA to correct appraisal records for errors, omissions, and late exemption applications. • Assisted with the appraisal and review of business personal property. • Performed CAMA error edits at close of appraisal cycle.
<p>Dan Ralstin RPA/CTA TDLR # 70108</p> <p>Senior Appraiser</p>	<ul style="list-style-type: none"> • Ensured that on-site inspection schedule was completed according to reappraisal schedule. • Performed on-site inspections of improved properties. • Analyzed sales to assist with appraisal model calibration. • Reviewed results of staff on-site inspections for proper application of appraisal models. • Provided explanations to property owners for proposed appraised values and made adjustments as needed based upon observations.

Name	Type of Assistance
Sherry Nichols RPA TDLR # 71323 Business Personal Property Appraiser	<ul style="list-style-type: none"> • Performed on-site inspections of business personal property parcels. • Reviewed rendition statements from property owners to ensure that all personal property used for the production of income was properly listed on the appraisal roll. • Assisted appraiser and their assistants on proper application of the appraisal model for real estate parcels. • Reviewed exemption applications for qualifications and supervised correspondence when additional information was needed for approval, modification or denial. • Provided explanations to property owners for proposed appraised values and made adjustments as needed based upon observations.
Jason Moore Appraiser Trainee TDLR # 75365 Land APPRAISER	<ul style="list-style-type: none"> • Performed reviews of land records through examination of CAD GIS maps, USDA Soil Survey Maps, and available aerial photography. • Reviewed applications for Open Space Land Valuation for pasture, cropland, timberland, and wildlife management for completeness and qualifying activities. • Corresponded with applicants as needed to process open space applications. • Made on-site inspections of properties. • Provided explanations to property owners for proposed appraised values and made adjustments as needed based upon observations.
Debbie Bowden Appraiser Trainee TDLR # 75538 Residential Property Appraiser	<ul style="list-style-type: none"> • Performed on-site inspections of improved parcels as assigned. • Performed CAMA data entry to modify records as a result of inspections. • Provided explanations to property owners for proposed appraised values and made adjustments as needed based upon observations.
Pritchard & Abbott Contracted Professional Valuation Firm	<ul style="list-style-type: none"> • Appraised all mineral, utility, industrial, and utility properties in the district in accordance with their reappraisal plan activities outlined in <i>Addendum 5</i> of this report. • Provided explanations to property owners for proposed appraised values and made adjustments as needed based upon observations.