

**Ward County Appraisal District
S.B. 1652 Biennial Reappraisal Plan**

**For Tax Years
2015 and 2016**

**As Adopted by the Ward County
Appraisal District Board of Directors**

Effective August 11, 2014

Ward County Appraisal District
NOTICE OF PUBLIC HEARING
APPRAISAL DISTRICT REAPPRAISAL PLAN

Section 6.05 of the Texas Property Tax Code requires that the Board of Directors of an appraisal district 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.

The public hearing will be held on **August 11, 2014 at 12:00 Noon** at the appraisal district office located at 808 South Betty, Monahans.

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.

Notice of Public Hearing was mailed to taxing units on 8/6/14.

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WARD COUNTY APPRAISAL DISTRICT

REAPPRAISAL PLAN

The Ward County Appraisal District has prepared and published this reappraisal plan to provide our Board of Directors, citizens, and taxpayers with a better understanding of the district's responsibilities and activities. This report has several parts: a general introduction and then, several sections describing the appraisal effort by the appraisal district.

The Ward County Appraisal District is a political subdivision of the State of Texas created effective January 1, 1980. The provisions of the Texas Property Tax Code govern the legal, statutory, and administrative requirements of the appraisal district. A member Board of Directors, appointed by the taxing units within the boundaries of Ward County, constitutes the district's governing body. The chief appraiser, appointed by the Board of Directors, is the chief administrator and chief executive officer of the appraisal district.

The Ward County Appraisal District is responsible for local property tax appraisal and exemption administration for 7 jurisdictions or taxing units in the county. Each taxing unit sets its own tax rate to generate revenue to pay for such things as police and fire protection, public schools, road and street maintenance, courts, water and sewer systems, and other public services. Property appraisals by the appraisal district allocate the year's tax burden on the basis of each taxable property's market value. The district also determines eligibility for various types of property tax exemptions such as those for homeowners, the elderly, disabled veterans, charitable or religious organizations and agricultural productivity valuation.

Appraisal Responsibilities

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

APPRAISAL RESOURCES

Personnel – The appraisal activities are conducted by 2 appraisers and a Chief Appraiser.
Data – The data used by field appraisers includes the existing property characteristic information contained in the district’s computer system. The data is printed on a property record card or personal property data sheets. Other data used includes maps, sales data, building permits, and actual cost and market information. Sources of information are gathered using excellent relationships with other participants in the real estate market place. The district cultivates sources and gathers information from both buyers and sellers participating in the real estate market.

APPRAISAL FREQUENCY AND METHOD SUMMARY

Residential Property – Residential property is examined every three years with appraisers noting condition of the improvement and looking for changes that might have occurred to the property since the last on site check. Every defined area is statistically analyzed annually to ensure that sales that have occurred in the defined area during the past 12 months are within an acceptable range of appraised value. If the sales do not indicate that range, adjustments are made to the defined areas using a process outlined in detail in the Residential Appraisal section of this report. The following reappraisal schedule will be used for Ward County Appraisal District property.

Addendum #1 map shows each defined market area for the Ward County Appraisal District.

Addendum #2 shows the calendar of events for each year. As the Property Tax Code is revised and local circumstances require the Calendar of Key Events may be changed as warranted.

The defined market areas for the Ward County Appraisal District are:

- 1. City Of Monahans**
- 2. MWP ISD**
- 3. GFR ISD**
- 4. PBT ISD**

For the 2016 reappraisal year, the City of Monahans following the city limit boundary lines and that portion of MWP I.S.D. inside the city limit boundary lines will be appraised. This includes all real and commercial property.

For the 2014 reappraisal year, all remaining property in the MWP I.S.D. along with all cities in MWP I.S.D. including Wickett, and Pyote will be appraised. This includes all real and commercial property.

For the 2015 reappraisal year, all rural property that is not part of MWP I.S.D. will be appraised. This includes the Grandfalls I.S.D. boundary lines, the City of Grandfalls, and the City of Barstow. This includes all real and commercial property.

Commercial Property – Commercial and industrial real estate is observed every three years to verify class and condition using the same reappraisal plan outline listed above for residential property. The income approach to value is utilized to appraise larger valued commercial properties such as apartment complexes, office buildings, restaurants, motels and hotels, and other types of property that typically sell based on net income. Due to the lack of information available at this time motels are the only properties that can be appraised using the income approach.

Business Personal Property – Business personal property is reappraised annually to develop quality and density observations. Rendition forms are mailed to every business listed on the appraisal roll no later than January 1st of each year. A rendition is left for new businesses to complete. Businesses are categorized using state codes. Rendition laws provide additional information on which to base values of all business personal property accounts.

Minerals – Working and royalty interests of producing oil and gas wells are appraised annually by Pritchard and Abbott Inc. The most recent production data available from the Texas Railroad Commission is used to estimate economically recoverable reserves. Those reserves are then valued based upon state mandated pricing using the previous year's average of oil or gas values. A discount is applied over the anticipated life of the well in order to consider the value of money over time to recover those reserves. Each producing lease is valued as a unit and then that value is divided according to the various owners of the lease listed in division orders.

Utilities and Pipelines – Utility companies and pipelines are appraised annually by Pritchard and Abbott Inc. using a unit value developed using all three approaches to value. A utility company's total value in the state is estimated using cost, market, and income approaches to value and then the entire value is allocated using the components of that utility company that have situs in the various tax units of Ward County. Components include such things as miles of transmission lines, miles of distribution lines, substations, and the like for an electric utility.

PRELIMINARY ANALYSIS

Data Collection/Validation

Data collection of real property involves maintaining data characteristics of the property on Computer Assisted Mass Appraisal. The information contained in CAMA includes site characteristics, such as land size and improvement data, such as square feet of living area, year built, quality of construction, and condition. Field appraisers are required to use a property classification system that establishes uniform procedures for the correct listing of real property. All properties are coded according to a classification system. The approaches to value are structured and calibrated based on this coding system and property description and characteristics. The field appraisers use property classification references as a guide in the field inspection of properties. Data collection for personal

property involves maintaining information on software designed to record and appraise business personal property. The type of information contained in the BPP files includes personal property such as business inventory, furniture and fixtures, machinery and equipment, with details such as cost and location. The field appraisers conducting on-site inspections use a personal property classification system as a guide to correctly list all personal property that is taxable.

Sources of Data

The sources of data collection are through property inspection, new construction field effort, data review/relist field effort, data mailer questionnaires, hearings, sales validation field effort, commercial sales verification and field effort, publications, and property owner correspondence by mail. A principal source of data comes from building permits. Paper permits are received and matched with the property's tax account number for data entry. Local real estate brokers are also sources of market and property information. Soil surveys and agricultural surveys of ranching property owners and industry professionals are helpful for productivity value calibration. The Texas Railroad Commission is the source for mineral production data and leasing information. Improvement cost information is gathered from area building contractors and Marshall and Swift Valuation Service. The sales validation effort in real property pertains to the collection of market data for properties that have sold. In residential and commercial property the sales validation effort involves inspection by field appraisers to verify the accuracy of the property characteristics and confirmation of the sales price. Property owners are one of the best sources for identifying incorrect data that generates a field check. Frequently, the property owner provides reliable data to allow correction of records. Properties identified in this manner are added to a work file and inspected at the earliest opportunity. Accuracy and validity in property descriptions and characteristics data is the highest goal and is stressed throughout the appraisal process from year to year. Appraisal opinion quality and validity relies on data accuracy as its foundation.

Data Collection Procedures

The appraisers identify specific areas throughout the district to conduct field inspections. Appraisers of real estate and business personal property conduct field inspections and document corrections and additions that the appraiser may find in his or her field inspection. The quality of the data used is extremely important in estimating market values of taxable property. While work performance standards are established and upheld for the various field activities, quality of data is emphasized as the goal and responsibility of each appraiser.

Data Maintenance

The field appraiser is responsible for the data entry of his/her fieldwork into the computer file. This responsibility includes not only data entry, but also quality assurance. The majority of data collected in the field is input by the field appraiser. Data updates and file

modification for property descriptions and input accuracy is conducted as the responsibility of the field appraiser and appraisal supervisor.

Field Review

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

Office Review

Office reviews are completed on properties where update information has been received from the owner of the property and is considered accurate and correct. When the property data is verified in this manner, field inspections may not be required. The personal property appraiser mails property rendition forms in December of each year to assist in the annual review of the property.

Performance Test

The property appraisers are responsible for conducting ratio studies and comparative analysis. Ratio studies are conducted on property located within certain neighborhoods or districts by appraisal staff. The sale ratio and comparative analysis of sale property to appraised property forms the basis for determining the level of appraisal and market influences and factors for the neighborhood. This information is the basis for updating property valuation for the entire area of property to be evaluated. Field appraisers, in many cases, may conduct field inspections to insure the accuracy of the property descriptions at the time of sale for this study. This inspection is to insure that the ratios produced are accurate for the property sold and that appraised values utilized in the study are based on accurate property data characteristics observed at the time of the sale. Also, property inspections are performed to discover if property characteristics had changed as of the sale date or subsequent to the sale date. Sale ratios should be based on the value of the property as of the date of sale not after a subsequent or substantial change was made to the property after the negotiation and agreement in price was concluded. Properly performed ratio studies are a good reflection of the level of appraisal for the district.

RESIDENTIAL VALUATION PROCESS

Scope of Responsibility

The residential appraisers are responsible for estimating equal and uniform market values for residential improved and vacant property. Appraisers from Pritchard and Abbott Inc. are responsible for estimating equal and uniform market values for industrial and mineral property. There are approximately 49,000 parcels in Ward County and adjoining overlapping jurisdictional areas.

Appraisal Resources

Personnel – The Ward County Appraisal District staff consists of 4 full-time employees.

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

VALUATION APPROACH

Land Analysis

Residential land valuation analysis is conducted prior to neighborhood sales analysis. The value of the land component to the property is estimated based on available market sales for comparable and competing land under similar usage. A comparison and analysis of comparable land sales is conducted based on a comparison of land characteristics found to influence the market price of land located in the neighborhood. A computerized land table file stores the land information required to consistently value individual parcels within neighborhoods given known land characteristics. Specific land influences are considered, where necessary, and depending on neighborhood and individual lot or tract characteristics, to adjust parcels outside the neighborhood norm for such factors as access, view, shape, size, and topography.

Area Analysis

Data of regional economic forces such as demographic patterns, regional locational factors, employment and income patterns, general trends and costs are collected from private vendors and public sources and provide the field appraiser a current economic outlook on the real estate market. Information is gleaned from real estate publications and sources such as continuing education in the form of IAAO and BTPE classes.

Neighborhood and Market Analysis

Neighborhood analysis involves the examination of how physical, economic, governmental and social forces and other influences affect property values. The effects of these forces are also used to identify, classify, and stratify comparable properties into smaller, manageable subsets of the universe of properties known as neighborhoods. Residential valuation and neighborhood analysis is conducted on various market areas within each of the political entities known as Independent School Districts. Analysis of

comparable market sales forms the basis of estimating market activity and the level of supply and demand affecting market prices for any given market area, neighborhood or district. Market sales indicate the effects of these market forces and are interpreted by the appraiser into an indication of market price ranges and indications of property component change considering a given time period relative to the date of appraisal. Cost and Market Approaches to estimate value are the basic techniques utilized to interpret these sales. For multiple family properties the Income Approach to value is also utilized to estimate an opinion of value for investment level residential property. The first step in neighborhood analysis is the identification of a group of properties that share certain common traits. A "neighborhood" for analysis purposes is defined as the largest geographic grouping of properties where the property's physical, economic, governmental and social forces are generally similar and uniform. Geographic stratification accommodates the local supply and demand factors that vary across a jurisdiction. Once a neighborhood with similar characteristics has been identified, the next step is to define its boundaries. This process is known as "delineation." Some factors used in neighborhood delineation include location, sales price range, lot size, age of dwelling, quality of construction and condition of dwellings, square footage of living area, and story height. Delineation can involve the physical drawing of neighborhood boundary lines on a map, but it can also involve statistical separation of stratification based on attribute analysis. Part of neighborhood analysis is the consideration of discernible patterns of growth that influence a neighborhood's individual market. Few neighborhoods are fixed in character. Each neighborhood may be characterized as being in a stage of growth, stability, or decline. The growth period is a time of development and construction. As new neighbors in a community are developed, they compete with existing neighborhoods. An added supply of new homes tends to induce population shift from older homes to newer homes. In the period of stability, or equilibrium, the forces of supply and demand are about equal. Generally, in the stage of equilibrium, older neighborhoods can be more desirable due to their stability of residential character and proximity to the workplace and other community facilities. The period of decline reflects diminishing demand or desirability. During decline, general property use may change from residential to a mix of residential and commercial uses. Declining neighborhoods may also experience renewal, reorganization, rebuilding, or restoration, which promotes increased demand and economic desirability. Neighborhood identification and delineation is the cornerstone of the residential valuation system at the district. All the residential analysis work done in association with the residential valuation process is neighborhood specific. Neighborhoods are field inspected and delineated based on observable aspects of homogeneity. Neighborhood delineation is periodically reviewed to determine if further neighborhood delineation is warranted. Whereas neighborhoods involve similar properties in the same location, a neighborhood group is simply defined as similar neighborhoods in similar locations. Each residential neighborhood is assigned to a neighborhood group based on observable aspects of homogeneity between neighborhoods. Neighborhood grouping is highly beneficial in cost-derived areas of limited or no sales, or use in direct sales comparison analysis. Neighborhood groups, or clustered neighborhoods, increase the available market data by linking comparable properties outside a given neighborhood. Sales ratio analysis, discussed below, is performed on a neighborhood basis, and in soft sale areas on a neighborhood group basis.

Highest and Best Use Analysis

The highest and best use of property is the reasonable and probable use that supports the highest present value as of the date of the appraisal. The highest and best use must be physically possible, legal, financially feasible, and productive to its maximum. The highest and best use of residential property is normally its current use. This is due in part to the fact that residential development, in many areas, through use of deed restrictions and zoning, precludes other land uses. Residential valuation undertakes reassessment of highest and best use in transition areas and areas of mixed residential and commercial use. In transition areas with ongoing gentrification, the appraiser reviews the existing residential property use and makes a determination regarding highest and best use. Once the conclusion is made that the highest and best use remains residential, further highest and best use analysis is done to decide the type of residential use on a neighborhood basis. As an example, it may be determined in a transition area that older, non-remodeled homes are economic misimprovements, and the highest and best use of such property is the construction of new dwelling. In areas of mixed residential and commercial use, the appraiser reviews properties in these areas on a periodic basis to determine if changes in the real estate market require reassessment of the highest and best use of a select population of properties.

VALUATION AND STATISTICAL ANALYSIS

Cost Schedules

All residential parcels in the district are valued with a replacement cost estimated from identical cost schedules based on the improvement classification system using a comparative unit method. The district's residential cost schedules are estimated from Marshall and Swift, a nationally recognized cost estimator service. These cost estimates are compared with sales of new improvements and evaluated from year to year and indexed to reflect the local residential building and labor market. Costs may also be indexed for neighborhood factors and influences that affect the total replacement cost of the improvements in a smaller market area based on evidence taken from a sample of market sales. The cost schedules are reviewed regularly as a result of recent state legislation requiring that the appraisal district cost schedules be within a range of plus or minus 10% from nationally recognized cost schedules. A review of the residential cost schedule is performed annually. As part of this review and evaluation process of the estimated replacement cost, newly constructed sold properties representing various levels of quality of construction in the district are considered. The property data characteristics of these properties are verified and CAD replacement costs are compared against Marshall & Swift, a nationally recognized cost estimator, and the indicated replacement cost abstracted from these market sales of comparably improved structures. The results of this comparison are analyzed using statistical measures, including stratification by quality and reviewing of estimated building costs plus land to sales prices. As a result of this analysis, a new regional multiplier or economic index factor and indications of neighborhood economic factors are developed for use in the district's cost process. This

new economic index is estimated and used to adjust the district's cost schedule to be in compliance with local building costs as reflected by the local market.

Sales Information

A sales file for the storage of sales data at the time of sale is maintained for real property. Residential vacant land sales, along with commercial improved and vacant land sales are maintained in a sales information system. Residential improved and vacant sales are collected from a variety of sources, including: district questionnaires sent to buyers, field discovery, protest hearings, builders, and realtors. A system of type, source, validity and verification codes has been established to define salient facts related to a property's purchase or transfer and to help determine relevant market sale prices. The effect of time as an influence on price was considered by paired comparison and applied in the ratio study to the sales as indicated within each neighborhood area. Neighborhood sales reports are generated as an analysis tool for the appraiser in the development and estimation of market price ranges and property component value estimates.

Statistical Analysis

The residential valuation appraisers perform statistical analysis annually to evaluate whether estimated values are equitable and consistent with the market. Ratio studies are conducted in the district to judge the two primary aspects of mass appraisal accuracy-level and uniformity of value. The level of appraised values is determined by the weighted mean ratio for sales of individual properties, and a comparison of weighted means reflect the general level of appraised value between comparable properties. This set of ratio studies affords the appraiser an excellent means of judging the present level of appraised value and uniformity of the sales. The appraiser, based on the sales ratio statistics and designated parameters for valuation update, makes a preliminary decision as to whether the value level needs to be updated or whether the level of market value is at an acceptable level.

Market and Cost Reconciliation and Valuation

Neighborhood analysis of market sales to achieve an acceptable sale ratio or level of appraisal is also the reconciliation of the market and cost approaches to valuation. Market factors are developed from appraisal statistics provided from market analysis and ratio studies and are used to ensure that estimated values are consistent with the market and to reconcile cost indicators. The district's primary approach to the valuation of residential properties uses a hybrid cost-sales comparison approach. When the appraiser reviews a neighborhood, the appraiser reviews and evaluates a ratio study that compares recent sales prices of property, appropriately adjusted for the effects of time, within a delineated neighborhood, with the value of the properties' based on the estimated depreciated replacement cost of improvements plus land value. The calculated ratio derived from the sum of the sold properties' estimated value divided by the sum of the time adjusted sales prices indicates the neighborhood level of appraisal based on sold properties. This ratio is compared to the acceptable appraisal ratio to determine the level

of appraisal for each neighborhood. If the level of appraisal for the neighborhood is outside the acceptable range of ratios, adjustment to the neighborhood are made. If reappraisal of the neighborhood is indicated, the appraiser analyzes available market sales. This allows the appraiser to focus on the rate of change for the improvement contribution to the property by providing a basis for calculating accrued depreciation attributed to the improvement component. This impact on value is usually the most significant factor affecting property value and the most important unknown to determine by market analysis. Comparing this indicated price for the improvement with the estimated replacement cost new of the improvement indicates any loss in value due to accrued forms of physical, functional, or economic obsolescence. This is a market driven measure of accrued depreciation and results in a true and relevant measure of improvement marketability, particularly when based on multiple sales that indicate the trending of this rate of change over certain classes of improvements within certain neighborhoods. Based on this market analysis, the appraiser estimates the annual rate of depreciation for given improvement descriptions considering age and observed condition. Once estimated, the appraiser recalculates the improvement value of all property within the sale sample to consider and review the effects on the neighborhood sale ratio. After an acceptable level of appraisal is achieved within the sale sample, the entire neighborhood of property is recalculated utilizing the indicated depreciation rates taken from market sales. This depreciation factor is the basis for trending all improvement values and when combined with other site improvements and land value, brings the estimated property value through the cost approach closer to actual market prices as evidenced by recent sale prices available within a given neighborhood. Therefore, based on analysis of recent sales located within a given neighborhood, estimated property values will reflect the market influences and conditions only for the specified neighborhood, thus producing more representative and supportable values. The estimated property values calculated for each update neighborhood are based on market indicated factors applied uniformly to all properties within a neighborhood. Finally, with all the market-trend factors applied, a final ratio study is generated that compares recent sale prices with the proposed appraised values for these sold properties. From this set of ratio studies, the appraiser judges the appraisal level and uniformity in both update and non-update neighborhoods and verifies appraised values against overall trends as exhibited by the local market, and finally, for the school district as a whole.

TREATMENT OF RESIDENCE HOMESTEADS

Beginning in 1998, the State of Texas implemented a constitutional classification scheme concerning the appraisal of residential property that receives a residence homestead exemption. Under that law, beginning in the second year a property receives a homestead exemption, increases in the assessed value of that property are "capped." The value for tax purposes of a qualified residence homestead will be the lesser of: the market value; or the preceding year's appraised value; plus 10 percent for each year since the property was re-appraised; plus the value of any improvements added since the last re-appraisal. Assessed values of capped properties must be recomputed annually. If a capped property sells, the cap automatically expires as of January 1st of the year following sale of the property and the property is appraised at its market value. An analogous provision

applies to new homes. While a developer owns them, unoccupied residences may be partially complete and appraised as part of an inventory. This valuation is estimated using the district's land value and the percentage of completion for the improvement contribution that usually is similar to the developer's construction costs as a basis of completion on the valuation date. However, in the year following changes in completion, occupancy, or sale, they are appraised at market value.

INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review

The appraiser identifies individual properties in critical need of field review through sales ratio analysis. Sold properties are field reviewed on a periodic basis to check for accuracy of data characteristics. The appraiser reviews subjective data items such as quality of construction, condition, and physical, functional, and economic obsolescence, factors contributing significantly to the market value of the property. During this review, the appraiser is able to physically inspect both sold properties and unsold properties for comparability and consistency of values.

Office Review

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

PERFORMANCE TESTS

Sales Ratio Studies

The primary analytical tool used by the appraisers to measure and improve performance is the ratio study. The district ensures that the appraised values that it produces meet the standards of accuracy in several ways. Overall sales ratios are generated to allow the appraiser to review general market trends and provide an indication of market appreciation over a specified period of time. The PC-based ratio studies are designed to emulate the findings of the state comptroller's annual property value study for category A property.

Management Review Process

Once the proposed value estimates are finalized, the appraiser reviews the sales ratios by neighborhood and presents pertinent valuation data, such as weighted sales ratio and pricing trends, to the Chief Appraiser for final review and approval. The primary objective of this review is to ensure that the proposed values have met preset appraisal guidelines appropriate for the tax year in question.

COMMERCIAL AND INDUSTRIAL PROPERTY VALUATION PROCESS

INTRODUCTION

Appraisal Responsibility

This mass appraisal assignment includes all of the commercially described real property which falls within the Ward County Appraisal District and located within the boundaries of the taxing jurisdictions. Appraisers appraise the fee simple interest of properties according to statute and court decisions. However, the affect of easements, restrictions, encumbrances, leases, contracts or special assessments are considered on an individual basis, as is the appraisement of any nonexempt taxable fractional interests in real property. Fractional interests or partial holdings of real property are appraised in fee simple for the whole property and divided programmatically based on their prorated interests.

Appraisal Resources

Personnel- The improved real property appraisal responsibilities are categorized according to major property types.

Data- The data used by the commercial appraisers includes verified sales of vacant land and improved properties and the pertinent data obtained from each: sales price levels, capitalization rates, income multipliers, marketing period, etc. Other data used by the appraisers includes actual income and expense data, actual contract rental data, leasing information, and actual construction cost data. In addition to the actual data obtained from specific properties, market data publications are also reviewed to provide additional support for market trends.

PRELIMINARY ANALYSIS

Market Study

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

approach, and income approach models. Ward CAD coordinates its discovery and valuation activities with adjoining appraisal districts. Data exchanges with adjacent appraisal districts have been conducted to ensure compliance with state statutes. In addition, Ward CAD administration and personnel interact with other assessment officials through professional trade organizations. District staff strives to maintain appraisal skills and professionalism by continuing education in the form of courses that are offered by several professional associations.

VALUATION APPROACH

Land Value

Commercial land is analyzed to compare appraised values with sales of land in the market area. If appraised values differ from sales prices being paid, adjustments are made to all land in that region. Generally, commercial property is appraised on a price per square foot basis. Factors are placed on individual properties based on corner influence, depth of site, shape of site, easements across site, and other factors that may influence value. The land is valued as though vacant at the highest and best use.

Area Analysis

Area data on regional economic forces as demographic patterns, regional locational factors, employment and income patterns, general trends in real property prices and rents, interest rate trends, availability of vacant land, and construction trends and costs are collected from private vendors and public sources.

Neighborhood Analysis

The neighborhood and market areas are comprised of the land area and commercially classed properties located within the boundaries of this appraisal jurisdiction. These areas consist of a wide variety of property types including multiple-family residential, commercial, and industrial. Neighborhood and area analysis involves the examination of how physical, economic, governmental, and social forces and other influences may affect property values within subgroups of property locations. The effects of these forces are also used to identify, classify, and organize comparable properties into smaller, manageable subsets of the universe of properties known as neighborhoods. In the mass appraisal of commercial and industrial properties these subsets of a universe of properties are generally referred to as market areas, neighborhoods, or economic areas. Economic areas are defined by each of the improved property use types based upon an analysis of similar economic or market forces. These include but are not limited to similarities of rental rates, classification of projects, date of construction, overall market activity or other pertinent influences. Economic area identification and delineation by each major property use type is the benchmark of the commercial valuation system. All income is economic area specific. Economic areas are periodically reviewed to determine if redelineation is required. The geographic boundaries as well as income, occupancy and expense levels and capitalization rates by age within each economic area fro all

commercial use types and its corresponding income model have been estimated for these properties.

Highest and Best Use Analysis

The highest and best use is the most reasonable and probable use that generates the highest net to land and present value of the real estate as of the date of valuation. The highest and best use of any given property must be physically possible, legally permissible, financially feasible, and maximally productive. For improved properties, highest and best use is evaluated as improved and as if the site were still vacant. This perspective assists in determining if the existing improvements have a transitional use, interim use, nonconforming use, multiple uses, speculative use, is excess land, or a different optimum use if the site were vacant. For vacant tracts of land within this jurisdiction, the highest and best use is considered speculative based on the surrounding land uses. Improved properties reflect a wide variety of highest and best uses which include, but are not limited to: office, retail, apartment, warehouse, light industrial, special purpose, or interim uses. In many instances, the property's current use is the same as its highest and best use. This analysis insures that an accurate estimate of market value is derived. On the other hand, value in use represents the value of a property to a specific user for a specific purpose. This perspective for value may be significantly different than market value, which approximates market value under the following assumptions: no coercion of undue influence over the buyer or seller in an attempt to force the purchase or sale; well-informed buyers and sellers acting in their own best interests; a reasonable time for the transaction to take place; and payment in cash or its equivalent.

Market Analysis

A market analysis relates directly to examining market forces affecting supply and demand. This study involves the relationships between social, economic, environmental, governmental, and site conditions. Current market activity including sales of commercial properties, new construction, new leases, lease rates, absorption rates, vacancies, allowable expenses, expense ratio trends, capitalization rate studies are analyzed to determine market ranges in price, operating costs and investment return expectations.

DATA COLLECTION/VALIDATION

Data Collection Manuals

All properties located in Ward CAD are coded according to a specific classification system and the approaches to value are structured and calibrated based on this coding system. Annually, after the sales of property have been researched, verified, keyed into the database, and quality control has been completed, the sales data is summarized and produced into list form. The confirmed sales reports categorize the sales by property and use type, and sort the data by location and chronological order.

Sources of Data

In terms of commercial sales data, Ward CAD receives a copy of the deeds recorded in Ward County and adjoining counties that convey commercially classed properties. These deeds involving a change in commercial ownership are entered into the sales information system and researched in an attempt to obtain the pertinent sale information. Other sources of sale data include the protest hearings process and local, regional, and national real estate and financial publications. For those properties involved in a transfer of commercial ownership, a sale file is produced which begins the research and verification process. The initial step in sales verification involves a computer-generated questionnaire, which is mailed to both parties in the transaction. If a questionnaire is answered and returned, the documented responses are recorded into the computerized sales database system. Other sources contacted are the brokers involved in the sale and property managers. In other instances, sales verification is obtained from local appraisers or others that may have the desired information. Model calibration involves the process of periodically adjusting the mass appraisal formula, tables, and schedules to reflect current local market conditions. Once the models have undergone the specification process, adjustments can be made to reflect new construction procedures, materials and/or costs, which can vary from year to year. The basic structure of a mass appraisal model can be valid over an extended period of time, with trending factors utilized for updating the data to the current market conditions.

Cost Schedules

The cost approach to value is applied to improved real property utilizing the comparative unit method. This methodology involves the utilization of national cost data reporting services as well as actual cost information on local comparable properties whenever possible. Cost models are typically developed based on the Marshall Valuation Service which indicates estimated hard or direct costs of various improvement types. Cost models include the derivation of replacement cost new of all improvements represented within the district. These include comparative base rates, per unit adjustments and lump sum adjustments for variations in property description, design, and types of improvement construction. This approach and analysis also employs the sales comparison approach in the evaluation of soft or indirect costs of construction. Evaluating market sales of newly developed improved property is an important part of understanding total replacement cost of improvements. What total costs may be involved in the development of the property, as well as any portion of cost attributed to entrepreneurial profit can only be revealed by market analysis of pricing acceptance levels. In addition, market related land valuation for the underlying land value is important in understanding and analyzing improved sales for all development costs and for the abstraction of improvement costs for construction and development. Time and location modifiers are necessary to adjust cost data to reflect conditions in a specific market and changes in costs over a period of time. Because a national cost service is used as a basis for the cost models, locational modifiers and estimates of soft cost factors are necessary to adjust these base costs specifically for various types of improvements located in Ward County. Thusly, local modifiers are additional cost factors applied to replacement cost estimated by the national cost service.

Estimated replacement new will reflect all costs of construction and development for various improvements located in Ward CAD as of the date of appraisal. Accrued depreciation is the sum of all forms of loss affecting the contributory value of the improvements. It is the measured loss against replacement cost new taken from all forms of physical deterioration, functional, and economic obsolescence. Accrued depreciation is estimated and developed based on losses typical for each property type at that specific age. Depreciation estimates have been implemented for what is typical of each major class of commercial property by economic life categories. Estimates of accrued depreciation have been calculated for improvements with a range of variable years expected life based on observed condition considering actual age. These estimates are continually tested to ensure they are reflective of current market conditions. The actual and effective ages of improvements are noted in CAMA. Effective age estimates are based on the utility of the improvements relative to where the improvement lies on the scale of its total economic life and its competitive position in the marketplace. Effective age estimates are considered and reflected based on five levels or rankings of observed condition, given actual age. Additional forms of depreciation such as external and/or functional obsolescence can be applied if observed. A depreciation calculation override can be used if the condition or effective age of a property varies from the norm by appropriately noting the physical condition and functional utility ratings on the property data characteristics. These adjustments are typically applied to a specific condition adequacy or deficiency, property type or location and can be developed via ratio studies or other market analyses. The result of estimating accrued depreciation and deducting that from the estimated replacement cost new of improvements indicates the estimated contributory value of the improvements. Adding the estimated land value, as if vacant, to the contributory value of the improvements indicates a property value by the cost approach. Given relevant cost estimates and market related measures of accrued depreciation, the indicated value of the property by the cost approach becomes a very reliable valuation technique.

Income Models

The income approach to value is applied to those real properties which are typically viewed by market participants as "income producing" and for which the income methodology is considered a leading value indicator. The first step in the income approach pertains to the estimation of market rent on a per unit basis. This is derived primarily from actual rent data furnished by property owners and from local market surveys conducted by the district and by information from area rent study reviews. This per unit rental rate multiplied by the number of units results in the estimate of potential gross rent. A vacancy and collection loss allowance is the next item to consider in the income approach. The projected vacancy and collection loss allowance is established from actual data furnished by property owners and local market survey trends. This allowance accounts for periodic fluctuations in occupancy, both above and below an estimated stabilized level. This feature may also provide for a reasonable lease-up period for multi-tenant properties, where applicable. The market derived stabilized vacancy and collection loss allowance is subtracted from the potential gross rent estimate to yield an indication of estimated annual effective gross rent to the property. Next, a secondary

income or service income is considered and, if applicable, calculated as a percentage of stabilized effective gross rent. Secondary income represents parking income, escalations, reimbursements, and other miscellaneous income generated by the operations of real property. The secondary income estimate is derived from actual data collected and available market information. The secondary income estimate is then added to effective gross rent to arrive at an effective gross income, when applicable. Allowable expenses and expense ratio estimates are based on a study of the local market, with the assumption of prudent management. An allowance for non-recoverable expenses such as leasing costs and tenant improvements may be included in the expenses. A non-recoverable expense represents costs that the owner pays to lease rental space. Relevant expense ratios are developed for different types of commercial property based on use and market experience. For instance, retail properties are most frequently leased on a triple-net basis, whereby the tenant is responsible for all operating expenses, such as ad valorem taxes, insurance, and common area and property maintenance. In comparison, a general office building is most often leased on a base year expense stop. This lease type stipulates that the owner is responsible for all expenses incurred during the first year of the lease. As a result, expense ratios are implemented and estimated based on observed market experience in operating various types of commercial property. Another form of allowable expense is the replacement of short-lived items requiring expenditures of lump sum costs. When these capital expenditures are analyzed for consistency and adjusted, they may be applied on an annualized basis as stabilized expenses. When performed according to local market practices by commercial property type, these expenses when annualized are known as replacement reserves. For some types of property, typical management does not reflect expensing reserves and is dependent on local and industry practices. Subtracting the allowable expenses from the annual effective gross income yields an estimate of annual net operating income to the property. Return rates and income multipliers are used to convert operating income expectations into an estimate of market value for the property under the income approach. These include income multipliers, overall capitalization rates, and discount rates. Each of these multipliers may vary between property types, as well as by location, quality, condition, design, age, and other factors. Therefore, application of the various rates and multipliers must be based on a thorough analysis of the market for individual income property types and uses. These procedures are supported and documented based on analysis of market sales for these property types. Capitalization analysis is used in the income approach models to form an indication of value. This methodology involves the direct capitalization of net operating income as an indication of market value for a specific property. Capitalization rates applicable for direct capitalization method and yield rates for estimating terminal cap rates for discounted cash flow analysis are derived from the market. Sales of improved properties from which actual income and expense data are obtained provide a very good indication of property return expectations a specific market participant is requiring from an investment at a specific point in time. In addition, overall capitalization rates can be derived and estimated from the built-up method. This method relates to satisfying estimated market return requirements of both the debt and equity positions in a real estate investment. This information is obtained from available sales of property, local lending sources, and from real estate and financial publications. Rent loss concessions are estimated for specific properties with vacancy problems. A rent loss concession accounts

for the impact of lost rental income while the building is moving toward stabilized occupancy. The rent loss is calculated by multiplying the rental rate by the percent difference of the property's stabilized occupancy and its actual occupancy. Build out allowances and leasing expenses are added to rent loss estimate. The total adjusted loss from these real property operations is discounted using an acceptable risk rate. The discounted value becomes the rent loss concession and is deducted from the value indication of the property at stabilized occupancy. A variation of this technique allows a rent loss deduction to be estimated for every year that the property's actual occupancy is less than stabilized occupancy.

Sales Comparison (Market) Approach

Although all three of the approaches to value are based on market data, the Sales Comparison Approach is most frequently referred to as the Market Approach. This approach is utilized not only for estimating land value but also in comparing sales of similarly improved properties to parcels on the appraisal roll. As previously discussed in the Data Collection/Validation section of this report, pertinent data from actual sales of properties, both vacant and improved, is pursued throughout the year in order to obtain relevant information which can be used in all aspects of valuation. Sales of similarly improved properties can provide a basis for the depreciation schedules in the Cost Approach, rates and multipliers used in the Income Approach, and as a direct comparison in the Sales Comparison Approach. Improved sales are also used in ratio studies, which afford the appraiser an excellent means of judging the present level and uniformity of the appraised values.

Final Valuation Schedules

Based on the market data analysis and review discussed previously in the cost, income, and sales approaches, the cost and income models are calibrated and finalized. The calibration results are keyed to the schedules and models in the CAMA system for utilization on all commercial properties in the district. Market factors reflected within the cost and income approaches are evaluated and confirmed based on market sales of commercial and industrial properties. The appraisers review the cost, income, and sales comparison approaches to value for each of the types of properties with available sales information. The final valuation of a property is estimated based on reconciling these indications of value considering the weight of the market information available for evaluation and analysis in these approaches to value.

Statistical and Capitalization Analysis

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

each property type with available sales data. These summary statistics including, but not limited to, the weighted mean, provide the appraisers an analytical tool by which to determine both the level and uniformity of appraised value of a particular property type. The level of appraised values can be determined by the weighted mean for individual properties within a specific type, and a comparison of weighted means can reflect the general level of appraised value. The appraisers review every commercial property type annually through the sales ratio analysis process. The first phase involves ratio studies that compare the recent sales prices of properties to the appraised values of the sold properties. This set of ratio studies affords the appraiser an excellent means of judging the present level of appraised value and uniformity of the appraised values. The appraiser, based on the sales ratio statistics and designated parameters for valuation update, makes a preliminary decision as to whether the value level of a particular property type needs to be updated in an upcoming reappraisal, or whether the level of market value is at an acceptable level. Potential gross rent estimates, occupancy levels, secondary income, allowable expenses, net operating income, and capitalization rate and multipliers are continuously reviewed. Income model estimates and conclusions are compared to actual information obtained on individual commercial and industrial income properties during the protest hearings process, as well as with information from published sources and area property managers and owners.

INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review

The date of last inspection, extent of that inspection, and the Ward CAD appraiser responsible are listed in the CAMA system. If a property owner disputes the District's records concerning this data in a protest hearing, CAMA may be altered based on the credibility of the evidence provided. Normally a new field check is then requested to verify this information for the current year's valuation or for the next year's valuation. In addition, if a building permit is filed for a particular property indicating a change in characteristics, that property is added to a work file for review. Commercial appraisers are somewhat limited in the time available to field review all commercial properties of a specific use type. However, a major effort is made by appraisers to field review as many properties as possible or economic areas experiencing large numbers of remodels, renovations, or retrofits, changes in occupancy levels or rental rates, new leasing activity, new construction, or wide variations in sale prices. Field review of real property accounts is accomplished while business personal property is reviewed and inspected in the field. Additionally, the appraisers frequently field review subjective data items such as building class, quality of construction, condition, and physical, functional and economic obsolescence factors contributing significantly to the market value of the property. In some cases field reviews are warranted when sharp changes in occupancy or rental rate levels occur between building classes or between economic areas. With preliminary estimates of value in these targeted areas, the appraisers test computer assisted values against their own appraisal judgment. While in the field, the appraisers physically inspect sold and unsold properties for comparability and consistency of values.

Office Review

Office reviews are completed on properties subject to field inspections and are performed in compliance with the guidelines required by the existing classification system. Office reviews are typically limited by the available market data presented for final value analysis. These reviews summarize the pertinent data of each property as well as comparing the previous value to the proposed value conclusions of the various approaches to value. These evaluations and reviews show proposed value changes, income model attributes or overrides, economic factors, and special factors affecting the property valuation such as new construction status, and a three years sales history. This is the USAP property history requirement for non-residential property. The appraiser may review methodology for appropriateness to ascertain that it was completed in accordance with USPAP or more stringent statutory and district policies. This review is performed after preliminary ratio statistics have been applied. If the ratio statistics are generally acceptable overall the review process is focused primarily on locating skewed results on an individual basis. Previous values resulting from protest hearings are individually reviewed to determine if the value remains appropriate for the current year based on market conditions. Once the appraiser is satisfied with the level and uniformity of value for each commercial property, the estimates of value go to noticing. Each parcel is subjected to the value parameters appropriate for its use type.

PERFORMANCE TESTS

The primary tool used to measure mass appraisal performance is the ratio study. A ratio study compares appraised values to market prices. In a ratio study, market values are typically represented with the range of sales prices. Independent expert appraisals may also be used to represent market values in a ratio study. If there are not enough examples of market price to provide necessary representativeness, independent appraisals can be used as indicators for market value. This can be particularly useful for commercial or industrial real property for which sales are limited. In addition, appraisal ratio studies can be used for properties statutorily no appraised at market value, but reflect the use-value requirement. An example of this are multi-family housing projects subject to subsidized rent provisions or other governmental guarantees as provided by legislative statutes or agricultural lands to be appraised on the basis of productivity or use value.

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

BUSINESS PERSONAL PROPERTY VALUATION PROCESS

INTRODUCTION

Appraisal Responsibility

There are three different personal property types appraised by the district's personal property section: Business Personal Property accounts; leased assets; and multiplication assets.

Personnel –The personal property staff consists of one appraiser and one support staff.
Data –A common set of data characteristics for each personal property account in Ward CAD is collected in the field. The property characteristic data drives the computer-assisted personal property appraisal (CAPP) system. The personal property appraisers collect the field data and maintain electronic property files making updates and changes gathered from field inspections, newspapers, property renditions, sales tax permit listing and interviews with property owners.

VALUATION APPROACH

SIC Code Analysis

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

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

Highest and Best Use Analysis

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

DATA COLLECTION/VALIDATION

Data Collection Procedures

Personal property data collection procedures are published and distributed to all appraisers involved in the appraisal and valuation of personal property. The appraisal

procedures are reviewed and revised to meet the changing requirements of field data collection.

Sources of Data

Business Personal Property

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

Vehicles

An outside vendor provides Ward CAD with a listing of vehicles within the jurisdiction. The vendor develops this listing from the Texas Department of Transportation (TX DOT) Title and Registration Division records. Other sources of data include property owner renditions and field inspections.

Leased and Multi-Location Assets

The primary source of leased and multi-location assets is property owner renditions of property. Other sources of data include field inspections.

VALUATION AND STATISTICAL ANALYSIS (Model Calibration)

Cost Schedules

Cost schedules are developed based on the SIC code by the Property Tax Division of the Comptroller's Office and by district personal property valuation appraisers. The cost schedules are developed by analyzing cost data from property owner renditions, hearings, state schedules, and published cost guides. The cost schedules are reviewed as necessary to conform to changing market conditions. The schedules are typically in a price per square foot format, but some exception SIC's are in an alternate price per unit format, such as per room for hotels.

Statistical Analysis

Summary statistics including, but not limited to, the median, weighted mean, and standard deviation provide the appraisers an analytical tool which to determine both the level and uniformity of appraised value by SIC code. Review of the standard deviation can discern appraisal uniformity within SIC codes.

Depreciation Schedule and Trending Factors

Business Personal Property

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

Computer Assisted Personal Property Appraisal (CAPP)

The CAPP valuation process has two main objectives: 1) Analyze and adjust estimated asset cost with existing SIC models. 2) Develop new models for business classifications not previously integrated into CAPP. The delineated sample is reviewed for accuracy of SIC code, square footage, field data, and original cost information. Models are created and refined using actual original cost data to derive a typical replacement cost new (RCN) per square foot for a specific category of assets. The RCN per square foot is depreciated by the estimated age using the depreciation table adopted for the tax year. The data sampling process is conducted in the following order: 1) Prioritizing Standard Industrial Classification (SIC) codes for model analysis. 2) Compiling the data and developing the reports. 3) Field checking the selected samples. The models are built and adjusted using internally developed software. The models are then tested against the previous year's data. The typical RCN per square foot (or applicable unit) is determined by a statistical analysis of the available data.

CAPP model values are used in the general business personal property valuation program to estimate the value of new accounts for which no property owner's rendition is filed. Model values are also used to establish tolerance parameters for testing the valuation of property for which prior data years' data exist or for which current year rendered information is available. The calculated current year value or the prior year's value is compared to the indicated model value by the valuation program. If the value being tested is within an established acceptable percentage tolerance range of the model value, the account passes that range check and moves to the next valuation step. If the account fails the tolerance range check, it is flagged for individual review. Allowable tolerance ranges may be adjusted from year to year depending on the analysis of the results of the prior year.

Vehicles

Value estimates for vehicles are provided by and outside vendor and are based on Just Texas published book values, and there are also considerations available for high mileage. Vehicles that are not valued by the vendor are valued by an appraiser using PVF schedules or published guides.

Leased and Multi-Location Assets

Leased and multi-location assets are valued using the PVF schedules mentioned above. If the asset to be valued in this category is a vehicle, then Just Texas published book values are used. Assets that are not valued by the vendor are valued by an appraiser using PVF schedules or published guides.

INDIVIDUAL VALUE REVIEW PROCEDURES

Office Review

Business Personal Property

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

PERFORMANCE TESTS

Ratio Studies

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

MINERALS (OIL AND GAS RESERVES) VALUATION PROCESS

INTRODUCTION

Appraisal Responsibility

Minerals-in-place (oil and gas reserves) are real property. Appraisal of minerals, oil and gas reserves, is based on estimation the present value of the economically recoverable reserves of oil and gas. Mineral rights are property rights and may be separable property interests from the land surface property rights. Minerals being produced are a tangible asset and are appraised for ad valorem taxation. The valuation of minerals-in-place is based on estimating the discounted net present value of the oil and gas production over the economic life of the well(s). Basically, this method of valuation is an income

approach using discounted cash flow analysis methodology. Oil and Gas Properties are also marketed based on proven reserves and the unit of comparison in this market is considered in barrels of oil or in cubic feet of natural gas. The market approach is based on sales of property based on barrels of proven reserves.

Mineral interests are commonly divided into property interests known as working interests and royalty interests. The valuation of this property begins with the valuation of the mineral lease and is divided into the property interests according to division orders for each lease. It is the goal and purpose of the CAD to identify every producing mineral property interest within the district and estimate the market value of each property interest listed on the roll.

Appraisal Resources

Personnel – Pritchard & Abbott Inc.

Data – A common set of data characteristics for each mineral property account in Ward CAD is collected from the Texas Railroad Commission Records and data entered to the district's computer. The property characteristic data drives the computer-assisted mineral property appraisal system. Railroad Commission Records are searched to discover new leases as of January 1 of the year and legal descriptions are gathered to determine the location of the lease within Ward CAD jurisdictional boundaries. Records are also reviewed for changes in production for existing wells and for abandoned wells with salvage value for equipment, tanks, and tubular goods. Production history for each mineral lease is gathered from IHS Energy production records and from the Texas Railroad Commission. Division Orders on each lease are requested annually from lease operators and checked against the appraisal roll for accuracy of owner name, address, and ownership percentage interest. To assist with operating information, an annual Confidential Lease Operating Expense Survey is mailed to the operator of each active lease requesting lease-specific operating information on oil and gas pricing, operating expenses, and possible market sales of leases.

To assist with the economic parameters influencing these properties, general economic data is gathered for the valuation process. The method of appraisal for minerals-in-place is the discounted cash flow method which looks at the net present value of operating the lease. Current interest rates, market rates of return and levels of discounting the investment are factors to consider when evaluating the returns necessary to attract investment capital for this type property. Capitalization rates are estimated based on data from the general market for oil and gas property. West Texas Intermediate Crude product prices are tracked on a daily basis from Plains Marketing, a regional product gathering and marketing company and the primary buyer for oil and gas produced in the area. Other capital market information and return rates for investors participating in the oil and gas market is taken from the Oil and Gas Journal, Ibbotson's SBBI Valuation Edition, Wall Street Journal, Mergent Bond Record, Moody's Corporate Bond Yield Averages, and Value Line Investment Survey "Ratings and Reports".

VALUATION AND STATISTICAL ANALYSIS (model calibration)

Pricing, Operating Expenses and Reserve Analysis

Crude oil and natural gas prices are important information in the valuation of mineral property because these prices help determine income to the lease and are a significant factor in determining the economic life of the production from the lease. Price analysis and estimates for crude oil and natural gas produced is based on the previous year's average price as per Texas Property Tax Code (Sec. 23.175). Prices paid for production for each lease is analyzed and averaged to evaluate the estimated average for the area.

Lease operating expenses are estimated based on rendered information and actual operating cost and expense from surveys of lease operators in Ward CAD. Decline curve analysis estimates the rate of production decline and is formulated using past production operating expenses and recent operating parameters such as water production, lease repairs, and secondary recovery efforts. Current operating income and expenses for the lease are considered and estimated in a discounted cash flow model to allow the appraiser to evaluate and estimate the net present value of producing oil and gas from the lease. Capitalization rates and discounting return rates are estimated for each lease based upon the particular risks inherent with production of oil and gas from that property. These risks may vary considerably from one lease to another depending several factors influencing the production form that particular lease. The discounted cash flow model method will allow the appraiser to evaluate current market value of the lease based on the estimated recoverable reserves. This methodology is approved and recommended by the Property Tax Division of the Comptroller's Office and is a recognized method of appraisal by industry standards. We have utilized the discounted cash flow model to estimate the market value of each lease located in Ward CAD.

Value Review Procedures

The method of value review for this type of property is based on the review of the factors estimated within the discounted cash flow analysis methodology such as the discount rate, product prices, and operating expenses. Evaluation and verification of these economic factors as to their validity within current economic times and based on current capital requirements for investment in this type property is re-confirmed and reviewed for reasonableness. Sales of mineral properties are considered but adequate sale data is usually not available due to difficulty in confirming sales. The market for this type of property is neither an active nor an efficient market, there are very few participants and pricing information is mostly confidential. There is no central source for tracking these transactions and property owners are reluctant to reveal market information concerning prices paid or terms of the transaction. Because of a lack of market sales on mineral property, appraised values are regularly compared to similar properties within the same production field, field of exploration, strata of formation, or production history and expense level.

Ratio studies are a source of comparison to evaluation level and uniformity of appraisal. When market sales are available the ratio study is based on a comparison of the appraised value to the sale price. For mineral property, which lacks available market sales, a ratio study is a comparison of another appraisal opinion with the opinion of the district to determine level and uniformity of appraisal. The Property Tax Division of the

Comptroller's Office conducts an annual ratio study of selected mineral properties to gauge the districts appraisal performance. The PTD utilizes the same valuation methodology to appraise individual mineral properties. This opinion of value is then utilized as market evidence with the same significance as if the property sold for that value. The estimated value of the property by Ward CAD is compared to the appraisal by the PTD to calculate the ratio and the indicated level of appraisal. This study indicates the median and mean levels of appraisal for mineral property and is considered reliable as a review and evaluation tool.

UTILITY PROPERTY VALUATION PROCESS

INTRODUCTION

Appraisal Responsibility

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

Appraisal Resources

Personnel –Pritchard & Abbott, Inc.

Data – A common set of data characteristics for each utility property account in Ward CAD is collected from the various government regulatory agency records, field inspections, and property owner renditions. This data is entered to the district's computer. Individual company financial information is gather through industry specific governmental filings such as Federal Energy Regulatory Commission Reports, Securities and Exchange Commission 10-K filings, and Public Utility Commission publications. Other company information is gathered from annual reports, internal appraisals, and other in-house and industry publications. Property owner renditions are requested to document and list property owned and located in our particular jurisdictions (i.e.: track mileage, number of meters, pipeline size and mileage, substation and transmission capacity, etc.). The property characteristic data drives the computer-assisted appraisal of the property. The appraisal of utility property utilizes three-approach analysis for form an opinion of value for the property. Financial and capital market information is pertinent to understanding factors affecting valuation of complex property. Gathering financial data to attempt to understand investor and corporate attitudes for capital return expectations giving considering return components such as current interest rates, capital debt structure,

bond market rates, and capital supply and demand trends. These financial factors result in overall return rates and capital structure for these companies and affects capitalization rates. The weighted average cost of capital is the most commonly used method of estimating capitalization rates for utility properties. Capitalization rates are estimated using capital return expectations from various publications: Ibbotson's SBBI Valuation Edition, Wall Street Journal, Mergent Bond Record, Moody's Corporate Bond Yield Averages, Value Line Investment Survey "Ratings and Reports". Industry specific information is also gathered from web sites, publications, periodicals, and reference manuals. Ward CAD utilizes the weighed average cost of capital to estimate the capitalization rate for utility appraisal under the income approach.

VALUATION AND STATISTICAL ANALYSIS (model calibration)

Approaches to Valuation, Reconciliation

Valuation of tangible assets for utility companies relies primarily on indications of value based on the cost and income approaches to value under the unit value approach. This methodology involves developing and estimating market value considering the entirety of the company's tangible assets and resolving an allocated value for that portion of specific tangible assets located in particular tax jurisdictions. The valuation opinion is based on three approach analysis utilized for the indicated unit appraisal of all company tangible assets, then an estimated allocation of unit value for only assets located in the district and particular jurisdictions. This methodology is approved and recommended by the Property Tax Division of the Comptroller's Office and is an accepted standard within the industry and appraisal community.

Value Review Procedures

Review of the valuation of utility property is based on verifying economic and financial factors utilized in the methodology as relevant to current capital markets and that these factors reflect current return expectations. Market sales of utility properties do occur and are a good source for comparison and review when the price of the tangible assets can be abstracted or allocated from the selling price. Typically, the sale of utility companies involve significant intangible property assets such as customer base, goodwill, favorable contracts, name recognition, etc. and the contributory value and allocation of these assets is subjective and unknown. In Texas, intangible property assets are exempt from taxation and must not be included on the appraisal roll as taxable property. Therefore, because of the lack of specific market information on sales of utility properties, appraised value is regularly compared to the valuation of similar property within the same set of property characteristics, business type and size. More of comparison for equity concerns on valuation rather than the full recognition of a market level certainty about appraisal level. Of course, the estimated value is based on recognized methodology for considering the valuation of these tangible assets, but true market confirmation of these factors may not be possible due to minimal market knowledge and experience.

Ratio studies are also a method of review for relevance of appraisal valuation to market value. Again, in the absence of full disclosure of prices paid and without the abstraction

of prices paid for the tangible asset components from recent utility property acquisitions or sales, market based analysis and review is not possible. Ratio studies for utility property must rely on a comparison of one appraisal opinion as the basis for the reasonable property valuation with the district's appraised value to determine the ratio for level and uniformity of appraisal. The PTD conducts the annual ratio study of selected utility properties to gauge the appraisal district's performance. The PTD utilizes the same valuation methodology to estimate appraisal valuations of utility properties and the results, when compared to the appraisal valuation estimated by Ward CAD for these properties yield ratios. This ratio study of certain utility properties indicates the level and uniformity of appraisal for this category of property.

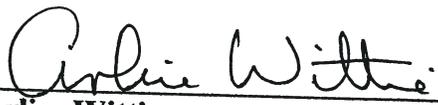
LIMITING CONDITIONS

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

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

CERTIFICATION STATEMENT:

"I, Arlice Wittie, Chief Appraiser for the Ward County 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 that I am aware of at an appraised value which, to the best of my knowledge and belief, was determined as required by law.


Arlice Wittie
Chief Appraiser